

Production Cost and Gross Profit from Fruit Farming in Nepal

2072/073 (2015/16)



Government of Nepal
Ministry of Agriculture Development
Department of Agriculture

**Agribusiness Promotion & Market Development Directorate
Market Research & Statistics Management Program**

Harihar Bhawan, Lalitpur
www.mrsmp.gov.np

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Netra Bahadur Bhandari
Maniratna Aryal



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FOREWORD



Agriculture Development Strategy, 2015-35 is prioritized horticultural crops for import substitution and trade surplus. Horticultural crops are of great importance for increasing the share of agriculture in Gross Domestic Product of the country. Commercialization of high value and low volume crops farming in the country is getting momentum at present. Majority of the farmers are shifting from the farming of agronomic crops to the horticultural crops nowadays. In this aspect, fruit farming is gaining popularity among the farmers of Terai, mid-hills and High hills of Nepal. Though farmers are trying to be commercial, there is lack of sufficient research and experiment in the fruit farming because these crops are perennial in nature. It is necessary to understand the farm conditions and household characteristics under which they are operating in order to help the farmers in production planning and resource utilization. In order to assist them substantial information has to be generate and analyzed by farm as far as possible. Profitability of the farm business is a pre-condition for attracting farmers for increasing the agricultural production in the country. Comparing the costs and benefits of different crops are necessary to device national policies for making the farm production viable. Survey of the costs of production and then comparison of net returns to the fixed farm resources from different crops fall under the regular activities of Market Research and Statistics Management Program. This is the second attempt to publish the cost of production of fruit crops. This report is published to help the farmers, agribusiness operators, researchers, academicians, executives and policy makers for the first time.

I am highly grateful to those farmers and agribusiness operators who provided useful information on the survey for this study. I fully appreciate the efforts and hard works of staffs involved in field survey, data analysis and writing this report. Special thanks go to dedicated Agricultural Economist Mr. Maniratna Aryal for his hard work in preparation of this report. I am also thankful to Senior Statistical Officer Dinesh Bhattarai for helping in the data management and field work. I also acknowledge the help of all the staffs under this programme for their direct and indirect help in completing this study.

I welcome reviews, comments and criticisms on this report from the users so that we can improve it further in the coming years.

Netra Bahadur Bhandari,

For Chief

July, 2016

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1. INTRODUCTION

Agriculture has become a way of life for 65.6% of the people in Nepal. This sector is contributing average 33% to the GDP from 2068/69-2072/73 (Economic Survey, 2015/16). Moreover, horticulture contributes 14% to the total agricultural gross domestic Product (AGDP). Agricultural diversification and commercialization have drawn attention of the planners and policy makers in terms of generating more income, employment opportunities and biodiversity conservation. The cultivation of high value and low volume crops and optimum utilization of the available resources for production, processing and marketing operations has been conceived for the sustainable development of the nation. A twenty years Agriculture Development Strategy (ADS) was implemented since 2015 with a view to develop overall economy and thus agricultural trade surplus. Nepal being rich in climatic diversity, we have wider scope for the production of various types of fruits and vegetables. Horticultural crops can contribute in food security, improve nutritional status, and provide employment opportunities, increase income and thus increasing the overall GDP of the country. Compared to the traditional food grain crops like maize, wheat, rice, fruit farming has been found much more profitable. The government has started the Agricultural Development Strategy, 2015-35 focusing the horticultural sector to substitute the import of fruits and foreign earning from export within 20 years period. The area under fruits cultivation in Nepal is 1,37,758 (Productive area : 1,10,802 hectare) with total production of 9,92,703 metric tons in 2014/15 (MoAD, 2014/15). Citrus alone contributes about 27% of the total fresh fruits production of the country. During fiscal year 2015/16, we have climate as well as land topography very much suitable for fruit cultivation. Thus there is need to explore the potentiality of fruit cultivation in Nepal for export promotion as well as import substitution and change the living standard of the farmers.

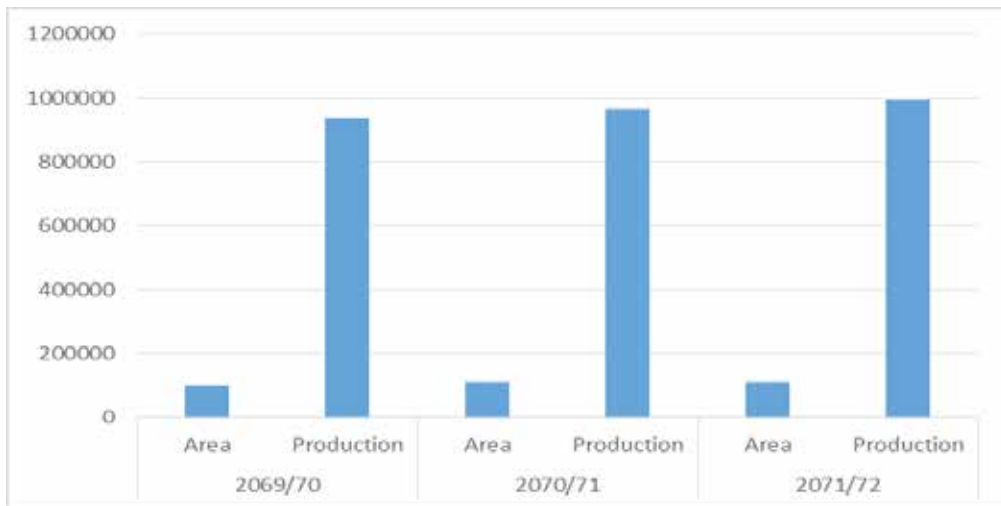


Figure 1 : Productive area and production trend of fruit crops from 2069/70-2071/72 in Nepal

The production of fruit was in increasing trend irrespective of decreasing area (Figure 1). The production was found greater in 2071/72 compared to the preceding year. The importance of agriculture sector and its overall development is directly linked with the objectives of meeting basic needs of the people. Increasing farm production and farmers' income depend upon how the farmers plan and manage their farms. Farmers usually do production planning and management in their own judgment as per individual's family needs. However, they surely can maximize their farm income by adopting profitable enterprise. Management of resources for maximizing the returns and minimizing costs as well as improving the overall efficiency of farmers is the major concern of all the institutions involved in uplifting agricultural livelihood. Information on production cost is fundamental and is helpful to all the policy makers; agricultural scientist, researchers and farming communities including the farmers need to be aware.

Cost of production is an aggregate of fixed and variable costs incurred in crop production. There exists substantial gap in our knowledge concerning critical aspects of farmers' decision-makers regarding profitability. Managing capabilities of farmers get improved once they come to realize some facts through available

information or documents. Data on cost of production can help farmers in their decision making process during the selection of profitable business. Farmers get knowledge of profitability in growing different suited to different agro climatic conditions by comparing the cost of production of different crops as well as other farming activities.

Cost and Benefit analysis of the fruit crop is the second attempt to publish in a report format. Citrus, Apple and Mango were the prime concerned fruit crops of the study and it might help in throwing we have put forward an effort to impart some light this concern as well. Managing capabilities of farmers get improved once they come to realize some facts through available information or documents. The recorded data sets help in recommending to the farmers what to grow, how much to plant, which varieties yield higher and subsequent selection of crop types; growing conditions, level of inputs to be used etc. Farmers get knowledge or confirmation of profitability of growing different crops suited to their agro-climatic area. Data on the cost of production/cultivation play also important role in the decision making by the planners and policy makers thereby results in the well being of the farmers of even for the purpose of setting up good governance. The present report aims to fulfill the above kind of requirement for major agricultural growers concentrating on major fruit crops including Mandarin Orange, Sweet Orange, Mango, Litchi, Kiwi, Pomegranate, Papaya, Apple, Pineapple, Walnut, Pear, Guava, Lime and Banana.

2. OBJECTIVES

The general objective of this study is to provide detail information on production costs and gross profits from fruit farming in Nepal.

The specific objectives are:

- To analyze cost of production of different fruit crops by districts.
- To provide data on the cost items and gross profit of major fruit crops under different conditions.
- To estimate benefit cost ratio of different fruit crops.

3. RATIONALE

The yield and input use level, therefore, as it will be noted, will appear to be higher compared to the national average production. Nevertheless, it is hoped that it would be helpful to assess the status of various efficiency indicators and provide basis to judge appropriate resource allocations by farmers so that the effective costs can be reduced to some extent if possible. In addition this report will also assist toward formulation of appropriate price policy. This data will be a great asset to plan their fruit farm in future. On the basis of B/C ratio, farmers can select the most profitable fruit crop, plan accordingly and can get more profit from the selected farm business. Value chain is another important tool, on the basis of production; some processing industries may be established which add value to the product, jobs opportunity and help to reduce the poverty in village level.

4. METHODOLOGY

The districts are selected on the basis of area of production and in consultation with district agriculture development office (DADO). Generally, DADO declared some VDCs as pocket areas of fruit production on the basis of area cultivation. The farms are selected from the pocket area of production. The data collected by conducting household surveys at different important crops growing areas of various districts. At least 30 households are taken as a sample farms from one district except pomegranate and kiwi fruits for new crop. This report also uses the published reports of some DADOs on cost of production of agricultural crops as part of their annual program and the input data supplied by the DADO. Similarly, the wholesale price data is used from the reports of Agribusiness Promotion and Market Development Directorate. Secondary information regarding the cost of production and yield of fruit crops were collected from Fruit Development Directorate, Kirtipur. The data are cleaned and processed by the use of CSPRO software. The results are obtained by the use of Strata and Excel. A farm is selected on the basis of number of plants (at least 20% per hectare)

5. DEFINITION AND CONCEPTS

The followings are the list of definitions and concepts used in the study.

5.1 Cost of Production

Cost of production is reported in two forms viz. (a) Total cost per hectare and (b) Cost per plant.

(a) Total Cost

This is the summation of both variable and fixed cost, both costs in cash and kind including household labor incurred during the production process.

(b) Cost per plant and Cost per Kg

Cost per plant is to be computed on the basis of "total cost" minus "value of by-product" divided by "total number of plants" using the following formula.

$$\text{Cost per Plant} = \frac{\text{Total cost per hectare} - \text{Value of by-products}}{\text{Total number of plants}}$$

However, as no by-products were reported to have been valued, the by-product case is not applicable at this point. So the formula will remain at this moment as:

$$\text{Cost per Plant} = \frac{\text{Total cost per hectare}}{\text{Total number of plants}}$$

Cost per Kg is to be computed on the basis of "total cost" minus "value of by-product" divided by "volume of main product in Kg" using the following formula.

$$\text{Cost per Kg} = \frac{\text{Total cost per hectare} - \text{Value of by-products}}{\text{Total production}}$$

5.2 Production Condition

Production condition may vary within and between the districts depending upon its geographical conditions and niches of the respective districts. Varieties of fruit crops (Local/Improved) under which the crop in question is cultivated. Similarly other crops under the study comprises of improved cultivars.

The cost calculation of perennial crop is different than seasonal/annual crops. Generally, the fruit crops are perennial and produce fruits after 4-5 years of plantation. During this period, farmers may make the use of land to cultivate intercrops which are seasonal in nature like cereals and vegetables. So, Upto 4-5 years, the farm is in loss position due to no production and just after 4-5 years, fruit plant start to produce fruits and the farm may proceed in profit condition. So, It is not good to calculate B/C ratio before production. There are four major components to be considered in cost calculation. They are called factors of production like ***Land, Labor, Capital and Management***. These four factors of production were taken as a major part of cost of production calculation.

5.3 Total Variable Cost

Total variable costs are the costs at market price level and incurred both in cash or kind on items such as human labor, bullock labor, seed, manures, irrigation cost, fertilizers, plant protection aids, lease land rent, interest of the capital, Management cost and other miscellaneous cost. Level of these costs varies depending on production locations, technology and scale of production.

5.3.1 Human Labor

Human labor forms one of the important components of cost involved in cost of fruit crop production. It is measured in terms of adult man-day (eight working hours) in the field.

Human labor is expressed in adult man-day. Generally in rural areas, woman workday and child workday is converted in terms of adult man-day, and it is being calculated as it usually practiced.

- 1.25 woman days is equivalent to One-man day; implying 1 woman day = 0.8 man day.
- 2 child-days is equivalent to One-man day; implying 1 child day = 0.5 man day.

A. Own Family Labor

It implies the labor contribution on farm by own family members. It is the main source of farm labor in case of small and medium sized farms. For estimating such costs, family labor has been valued as paid type of labor. Labor taken on exchange basis is also included in family labor.

B. Hired Labor

Hired labor is the non-family labor employed for farm work on payment on wages in cash, kind or both. On the basis of work nature, the wage rate is different between man and women.

5.3.2 Bullock Labor

Bullock labor inputs are measured in terms of bullock day, which means use of a pair of bullock for eight hours. Bullock services costs have been calculated at the current market rate per pair of bullock per day. The cost incurred for ploughman is separately included in the human labor.

Nowadays, bullocks are being replaced by tractor in Terai and hill areas. The tractor labor is calculated per hour basis. Besides this, for the harvesting of cereal crops, harvesting machines are being used. These machineries will help to save the time and cost compare to human labor and bullock labor. These machineries are very useful to increase the benefit as well as efficiency.

5.3.3 Manures and Fertilizers

Manures and fertilizers are measured in physical as well as value terms. Marketing

of manure is not usual in most of the rural areas of Nepal. As substantial amount of labor is involved in preparation of manure, a minimum cost is assigned. While taking an account of the fertilizers, urea, di-ammonium phosphate (DAP) and muriate of potash (potash) are commonly available in the market and applied in the farms. The cost of fertilizers has been calculated on the basis of actual price paid by the farmers.

5.3.4 Irrigation

Irrigation charge or cost incurred while hiring pump-set has been taken as actual amount paid. The labor involvement in irrigating field is accounted in human labor.

5.3.5 Seedlings

In case of fruits, seedlings/saplings from seed or different propagation methods are purchased from government or private nurseries. The seedling price was found lower from government institutions but the quantity is very low where private nurseries have enough numbers but the price was found higher. Generally, the seedlings developed from seed will take 5 years to produce fruits but the seedlings developed from different propagation methods like cutting, layering, grafting etc will take just 3-4 years to produce fruits. The price of seedlings developed from seed and from different propagation methods is different. The seedlings developed from seed were found lower than different propagation method.

5.3.6 Other Material Inputs

Material inputs such as pesticides and insecticides have been taken at actual price paid have been evaluated accordingly.

5.4 Fixed Cost

Fixed costs are those that do not vary with size of enterprise and have no bearing upon decisions to increase or decrease production. It includes land revenue, water tax, depreciation as well as tools and implements and interest in fixed assets.

5.4.1 Land Tax

Agricultural land is classified into upland and lowland. The land survey has divided each type of land into 4 categories namely, Abbal, Doyam, Sim and Chahar. The land tax has been taken as actual tax paid by the farmers.

5.4.2 Other Tax

It includes water tax and local tax and other governmental taxes if any levied in some special areas for specific unique purpose.

5.4.3 Depreciation

Depreciation cost is calculated on the basis of purchase value and economic life of an asset. The economic life of an asset is provided by the company. The formula for calculating annual depreciation cost is as follows:

Depreciation Cost = (Purchase value – Scrap value)/Economic lifetime of the farm asset.

For those small agricultural tools and implements, which last around a year scrap, value is not taken into account since they are negligible.

Farm families have agricultural tools and these are used virtually for almost all crops. Depreciation charge for each crop is calculated by the following formulae:

Depreciation cost/Crop = (Area under a crop X Annual depreciation cost)/ Total cropped area

5.4.4 Repairs and Maintenance

Farmers in rural areas pay a fixed amount of their main produce to local blacksmiths who provide regular services of repair and maintaining services of agricultural tools and implements in rural areas. An annual repairing and maintenance cost is calculated by using the following formula:

$$\text{Repair and Maintenance} = \frac{\text{Area under particular crop} \times \text{Fruit quantity paid} \times \text{Price/unit}}{\text{Total Cropped Area}}$$

However, payments made by the farmer for the repair and maintenance all the year round are proportioned as per the crop duration and the area of cultivation.

5.5 Interest on Working Capital

Interest on the working capital is charged cash expenses incurred are calculated as 10-12 percent per annum (Based on Agricultural Development Bank interest rate) and thus calculated for a particular crop for the months it covers the arable land and it is incurred in the conditions such as:

- a. Hired human and bullock labor
- b. Hired tractor and pump-set
- c. Other taxes
- d. Expenses incurred on material inputs such as seeds, chemicals, fertilizers, manures, insecticides and pesticides.

5.6 Land lease value

Land is another important factor for production. Generally, land leasing is not common in fruit crops but it is better to use lease land value for the calculation of B/C ratio including all factors of production. We have to include the land, labor, capital and management factors for B/C ratio calculation. Then, anyone who is interested to invest in fruit production business, they are well informed and can calculate the real cost of production including all factors of production like family labor cost, land lease value, interest of investment. In this study, land lease value of hills and mountain is estimated Rs. 1000-1500 per ropani and in case of terai Rs. 850-1000 per kattha.

5.7 Management cost

The previous studies of cost of production of cereals and vegetables did not include the management cost. But it is necessary to use the management cost in cost

calculation because management is also an important factors of production and fruit crops are perennial in nature. The life span of fruit crop is generally 25-30 years. In this study, Rs. 1500-2000 per month is used for management cost.

5.8 Gross Income

It is the value of the total crop produce (output) including main and by-product multiplied by farm gate price.

Gross Income = Total products * Farm gate price

In case of fruit, the crop started to produce fruits after 3-4 years. Therefore, the gross income will be positive after 5 years only. During the growth period, the business has negative gross income.

5.9 Benefit Cost Ratio

This is the ratio of the value of output including for by-product and the total cost of production on per hectare basis.

B/C ratio = Gross Income/Total cost

If the B/C ratio is above 1, then the farm is earning profit. If the B/C ratio was found less than 1 or negative, then the farm is in loss. The fruit farm will generate positive B/C ratio after 5 years only.

5.10 Gross Profit at Farm Gate

It is the difference between the gross incomes to the total cost considering the product price at farm gate.

6. Some important information of fruit crops

6.1 Mandarin Orange Tangerine (*Citrus reticulata*)



SN	Particulars	Details
1	Altitude and Temperature	950-1500 masl in the mid-hills, 5°C to 35°C
2	Planting	Asar-Shrawan (Aug-Sept), Pit digging before 2-3 months
3	Flowering and Fruiting	March-April (Falgun-Chaitra)
4	Harvesting	November-December (Aswin-Mangsir)
5	Propagation	Grafting, Seed, Layering, Budding
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 544 gm DAP, 874 gm Urea and 833 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	5 m*6 m
9	Varieties	Dhankuta local, Pokhara local, Local, Nagpur, Ponkan, Kinnow

6.2 Sweet Orange (*Citrus sinensis*)



SN	Particulars	Details
1	Best	800-1400 masl in the mid-hills, 5°C to 35°C
2	Planting	Asar-Shrawan (Aug-Sept), Pit digging before 2-3 months
3	Flowering and Fruiting	March-April (Falgun-Chaitra)
4	Harvesting	November-December (Aswin-Poush)
5	Propagation	Grafting, Seed, Budding, Layering
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 250 gm DAP, 400 gm Urea and 500 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	5m*6 m
9	Varieties	Wasington navel, local, Valencia let

6.3 Apple (*Malus pumila*)



SN	Particulars	Details
1	Best	High chilling varieties : 2000-3000 masl Mid chilling varieties : 1500-2000 masl Low chilling varieties : 1200-1500 masl
2	Planting	Poush-Magh (December-January), Pit digging before 2-3 months
3	Flowering and Fruiting	July-August (Shrawan-Bhadra), Feb-March (Magh-Falgun)
4	Harvesting	August-November (Aswin-Mansir)
5	Propagation	Grafting, Seed
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 434 gm DAP, 700 gm Urea and 133 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	6m*6 m
9	Varieties	High chilling varieties : Golden Delicious, Red Delicious, Royal Delicious, Jonathan, Well spur, Granny Smith, Vance Delicious Mid chilling varieties : Crispin, Red June, Pippin Low chilling varieties : Anna and Vered

6.4 Mango (*Mangifera indica*)



SN	Particulars	Details
1	Best	61 masl in the Terai to 600 m in the mid-hills
2	Planting	Asar-Shrawan (June-Aug), Pit digging before 2-3 months
3	Flowering and Fruiting	March-April (Falgun-Chaitra)
4	Harvesting	June-August (Jestha-Shrawan)
5	Propagation	Enarching, Seed, tongue Grafting, Shaddle grafting
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 931 gm DAP, 1434 gm Urea and 1133 gm Potash
7	Plant Density	100-120 plants/ha
8	Spacing	10m*12 m & 8m*8 m (For Dwarf-Amrapali)
9	Varieties	Bombay Green, Dashahari, Maldaha, Amrapali, Kalkattiya, Alphonso, Langra, Chausa, Neelum

6.5 Litchi (*Litchi chinensis*)



SN	Particulars	Details
1	Best	61 masl in the Terai to 800 m in the mid-hills
2	Pit digging and planting	Asar-Shrawan (Aug-Sept)
3	Flowering	March-April (Falgun-Chaitra)
4	Fruiting	June-August (Jestha-Shrawan)
5	Propagation	Air layering, Seed
6	Manure and fertilizer	30-50kg FYM or compost (2 doko), 435 gm DAP, 1134 gm Urea and 1000 gm Potash
7	Plant Density	140-160 plants/ha
8	Spacing	10m*10 m
9	Varieties	Mujafurpur, Bedana, Colcuttiya, Seedless, Rose Scented, Shahi, Dehra Dun, China

6.6 Kiwi Fruits (*Actinidia deliciosa*)



SN	Particulars	Details
1	Best	Mid hills (1000-2200 masl)
2	Planting	Kartik-Mangsir and Poush- Magh (Jan-Feb)
3	Flowering and Fruiting	March-April (Falgun-Chaitra)
4	Harvesting	November-December (Kartik-Mangsir)
5	Propagation	Splice/bench grafting, grafting, Cutting
6	Manure and fertilizer	20-30kg FYM or (1 doko), 5 kg wood ash, 500g bone-meal
7	Varieties	Aalisan, Heyward (Female), Tomore (Male), Monty, Bruno
8	Male : Female ratio	1:8
9	Seedlings per hectare	400 plants/ha (20 plants/ropani)
10	Spacing	6m*4 m

6.7 Banana (*Musa paradisiaca*)



SN	Particulars	Details
1	Best	60-800 m in the Terai to mid hills
2	Planting	Asar-Shrawan (July-August)
3	Flowering and Fruiting	July-August (Shrawan-Bhadra), Throughout the year
4	Harvesting	September-November (Kartik-Mansir)
5	Propagation	Sucker, Tissue culture
6	Manure and fertilizer	20-30 kg FYM or compost (1 doko), 239 gm DAP, 341 gm Urea and 416 gm Potash
7	Plant Density	1000 plants/ha (50 plants/ropani)
8	Spacing	2m*2 m
9	Varieties	William Hybrid, Jhapali Malbhog, Local, Robusta, Harichal, Malbhog

6.8 Papaya (*Carica papaya*)



SN	Particulars	Details
1	Best	60-800 m in the Terai to mid hills
2	Planting	Poush-Magh (December-January), May-June, Aug-Sept
3	Flowering and Fruiting	July-August (Shrawan-Bhadra)
4	Harvesting	September-November (Kartik-Mansir)
5	Propagation	Seed, Tissue culture
6	Manure and fertilizer	20-30 kg FYM or compost (1 doko), 543 gm DAP, 330 gm Urea and 833 gm Potash
7	Plant Density	1000 plants/ha (50 plants/ropani)
8	Spacing	2m*2 m
9	Varieties	Wasington, Honeydew, Koyembutor, Pusa Delicious, Pusa Dwarf, Solo

6.9 Pomegranate (*Punica granatum*)



SN	Particulars	Details
1	Best	500-1600 m in the mid hills
2	Planting	Major season : Kartik-Mangsir (Sept-Nov) And Poush-Magh (December-January)
3	Flowering and Fruiting	Ambe Bahar : Poush-Magh (December-January) Mrig Bahar : Jestha-Asad Hasta Bahar : Aswin-Kartik Main season : July-August (Shrawan-Bhadra)
4	Harvesting	After 4-5 months of flowering
5	Propagation	Grafting, Seed, Layering, Cutting
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 543 gm DAP, 874 gm Urea and 417 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	5m*5 m
9	Varieties	Bedena, Mridula, Ganesh

6.10 Pear (*Pyrus spp*)



SN	Particulars	Details
1	Best	800-1600 m in the mid hills
2	Planting	Major season : Poush-Magh (December-January)
3	Flowering and Fruiting	Main season : July-August (Shrawan-Bhadra)
4	Harvesting	After 2-3 months of flowering
5	Propagation	Grafting, Seed and cutting
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 434 gm DAP, 700 gm Urea and 66 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	6-8 m*6-8 m
9	Varieties	Pharping, Hosui, Chojuro, Sinko

6.11 Pineapple (*Ananas comosus*)



SN	Particulars	Details
1	Best	200-900 m
2	Planting	Major season : Shrawan-Bhadra
3	Flowering and Fruiting	Flowering : Magh-Falgun (February-April) Fruiting : Asad-Shrawan (July-September)
4	Harvesting	After 12 months of planting
5	Propagation	Sucker, Slips and Crown
6	Manure and fertilizer	2500 kg/ha FYM or compost, 173 gm DAP, 322 gm Urea and 266 gm Potash
7	Plant Density	20,000 plants/ha (1000 plants/ropani)
8	Spacing	1 m*0.6 m
9	Varieties	Mauritius, Giant Kew, Queen

6.12 Guava (*Psidium guajava*)



SN	Particulars	Details
1	Best	500-1500 m
2	Planting	Major season : Asar-Shrawan And Poush-Magh (December-January)
3	Flowering and Fruiting	Main season : July-August (Shrawan-Bhadra)
4	Harvesting	After 3-4 years of plantation
5	Propagation	Grafting, Seed, Air layering, Cutting
6	Manure and fertilizer	30-40 kg FYM or compost (2 doko), 263 gm DAP, 524 gm Urea and 500 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	6-7 m*6-7 m
9	Varieties	Allahabad safeda, Lucknow 46, Nagpur seedless, local

6.13 Walnut (*Juglans regia*)



SN	Particulars	Details
1	Best	>2000 m in the high hills
2	Planting	Major season : Poush-Magh (December-January)
3	Flowering and Fruiting	Main season : July-August (Shrawan-Bhadra)
4	Harvesting	After 8-10 years of plantation
5	Propagation	Grafting, Seed, Budding
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 434 gm DAP, 700 gm Urea and 333 gm Potash
7	Plant Density	120 plants/ha (6 plants/ropani)
8	Spacing	10-12 m* 10-12 m
9	Varieties	Winsel, heartle, yeshle

6.14 Lime (*Citrus aurantiifolia*)



SN	Particulars	Details
1	Best	300-2000 m in the Terai and mid hills
2	Planting	Major season : Jetha-Shrawan (June-August)
3	Flowering and Fruiting	Throughout the year (2-3 cycle)
4	Harvesting	After 3-4 years of plantation
5	Propagation	Grafting, Seed, Budding
6	Manure and fertilizer	30-50 kg FYM or compost (2 doko), 434 gm DAP, 700 gm Urea and 55 gm Potash
7	Plant Density	300 plants/ha (15 plants/ropani)
8	Spacing	4-5 m* 4-5 m
9	Varieties	Mexican, Banarasi, Local

7. Description of the results

Land lease, interest on variable cost and management cost has higher cost percentage (41%) compared to others followed by labor (27%), seedling cost (12%), manures/fertilizers (9%), plant protection (5%) and miscellaneous (6%) (Fig 2). The Benefit cost ratio was ranging from 1 to 5. It means the profit is 5 times more than the total cost. If there is the total cost of Rs 1,00,000 then, the profit is Rs 5,00,000 for b/c ratio 5. It depends upon the fruits type and life span of the crops. In general, Kiwi has higher b/c ratio followed by banana, and papaya. Kiwi is new fruit for Nepal and has higher farm gate price per Kg. The result is also similar of previous study from this organization. B/C ratio of the fruits crop varied from 1.86 to 3.66 showing their relatively higher level of profitability in terms of investment (Economic Aspects of Fruit And Vegetable Production, 1992).

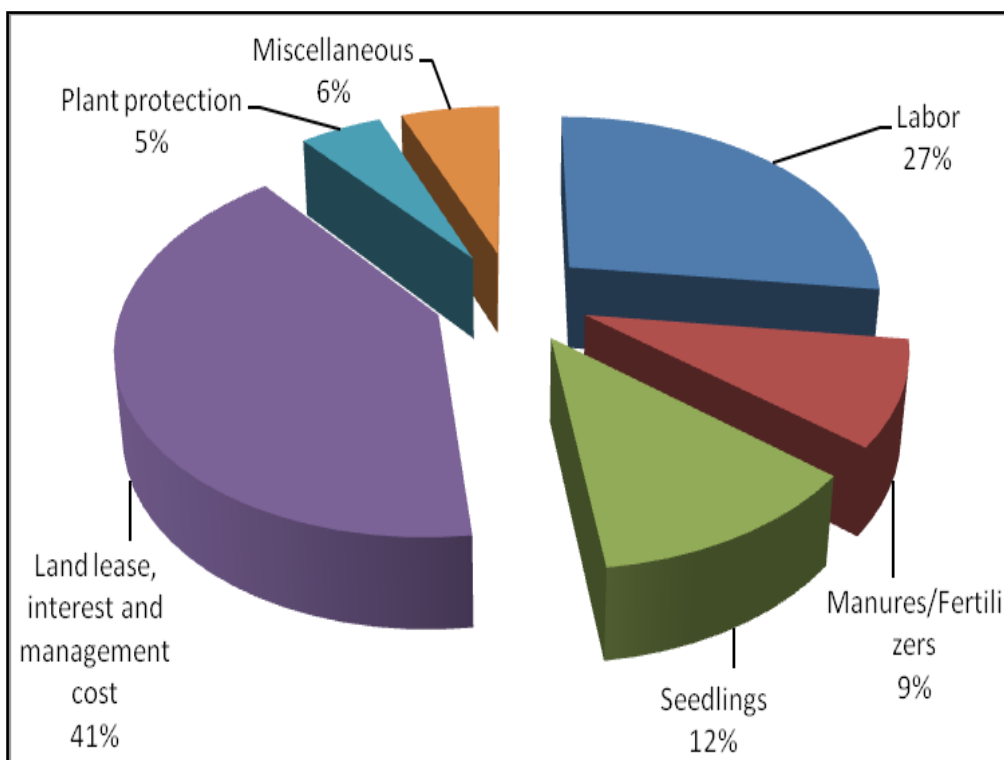


Figure 2 : Expenditure percentage on different items for production cost of fruit crops

Generally, fruit crops are perennial and have long life span of around 3-40 years. Majority of the fruit crops start to fruit after 4 years of planting. Therefore, the farm is in loss upto 5 years in case of seedlings produced by seed and started to gain profit after 5 years where b/c ratio was found higher than 1. If the farmers planted grafted or layering seedling, it will produce fruits within 2-4 years. Walnut will produce fruits after 8-10 years of plantation. The farm will produce optimum production around 9-10 years of planting where farmers can get the highest b/c ratio. The payback period of the farm was found at 9-10 years. Then, the farm is in profit throughout the life span of the crop. In this study, interest rate is used 11% levied by Agriculture Development Bank limited of Nepal. Interest is not added after 10 years on variable cost because the payback period of the farm was found at 9-10 years except banana and papaya.

The farm has produced 80% of the plant population at the start of the production and production declines by 10-20% after 15 years of plant age.

8. Conclusion and Recommendation

From the results, we can conclude that the fruit farm business was found profitable. The b/c ratio from fruit was found higher (1-5) compared to cereals (1-2) and vegetables (1-3). It means the profit gained from fruit business was higher than the profit gained from cereals and vegetables. The fruit farm business can earn more profit if we start to add value by processing in future. This business provides more employment opportunities through value addition by establishing processing industry in future. These fruits are perishable in nature but we can extend their life up to six months after harvesting through cold store, cellar store and other advanced techniques which help to generate higher price than the seasonal price. This means, the b/c ratio will be higher than the calculated which focus on farm gate price in this study. We will try to calculate the b/c ratio in both condition like farm gate price and market price in next study.

This study and the data will provide base for insurance schemes both for farmers and insurance company. Unfortunately, this study did not cover the insurance premium cost in this report. We will try to adjust the insurance premium cost in future study as a cost for production.

On the basis of the results obtained from this study, the ministry of agriculture development and department of agriculture will plan the different programs for farmers. The government should focus on production of sufficient seedling as per the demand of farmers and should supply on time of plantation. The seedling produced from government farms is cheaper as compared to private nurseries. This seedling cost would play a vital role to reduce the cost and increase the b/c ratio. Besides this, the production is earlier from propagated seedlings than direct from seed. The program should focus to increase the area of production including high yielding varieties to increase the b/c ratio or higher profits for farmers. The center offices should focus on reducing the interest cost by providing interest subsidy in the fruit business. The labor should be replaced by machines to reduce the cost and increase profit. The cost will be reduced by 40% if the machines replaced labor (MRSMP, 2012). Therefore, the government should provide subsidy on machines and encourage the farmers to make the use of machines in plantation to harvesting.

APPENDICES

1. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Mandarin Orange
Variety : Local

District : Darchula
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				108895			83625
a.	Human labor	Day	60	300	18000	40	300	12000
b.	Bullock labor	Day	7	850	5950	2	850	1700
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	275	3300	15	275	4125
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1250	5000			
g.	Sapling	Number	330	45	14850			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	25	25	625			
	DAP	Kg	15	50	750			
	Potash	Kg	12	35	420			
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			3500			4000
l.	Training and Pruning					4	950	3800
m.	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11978.45			9198.75
p.	Others	Rs			3000			3500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1925			1925
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			122798.45			94748.75

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				7	15	25	35
2	Production (Kg/ha)				1820	3900	6500	9100
3	Total income (Rs)				65520	140400	234000	327600
4	Variable cost	120873.5	92823.75	102106.13	112316.738	123548.4	135903.3	149493.578
5	Fixed cost	1925	1925	1925	1925	1925	1925	1925
6	Total cost	122798.5	94748.75	104031.13	114241.738	125473.4	137828.3	151418.578
7	Profit/Loss	-122798.5	-94748.8	-104031.1	-48721.738	14926.59	96171.75	176181.422
8	B/C ratio					1.12	1.70	2.16
9	Cost per Kg				62.77	32.17	21.20	16.64

SN	Year		8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)		45	50	50	50	40
2	Production (Kg/ha)		11700	13000	13000	13000	10400
3	Total income (Rs)		421200	468000	468000	468000	374400
4	Variable cost		164442.94	180887.229	198976	198976	198975.952
5	Fixed cost		1925	1925	1925	1925	1925
6	Total cost		166367.94	182812.229	200901	200901	200900.952
7	Profit/Loss		254832.06	285187.771	267099	267099	173499.048
8	B/C ratio		2.53	2.56	2.33	2.33	1.86
9	Cost per Kg		14.22	14.06	15.45	15.45	19.32

Condition of Mandarin Orange Fruits Human labor Requirement (First year)					
1	Activities	Units	Labor		
1.1	Land leveling, pit digging	Number	30		
1.2	Manuring and pit filling	Number	15		
1.3	Seedling planting	Number	5		
1.4	Irrigation	Number	5		
1.5	Mulching	Number	5		
	Total		60		
2	Materials Utilization				
2.1	Manure	Kg/Plant	15-30		
2.2	Chemical fertilizer	Kg/Plant	0.3		
2.3	Micronutrient	Kg/Plant	0.2-1		
2.4	No of seedling	Plants/ha	300	Mortality	10%
3	Life span	Years	16-25		
4	Production start				
4.1	Grafted seedlings	Years	4		
4.2	By seed	Years	5		
4.3	Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops					
5	Production Process				
5.1	No of Plants in produciton	Number	260		
5.2	Price	Rs/Kg	36		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Pokhara Local

District : Tanahun
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				100957			79675
a.	Human labor	Day	55	325	17875	35	325	11375
b.	Bullock labor	Day	6	900	5400	1	900	900
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	30	9900			0
h.	Manure	Kg	4500	1.4	6300	6000	1.4	8400
i.	Fertilizer							
	Urea	Kg	28	25	700			
	DAP	Kg	15	50	750			
	Potash	Kg	12	36	432			
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1200	6000
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11105.27			8764.25
p.	Others	Rs			3000			3250
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			114187.27			90564.25

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				8	18	32	44
2	Production (Kg/ha)				2080	4680	8320	11440
3	Total income (Rs)				58240	131040	232960	320320
4	Variable cost	112062.3	88439.25	97283.175	107011.493	117712.6	129483.9	142432.297
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	114187.3	90564.25	99408.175	109136.493	119837.6	131608.9	144557.297
7	Profit/Loss	-114187.3	-90564.3	-99408.18	-50896.493	11202.36	101351.1	175762.703
8	B/C ratio					1.09	1.77	2.22
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			52	48	48	50	42
2	Production (Kg/ha)			13520	12480	12480	13000	10920
3	Total income (Rs)			378560	349440	349440	364000	305760
4	Variable cost			156675.53	172343.079	189577.4	189577.4	189577.387
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			158800.53	174468.079	191702.4	191702.4	191702.387
7	Profit/Loss			219759.47	174971.921	157737.6	172297.6	114057.613
8	B/C ratio			2.38	2.00	1.82	1.90	1.59

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Local

District : Panchthar
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				107935			81900
a.	Human labor	Day	55	325	17875	38	325	12350
b.	Bullock labor	Day	8	800	6400	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1600	4800			
g.	Sapling	Number	330	45	14850			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	30	26	780			
	DAP	Kg	15	50	750			
	Potash	Kg	10	38	380			
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					5	1000	5000
m.	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11872.85			9009
p.	Others	Rs			3000			3500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			121932.85			93034

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				10	18	25	40
2	Production (Kg/ha)				2600	4680	6500	10400
3	Total income (Rs)				83200	149760	208000	332800
4	Variable cost	119807.9	90909	99999.9	109999.89	120999.9	133099.9	146409.854
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	121932.9	93034	102124.9	112124.89	123124.9	135224.9	148534.854
7	Profit/Loss	-121932.9	-93034	-102124.9	-28924.89	26635.12	72775.13	184265.146
8	B/C ratio					1.22	1.54	2.24
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			45	50	45	45	35
2	Production (Kg/ha)			11700	13000	11700	11700	9100
3	Total income (Rs)			374400	416000	374400	374400	291200
4	Variable cost			161050.84	177155.923	194871.5	194871.5	194871.515
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			163175.84	179280.923	196996.5	196996.5	196996.515
7	Profit/Loss			211224.16	236719.077	177403.5	177403.5	94203.4849
8	B/C ratio			2.29	2.32	1.90	1.90	1.48

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Local

District : Dadeldhura
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				106285			81625
a.	Human labor	Day	60	325	19500	35	325	11375
b.	Bullock labor	Day	8	800	6400	2	800	1600
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	25	25	625			
	DAP	Kg	15	50	750			
	Potash	Kg	10	36	360			
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			3000			4000
l.	Training and Pruning					4	1100	4400
m	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11691.35			8978.75
p.	Others	Rs			3000			3500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			120101.35			92728.75

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				8	15	25	36
2	Production (Kg/ha)				2080	3900	6500	9360
3	Total income (Rs)				66560	124800	208000	299520
4	Variable cost	117976.4	90603.75	99664.125	109630.538	120593.6	132653	145918.245
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	120101.4	92728.75	101789.13	111755.538	122718.6	134778	148043.245
7	Profit/Loss	-120101.4	-92728.8	-101789.1	-45195.538	2081.409	73222.05	151476.755
8	B/C ratio					1.02	1.54	2.02
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			42	50	44	48	39
2	Production (Kg/ha)			10920	13000	11440	12480	10140
3	Total income (Rs)			349440	416000	366080	399360	324480
4	Variable cost			160510.07	176561.077	194217.2	194217.2	194217.185
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			162635.07	178686.077	196342.2	196342.2	196342.185
7	Profit/Loss			186804.93	237313.923	169737.8	203017.8	128137.815
8	B/C ratio			2.15	2.33	1.86	2.03	1.65

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Local

District : Rolpa
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				105928			80450
a.	Human labor	Day	56	350	19600	35	350	12250
b.	Bullock labor	Day	7	800	5600	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	160	1920	15	160	2400
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1000	4000			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	28	26	728			
	DAP	Kg	15	50	750			
	Potash	Kg	10	38	380			
j.	Plant protection chemical	Rs			2500	2	1500	3500
k.	Bordeaux mixture and micro nutrient	Lum			3000			4000
l.	Training and Pruning					4	1000	4000
m	Equipments	Number	5	850	4250			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11652.08			8849.5
p.	Others	Rs			3000			3500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			119705.08			91424.5

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				6	14	22	35
2	Production (Kg/ha)			1560	3640	5720	9100	
3	Total income (Rs)			46800	109200	171600	273000	
4	Variable cost	117580.1	89299.5	98229.45	108052.395	118857.6	130743.4	143817.738
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	119705.1	91424.5	100354.45	110177.395	120982.6	132868.4	145942.738
7	Profit/Loss	-119705.1	-91424.5	-100354.5	-63377.395	-11782.6	38731.6	127057.262
8	B/C ratio					0.90	1.29	1.87
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			42	45	50	44	35
2	Production (Kg/ha)			10920	11700	13000	11440	9100
3	Total income (Rs)			327600	351000	390000	343200	273000
4	Variable cost			158199.51	174019.463	191421.4	191421.4	191421.409
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			160324.51	176144.463	193546.4	193546.4	193546.409
7	Profit/Loss			167275.49	174855.537	196453.6	149653.6	79453.5911
8	B/C ratio			2.04	1.99	2.02	1.77	1.41

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Local

District : Pyuthan
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				102356			79100
a.	Human labor	Day	60	330	19800	35	330	11550
b.	Bullock labor	Day	8	800	6400	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1000	4000			
g.	Sapling	Number	330	30	9900			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	25	26	650			
	DAP	Kg	15	50	750			
	Potash	Kg	12	38	456			
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					4	1000	4000
m	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11259.16			8701
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1950			1950
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			115565.16			89751

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				6	15	25	32
2	Production (Kg/ha)				1560	3900	6500	8320
3	Total income (Rs)				56160	140400	234000	299520
4	Variable cost	113615.2	87801	96581.1	106239.21	116863.1	128549.4	141404.389
5	Fixed cost	1950	1950	1950	1950	1950	1950	1950
6	Total cost	115565.2	89751	98531.1	108189.21	118813.1	130499.4	143354.389
7	Profit/Loss	-115565.2	-89751	-98531.1	-52029.21	21586.87	103500.6	156165.611
8	B/C ratio					1.18	1.79	2.09
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			38	42	45	48	38
2	Production (Kg/ha)			9880	10920	11700	12480	9880
3	Total income (Rs)			355680	393120	421200	449280	355680
4	Variable cost			155544.83	171099.31	188209.2	188209.2	188209.241
5	Fixed cost			1950	1950	1950	1950	1950
6	Total cost			157494.83	173049.31	190159.2	190159.2	190159.241
7	Profit/Loss			198185.17	220070.69	231040.8	259120.8	165520.759
8	B/C ratio			2.26	2.27	2.21	2.36	1.87

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Pokhara Local

District : Chitwan
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				108660			80900
a.	Human labor	Day	60	375	22500	36	375	13500
b.	Bullock labor	Day	7	900	6300	1	900	900
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	200	2400	15	200	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	30	25	750			
	DAP	Kg	20	50	1000			
	Potash	Kg	10	36	360			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3500
l.	Training and Pruning					4	1000	4000
m	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11952.6			8899
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1975			1975
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			122587.6			91774

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				6	15	25	32
2	Production (Kg/ha)			1560	3900	6500	8320	
3	Total income (Rs)			54600	136500	227500	291200	
4	Variable cost	120612.6	89799	98778.9	108656.79	119522.5	131474.7	144622.187
5	Fixed cost	1975	1975	1975	1975	1975	1975	1975
6	Total cost	122587.6	91774	100753.9	110631.79	121497.5	133449.7	146597.187
7	Profit/Loss	-122587.6	-91774	-100753.9	-56031.79	15002.53	94050.28	144602.813
8	B/C ratio					1.12	1.70	1.99
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			38	42	45	48	38
2	Production (Kg/ha)			9880	10920	11700	12480	9880
3	Total income (Rs)			345800	382200	409500	436800	345800
4	Variable cost			159084.41	174992.847	192492.1	192492.1	192492.132
5	Fixed cost			1975	1975	1975	1975	1975
6	Total cost			161059.41	176967.847	194467.1	194467.1	194467.132
7	Profit/Loss			184740.59	205232.153	215032.9	242332.9	151332.868
8	B/C ratio			2.15	2.16	2.11	2.25	1.78

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarin Orange
Variety : Local

District : Lamjung
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				104710			78500
a.	Human labor	Day	55	330	18150	35	330	11550
b.	Bullock labor	Day	8	850	6800	2	850	1700
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	1.5	6750	6000	1.5	9000
i.	Fertilizer							
	Urea	Kg	30	25	750			
	DAP	Kg	15	50	750			
	Potash	Kg	10	36	360			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1000	5000
m	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11518.1			8635
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1950			1950
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			118178.1			89085

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)				6	15	22	36	
2	Production (Kg/ha)				1560	3900	5720	9360	
3	Total income (Rs)				49920	124800	183040	299520	
4	Variable cost	116228.1	87135	95848.5	105433.35	115976.7	127574.4	140331.789	
5	Fixed cost	1950	1950	1950	1950	1950	1950	1950	
6	Total cost	118178.1	89085	97798.5	107383.35	117926.7	129524.4	142281.789	
7	Profit/Loss	-118178.1	-89085	-97798.5	-57463.35	6873.315	53515.65	157238.211	
8	B/C ratio					1.06	1.41	2.11	
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			40	45	50	50	40	
2	Production (Kg/ha)			10400	11700	13000	13000	10400	
3	Total income (Rs)			332800	374400	416000	416000	332800	
4	Variable cost			154364.97	169801.465	186781.6	186781.6	186781.611	
5	Fixed cost			1950	1950	1950	1950	1950	
6	Total cost			156314.97	171751.465	188731.6	188731.6	188731.611	
7	Profit/Loss			176485.03	202648.535	227268.4	227268.4	144068.389	
8	B/C ratio			2.13	2.18	2.20	2.20	1.76	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarine Orange
Variety : Local

District : Doti
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				106734			76950
a.	Human labor	Day	58	350	20300	35	350	12250
b.	Bullock labor	Day	8	850	6800	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	150	1800	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1500	6000			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg	30	26	780			
	DAP	Kg	15	50	750			
	Potash	Kg	8	38	304			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					5	1000	5000
m.	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11740.74			8464.5
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1950			1950
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			120424.74			87364.5

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				8	15	25	35
2	Production (Kg/ha)				2080	3900	6500	9100
3	Total income (Rs)				62400	117000	195000	273000
4	Variable cost	118474.7	85414.5	93955.95	103351.545	113686.7	125055.4	137560.906
5	Fixed cost	1950	1950	1950	1950	1950	1950	1950
6	Total cost	120424.7	87364.5	95905.95	105301.545	115636.7	127005.4	139510.906
7	Profit/Loss	-120424.7	-87364.5	-95905.95	-42901.545	1363.3	67994.63	133489.094
8	B/C ratio					1.01	1.54	1.96
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	45	48	48	38
2	Production (Kg/ha)			10400	11700	12480	12480	9880
3	Total income (Rs)			312000	351000	374400	374400	296400
4	Variable cost			151317	166448.697	183093.6	183093.6	183093.566
5	Fixed cost			1950	1950	1950	1950	1950
6	Total cost			153267	168398.697	185043.6	185043.6	185043.566
7	Profit/Loss			158733	182601.303	189356.4	189356.4	111356.434
8	B/C ratio			2.04	2.08	2.02	2.02	1.60

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandaine Orange
Variety : Dhankuta Local

District : Illam
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				102346			77100
a.	Human labor	Day	55	350	19250	35	350	12250
b.	Bullock labor	Day	6	850	5100	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	160	1600	15	160	2400
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1400	4200			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg	30	26	780			
	DAP	Kg	15	50	750			
	Potash	Kg	7	38	266			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					5	1000	5000
m.	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11258.06			8481
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1950			1950
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			115554.06			87531

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				7	15	25	35
2	Production (Kg/ha)				1820	3900	6500	9100
3	Total income (Rs)				54600	117000	195000	273000
4	Variable cost	113604.1	85581	94139.1	103553.01	113908.3	125299.1	137829.056
5	Fixed cost	1950	1950	1950	1950	1950	1950	1950
6	Total cost	115554.1	87531	96089.1	105503.01	115858.3	127249.1	139779.056
7	Profit/Loss	-115554.1	-87531	-96089.1	-50903.01	1141.689	67750.86	133220.944
8	B/C ratio					1.01	1.53	1.95
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	44	48	45	36
2	Production (Kg/ha)			10400	11440	12480	11700	9360
3	Total income (Rs)			312000	343200	374400	351000	280800
4	Variable cost			151611.96	166773.158	183450.5	183450.5	183450.474
5	Fixed cost			1950	1950	1950	1950	1950
6	Total cost			153561.96	168723.158	185400.5	185400.5	185400.474
7	Profit/Loss			158438.04	174476.842	188999.5	165599.5	95399.5261
8	B/C ratio			2.03	2.03	2.02	1.89	1.51

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandaine Orange
Variety : Local

District : Bhojpur
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				101624			74925
a.	Human labor	Day	60	330	19800	35	330	11550
b.	Bullock labor	Day	6	800	4800	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	145	1740	15	145	2175
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1450	4350			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4500	1.4	6300	6000	1.4	8400
i.	Fertilizer							
	Urea	Kg	30	26	780			
	DAP	Kg	15	50	750			
	Potash	Kg	8	38	304			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					5	1000	5000
m	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11178.64			8241.75
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1900			1900
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			114702.64			85066.75

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)				8	15	25	35	
2	Production (Kg/ha)			2080	3900	6500	9100		
3	Total income (Rs)			62400	117000	195000	273000		
4	Variable cost	112802.6	83166.75	91483.425	100631.768	110694.9	121764.4	133940.883	
5	Fixed cost	1900	1900	1900	1900	1900	1900	1900	
6	Total cost	114702.6	85066.75	93383.425	102531.768	112594.9	123664.4	135840.883	
7	Profit/Loss	-114702.6	-85066.8	-93383.43	-40131.768	4405.056	71335.56	137159.117	
8	B/C ratio					1.04	1.58	2.01	
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			40	45	46	46	37	
2	Production (Kg/ha)			10400	11700	11960	11960	9620	
3	Total income (Rs)			312000	351000	358800	358800	288600	
4	Variable cost			147334.97	162068.468	178275.3	178275.3	178275.315	
5	Fixed cost			1900	1900	1900	1900	1900	
6	Total cost			149234.97	163968.468	180175.3	180175.3	180175.315	
7	Profit/Loss			162765.03	187031.532	178624.7	178624.7	108424.685	
8	B/C ratio			2.09	2.14	1.99	1.99	1.60	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mandarine Orange
Variety : Pokhara Local

District : Argakhanchi
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				104230			78500
a.	Human labor	Day	55	320	17600	35	330	11550
b.	Bullock labor	Day	8	850	6800	2	850	1700
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	160	1920	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	1.6	7200	6000	1.5	9000
i.	Fertilizer							
	Urea	Kg	30	25	750			
	DAP	Kg	15	50	750			
	Potash	Kg	10	36	360			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1000	5000
m.	Equipments	Number	5	900	4500			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11465.3			8635
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1950			1950
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			117645.3			89085

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)				6	15	22	36	
2	Production (Kg/ha)			1560		3900	5720	9360	
3	Total income (Rs)			56160		140400	205920	336960	
4	Variable cost	115695.3	87135	95848.5	105433.35	115976.7	127574.4	140331.789	
5	Fixed cost	1950	1950	1950	1950	1950	1950	1950	
6	Total cost	117645.3	89085	97798.5	107383.35	117926.7	129524.4	142281.789	
7	Profit/Loss	-117645.3	-89085	-97798.5	-51223.35	22473.32	76395.65	194678.211	
8	B/C ratio					1.19	1.59	2.37	
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			40	45	50	50	40	
2	Production (Kg/ha)			10400	11700	13000	13000	10400	
3	Total income (Rs)			374400	421200	468000	468000	374400	
4	Variable cost			154364.97	169801.465	186781.6	186781.6	186781.611	
5	Fixed cost			1950	1950	1950	1950	1950	
6	Total cost			156314.97	171751.465	188731.6	188731.6	188731.611	
7	Profit/Loss			218085.03	249448.535	279268.4	279268.4	185668.389	
8	B/C ratio			2.40	2.45	2.48	2.48	1.98	

2. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Sweet Orange
Variety : Local

District : Sindhuli
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				98224			76575
a.	Human labor	Day	55	325	17875	36	325	11700
b.	Bullock labor	Day	6	850	5100	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	215	2150	15	215	3225
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1000	4000			
g.	Sapling	Number	330	30	9900			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	25	50	1250			
	Potash	Kg	7	37	259			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			4000
l.	Training and Pruning					4	800	3200
m	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				10804.64			8423.25
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1775			1775
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			450			450
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			110803.64			86773.25

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				7	16	25	38
2	Production (Kg/ha)				1820	4160	6500	9880
3	Total income (Rs)				69160	158080	247000	375440
4	Variable cost	109028.6	84998.25	93498.075	102847.883	113132.7	124445.9	136890.53
5	Fixed cost	1775	1775	1775	1775	1775	1775	1775
6	Total cost	110803.6	86773.25	95273.075	104622.883	114907.7	126220.9	138665.53
7	Profit/Loss	-110804	-86773.3	-95273.08	-35462.8825	43172.33	120779.1	236774.47
8	B/C ratio					1.38	1.96	2.71
9	Cost per Kg					27.62	19.42	14.03
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		44	45	46	50	40	
2	Production (Kg/ha)		11440	11700	11960	13000	10400	
3	Total income (Rs)		434720	444600	454480	494000	395200	
4	Variable cost		150579.58	165637.543	182201.3	182201.3	182201.3	
5	Fixed cost		1775	1775	1775	1775	1775	
6	Total cost		152354.58	167412.543	183976.3	183976.3	183976.3	
7	Profit/Loss		282365.42	277187.457	270503.7	310023.7	211223.7	
8	B/C ratio		2.85	2.66	2.47	2.69	2.15	
9	Cost per Kg		13.32	14.31	15.38	14.15	17.69	

Condition of Sweet Orange Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling, pit digging	Number	25			
Manuring and pit filling	Number	15			
Seedling planting	Number	5			
Irrigation	Number	5			
Mulching	Number	5			
Total		55			
Materials Utilization					
Manure	Kg/Plant	15-40			
Chemical fertilizer	Kg/Plant	0.2			
Micronutrient	Kg/Plant	0.1-1			
No of seedling	Plants/ha	300	Mortality	10%	
Life span	Years	16-25			
Production start					
Grafted seedlings	Years	3			
By seed	Years	5			
Secondary production		Vegetables			
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in produciton	Number	260	500-600 fruits per plant		
Price	Rs/Kg	38			

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Sweet Orange
Variety : Local

District : Ramechap
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95620			73610
a.	Human labor	Day	56	330	18480	32	330	10560
b.	Bullock labor	Day	5	850	4250	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	180	1800	15	180	2700
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	30	9900			0
h.	Manure	Kg	4500	1.5	6750	6000	1.5	9000
i.	Fertilizer							
	Urea	Kg	20	26	520			
	DAP	Kg	25	50	1250			
	Potash	Kg	10	37	370			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					4	1000	4000
m	Equipments	Number	4	800	3200			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				10518.2			8097.1
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			107963.2			83532.1

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)				5	16	30	40	
2	Production (Kg/ha)			1300	4160	7800	10400		
3	Total income (Rs)			46800	149760	280800	374400		
4	Variable cost	106138.2	81707.1	98865.591	108752.2	119627.4	131590.1		
5	Fixed cost	1825	1825	1825	1825	1825	1825	1825	
6	Total cost	107963.2	83532.1	100690.591	110577.2	121452.4	133415.1		
7	Profit/Loss	-107963	-83532.1	-53890.591	39182.85	159347.6	240984.9		
8	B/C ratio				1.35	2.31	2.81		
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			44	46	48	45	36	
2	Production (Kg/ha)			11440	11960	12480	11700	9360	
3	Total income (Rs)			411840	430560	449280	421200	336960	
4	Variable cost			144749.11	159224.023	175146.4	175146.4	175146.43	
5	Fixed cost			1825	1825	1825	1825	1825	
6	Total cost			146574.11	161049.023	176971.4	176971.4	176971.43	
7	Profit/Loss			265265.89	269510.977	272308.6	244228.6	159988.57	
8	B/C ratio			2.81	2.67	2.54	2.38	1.90	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Sweet Orange
Variety : Local

District : Gulmi
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				99470			76100
a.	Human labor	Day	58	325	18850	35	325	11375
b.	Bullock labor	Day	6	800	4800	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4200	1.6	6720	5500	1.6	8800
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	25	50	1250			
	Potash	Kg	10	36	360			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					5	850	4250
m.	Equipments	Number	4	800	3200			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				10941.7			8371
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1815			1815
a.	Land tax	Rs			300			300
b.	Water tax	Rs			515			515
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			112226.7			86286

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				8	16	26	32
2	Production (Kg/ha)				2080	4160	6760	8320
3	Total income (Rs)				76960	153920	250120	307840
4	Variable cost	110411.7	84471	92918.1	102209.91	112430.9	123674	136041.39
5	Fixed cost	1815	1815	1815	1815	1815	1815	1815
6	Total cost	112226.7	86286	94733.1	104024.91	114245.9	125489	137856.39
7	Profit/Loss	-112227	-86286	-94733.1	-27064.91	39674.1	124631	169983.61
8	B/C ratio					1.35	1.99	2.23
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			36	44	47	46	37
2	Production (Kg/ha)			9360	11440	12220	11960	9620
3	Total income (Rs)			346320	423280	452140	442520	355940
4	Variable cost			149645.53	164610.082	181071.1	181071.1	181071.09
5	Fixed cost			1815	1815	1815	1815	1815
6	Total cost			151460.53	166425.082	182886.1	182886.1	182886.09
7	Profit/Loss			194859.47	256854.918	269253.9	259633.9	173053.91
8	B/C ratio			2.29	2.54	2.47	2.42	1.95

3. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Apple
Variety : Golden Delicious

District : Mustang
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				117125			84000
a.	Human labor	Day	75	275	20625	40	275	11000
b.	Bullock labor	Day	6	750	4500	2	750	1500
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	200	2000	15	200	3000
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				14055			10080
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			133005			95905

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
	No of plants in production:				240	Price (Rs/ Kg) :		45
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				6	14	25	36
2	Production (Kg/ha)				1440	3360	6000	8640
3	Total income (Rs)				64800	151200	270000	388800
4	Variable cost	131180	94080	103488	113836.8	125220.5	137742.5	151516.78
5	Fixed cost	1825	1825	1825	1825	1825	1825	1825
6	Total cost	133005	95905	105313	115661.8	127045.5	139567.5	153341.78
7	Profit/Loss	-133005	-95905	-105313	-50861.8	24154.52	130432.5	235458.22
8	B/C ratio					1.19	1.93	2.54
9	Cost per Kg					37.81	23.26	17.75
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	46	46	46	37
2	Production (Kg/ha)			9600	11040	11040	11040	8880
3	Total income (Rs)			432000	496800	496800	496800	399600
4	Variable cost			166668.46	183335.305	201668.8	221835.7	244019.29
5	Fixed cost			1825	1825	1825	1825	1825
6	Total cost			168493.46	185160.305	203493.8	223660.7	245844.29
7	Profit/Loss			263506.54	311639.695	293306.2	273139.3	153755.71
8	B/C ratio			2.56	2.68	2.44	2.22	1.63
9	Cost per Kg			17.55	16.77	18.43	20.26	27.69

Condition of Apple Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling, pit digging	Number	40		
Manuring and pit filling	Number	15		
Seedling planting	Number	5		
Irrigation	Number	5		
Mulching	Number	10		
Total		75		
Materials Utilization				
Manure	Kg/Plant	25-40		
Micronutrient	Kg/Plant	0.1-1		
No of seedling	Plants/ha	300	Mortality	10%
Life span	Years	25-40		
Production start				
Grafted seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in produciton	Number	240		
Price	Rs/Kg	45		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Apple
Variety : Red Delicious

District : Jumla
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				115860			85350
a.	Human labor	Day	70	300	21000	42	300	12600
b.	Bullock labor	Day	8	700	5600	2	700	1400
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	190	1900	15	190	2850
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	32	10560			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				13903.2			10242
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1925			1925
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			131688.2			97517

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				7	20	25	35
2	Production (Kg/ha)				1680	4800	6000	8400
3	Total income (Rs)				58800	168000	210000	294000
4	Variable cost	129763.2	95592	105151.2	115666.32	127233	139956.2	153951.87
5	Fixed cost	1925	1925	1925	1925	1925	1925	1925
6	Total cost	131688.2	97517	107076.2	117591.32	129158	141881.2	155876.87
7	Profit/Loss	-131688	-97517	-107076.2	-58791.32	38842.05	68118.75	138123.13
8	B/C ratio					1.30	1.48	1.89
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	44	45	42	34
2	Production (Kg/ha)			9600	10560	10800	10080	8160
3	Total income (Rs)			336000	369600	378000	352800	285600
4	Variable cost			169347.06	186281.765	204909.9	225400.9	247941.03
5	Fixed cost			1925	1925	1925	1925	1925
6	Total cost			171272.06	188206.765	206834.9	227325.9	249866.03
7	Profit/Loss			164727.94	181393.235	171165.1	125474.1	35733.971
8	B/C ratio			1.96	1.96	1.83	1.55	1.14

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Apple
Variety : Golden Delicious

District : Solukhumbu
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				116950			86100
a.	Human labor	Day	70	300	21000	45	300	13500
b.	Bullock labor	Day	7	750	5250	2	750	1500
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	175	1750	12	175	2100
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	30	9900			0
h.	Manure	Kg	4500	2.5	11250	5000	2.5	12500
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				14034			10332
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1900			1900
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			132884			98332

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				6	15	22	35
2	Production (Kg/ha)				1440	3600	5280	8400
3	Total income (Rs)				57600	144000	211200	336000
4	Variable cost	130984	96432	106075.2	116682.72	128351	141186.1	155304.7
5	Fixed cost	1900	1900	1900	1900	1900	1900	1900
6	Total cost	132884	98332	107975.2	118582.72	130251	143086.1	157204.7
7	Profit/Loss	-132884	-98332	-107975.2	-60982.72	13749.01	68113.91	178795.3
8	B/C ratio					1.11	1.48	2.14
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	42	44	44	35
2	Production (Kg/ha)			9600	10080	10560	10560	8400
3	Total income (Rs)			384000	403200	422400	422400	336000
4	Variable cost			170835.17	187918.687	206710.6	227381.6	250119.77
5	Fixed cost			1900	1900	1900	1900	1900
6	Total cost			172735.17	189818.687	208610.6	229281.6	252019.77
7	Profit/Loss			211264.83	213381.313	213789.4	193118.4	83980.227
8	B/C ratio			2.22	2.12	2.02	1.84	1.33

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Apple
Variety : Golden Delicious

District : Humla
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				119575			85800
a.	Human labor	Day	75	300	22500	38	300	11400
b.	Bullock labor	Day	8	700	5600	2	700	1400
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	200	2000	15	200	3000
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	2.25	10125	6000	2.25	13500
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1500	7500
m	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				14349			10296
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1925			1925
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			600			600
3	Total cost	Rs			135849			98021

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO										
SN	Year	Investment Phase	2	3	4	5	6	7	6	7
1	Production (Kg/plant)				7	12	20	28		
2	Production (Kg/ha)			1680	2880	4800	6720			
3	Total income (Rs)			58800	100800	168000	235200			
4	Variable cost	133924	96096	105705.6	116276.16	127903.8	140694.2	154763.57		
5	Fixed cost	1925	1925	1925	1925	1925	1925	1925		
6	Total cost	135849	98021	107630.6	118201.16	129828.8	142619.2	156688.57		
7	Profit/Loss	-135849	-98021	-107630.6	-59401.16	-29028.8	25380.85	78511.431		
8	B/C ratio						1.18	1.50		
SN	Year			8	9	10	11-15 Yr	16-25 Yr		
1	Production (Kg/plant)			32	35	40	40	32		
2	Production (Kg/ha)			7680	8400	9600	9600	7680		
3	Total income (Rs)			268800	294000	336000	336000	268800		
4	Variable cost			170239.93	187263.918	205990.3	226589.3	249248.28		
5	Fixed cost			1925	1925	1925	1925	1925		
6	Total cost			172164.93	189188.918	207915.3	228514.3	251173.28		
7	Profit/Loss			96635.074	104811.082	128084.7	107485.7	17626.725		
8	B/C ratio			1.56	1.55	1.62	1.47	1.07		

4. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Mango
Variety : Local

District : Dadeldhura
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				98763			76900
a.	Human labor	Day	50	350	17500	30	350	10500
b.	Bullock labor	Day	3	900	2700	1	900	900
c.	Tractor	hour	1	1600	1600	1	1600	1600
d.	Pump set, water pond	hour	15	130	1950	20	130	2600
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1250	6250			
g.	Sapling	Number	110	50	5500			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	15	25	375			
	DAP	Kg	22	50	1100			
	Potash	Kg	8	36	288			
j.	Plant protection chemical	Rs			2500	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1000	2000
m.	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11851.56			9228
p.	Others	Rs			2500			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2300			2300
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			112914.56			88428

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				20	45	65	80
2	Production (Kg/ha)				1700	3825	5525	6800
3	Total income (Rs)				68000	153000	221000	272000
4	Variable cost	110614.56	86128	94740.8	104214.88	114636.4	126100	138710.01
5	Fixed cost	2300	2300	2300	2300	2300	2300	2300
6	Total cost	112914.56	88428	97040.8	106514.88	116936.4	128400	141010.01
7	Profit/Loss	-112914.56	-88428	-97040.8	-38514.88	36063.63	92600	130989.99
8	B/C ratio					1.31	1.72	1.93
9	Cost per Kg					30.57	23.24	20.74
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		90	100	115	125	100	
2	Production (Kg/ha)		7650	8500	9775	10625	8500	
3	Total income (Rs)		306000	340000	391000	425000	340000	
4	Variable cost		152581	167839.106	184623	203085.3	223393.85	
5	Fixed cost		2300	2300	2300	2300	2300	
6	Total cost		154881	170139.106	186923	205385.3	225693.85	
7	Profit/Loss		151119	169860.894	204077	219614.7	114306.15	
8	B/C ratio		1.98	2.00	2.09	2.07	1.51	
9	Cost per Kg		20.25	20.02	19.12	19.33	26.55	

Condition of Mango Fruits							
Human labor Requirement (First year)							
Activities	Units	Labor	Year	No/plant	Kg/plant		
Land leveling. Pit digging	Number	20	10	500	125.00		
Manuring and pit filling	Number	15	9	400	100.00		
Seedling planting	Number	5	8	310	77.50		
Irrigation	Number	5	7	210	52.50		
Mulching	Number	5	6	180	45.00		
Total		50		1 kg =4 mango			
Materials Utilization							
Manure	Kg/Plant	20-50					
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)				
Micronutrient	Kg/Plant	0.2-1					
No of seedling	Plants/ha	100	Mortality	10%			
Life span	Years	25-40					
Production start							
Layering seedlings	Years	4					
By seed	Years	5					
Secondary production		Vegetables					
Note : Benefit and cost are equal for secondary crops							
Production Process							
No of Plants in production	Number	85					
Price	Rs/Kg	40					

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Maldaha

District : Siraha
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				94513			79810
a.	Human labor	Day	55	350	19250	30	350	10500
b.	Bullock labor	Day	1	900	900	2	900	1800
c.	Tractor	hour	1	1600	1600	1	1600	1600
d.	Pump set, water pond	hour	15	130	1950	20	130	2600
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	110	35	3850			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	18	50	900
	Potash	Kg	8	36	288	10	36	360
j.	Plant protection chemical	Rs			2500	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum			2750			3000
l.	Training and Pruning					2	1250	2500
m	Equipments	Number	4	1250	5000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11341.56			9577.2
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2375			2375
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			108229.56			91762.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				20	50	80	100
2	Production (Kg/ha)				1700	4250	6800	8500
3	Total income (Rs)				64600	161500	258400	323000
4	Variable cost	105854.56	89387.2	98325.92	108158.512	118974.4	130871.8	143958.98
5	Fixed cost	2375	2375	2375	2375	2375	2375	2375
6	Total cost	108229.56	91762.2	100700.9	110533.512	121349.4	133246.8	146333.98
7	Profit/Loss	-108229.56	-91762.2	-100701	-45933.512	40150.64	125153.2	176666.02
8	B/C ratio						1.94	2.21
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			110	120	125	130	100
2	Production (Kg/ha)			9350	10200	10625	11050	8500
3	Total income (Rs)			355300	387600	403750	419900	323000
4	Variable cost			158354.9	174190.365	191609.4	210770.3	231847.38
5	Fixed cost			2375	2375	2375	2375	2375
6	Total cost			160729.9	176565.365	193984.4	213145.3	234222.38
7	Profit/Loss			194570.1	211034.635	209765.6	206754.7	88777.624
8	B/C ratio			2.21	2.20	2.08	1.97	1.38

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Maldaha

District : Jhapa
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				94210			76960
a.	Human labor	Day	48	350	16800	30	350	10500
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	4	1600	6400	1	1600	1600
d.	Pump set, water pond	hour	15	125	1875	20	125	2500
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	110	60	6600			0
h.	Manure	Kg	2500	2	5000	3000	2	6000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	12	50	600	15	50	750
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	4	1200	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1250	2500
m.	Equipments	Number	4	100	400			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11305.2			9235.2
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			107640.2			88320.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	45	60	80
2	Production (Kg/ha)				2125	3825	5100	6800
3	Total income (Rs)				76500	137700	183600	244800
4	Variable cost	105515.2	86195.2	94814.72	104296.192	114725.8	126198.4	138818.23
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	107640.2	88320.2	96939.72	106421.192	116850.8	128323.4	140943.23
7	Profit/Loss	-107640.2	-88320.2	-96939.7	-29921.192	20849.19	55276.61	103856.77
8	B/C ratio					1.18	1.43	1.74
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			95	115	120	130	104
2	Production (Kg/ha)			8075	9775	10200	11050	8840
3	Total income (Rs)			290700	351900	367200	397800	318240
4	Variable cost			152700.1	167970.06	184767.1	203243.8	223568.15
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			154825.1	170095.06	186892.1	205368.8	225693.15
7	Profit/Loss			135874.9	181804.94	180307.9	192431.2	92546.85
8	B/C ratio			1.88	2.07	1.96	1.94	1.41

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Local

District : Doti
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				97938			74800
a.	Human labor	Day	55	325	17875	35	325	11375
b.	Bullock labor	Day	1	800	800	1	800	800
c.	Tractor	hour	3	1650	4950	1	1650	1650
d.	Pump set, water pond	hour	14	125	1750	15	125	1875
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	110	40	4400			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625			
	DAP	Kg	15	50	750			
	Potash	Kg	8	36	288			
j.	Plant protection chemical	Rs			2500	4	1000	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	800	1600
m	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11752.56			8976
p.	Others	Rs			2700			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2375			2375
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			112065.56			86151

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	45	65	80
2	Production (Kg/ha)				2125	3825	5525	6800
3	Total income (Rs)				74375	133875	193375	238000
4	Variable cost	109690.56	83776	92153.6	101368.96	111505.9	122656.4	134922.09
5	Fixed cost	2375	2375	2375	2375	2375	2375	2375
6	Total cost	112065.56	86151	94528.6	103743.96	113880.9	125031.4	137297.09
7	Profit/Loss	-112065.56	-86151	-94528.6	-29368.96	19994.14	68343.56	100702.91
8	B/C ratio					1.18	1.55	1.73
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			95	115	120	125	100
2	Production (Kg/ha)			8075	9775	10200	10625	8500
3	Total income (Rs)			282625	342125	357000	371875	297500
4	Variable cost			148414.3	163255.724	179581.3	197539.4	217293.37
5	Fixed cost			2375	2375	2375	2375	2375
6	Total cost			150789.3	165630.724	181956.3	199914.4	219668.37
7	Profit/Loss			131835.7	176494.276	175043.7	171960.6	77831.632
8	B/C ratio			1.87	2.07	1.96	1.86	1.35

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Dasahari

District : Makwanpur
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95735			78785
a.	Human labor	Day	50	350	17500	30	350	10500
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	3	1650	4950	1	1650	1650
d.	Pump set, water pond	hour	15	150	2250	17	150	2550
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	110	40	4400			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	25	25	625
	DAP	Kg	15	50	750	20	50	1000
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1200	2400
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11488.2			9454.2
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109348.2			90364.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	50	65	85
2	Production (Kg/ha)				2125	4250	5525	7225
3	Total income (Rs)				85000	170000	221000	289000
4	Variable cost	107223.2	88239.2	97063.12	106769.432	117446.4	129191	142110.11
5	Fixed cost		2125	2125	2125	2125	2125	2125
6	Total cost	109348.2	90364.2	99188.12	108894.432	119571.4	131316	144235.11
7	Profit/Loss	-109348.2	-90364.2	-99188.1	-23894.432	50428.62	89683.99	144764.89
8	B/C ratio						1.68	2.00
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			100	115	120	130	100
2	Production (Kg/ha)			8500	9775	10200	11050	8500
3	Total income (Rs)			340000	391000	408000	442000	340000
4	Variable cost			156321.1	171953.238	189148.6	208063.4	228869.76
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			158446.1	174078.238	191273.6	210188.4	230994.76
7	Profit/Loss			181553.9	216921.762	216726.4	231811.6	109005.24
8	B/C ratio			2.15	2.25	2.13	2.10	1.47

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Dasahari

District : Udayapur
Propagation Layering/Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				96285			76235
a.	Human labor	Day	50	350	17500	30	350	10500
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	3	1600	4800	1	1600	1600
d.	Pump set, water pond	hour	15	150	2250	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1250	5000			
g.	Sapling	Number	110	35	3850			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	25	25	625
	DAP	Kg	15	50	750	20	50	1000
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	3	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2750			3000
l.	Training and Pruning					2	1000	2000
m.	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11554.2			9148.2
p.	Others	Rs			2700			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2150			2150
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109989.2			87533.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				20	45	70	90
2	Production (Kg/ha)				1700	3825	5950	7650
3	Total income (Rs)				56100	126225	196350	252450
4	Variable cost	107839.2	85383.2	93921.52	103313.672	113645	125009.5	137510.5
5	Fixed cost	2150	2150	2150	2150	2150	2150	2150
6	Total cost	109989.2	87533.2	96071.52	105463.672	115795	127159.5	139660.5
7	Profit/Loss	-109989.2	-87533.2	-96071.5	-49363.672	10429.96	69190.46	112789.5
8	B/C ratio						1.54	1.81
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			105	120	120	125	100
2	Production (Kg/ha)			8925	10200	10200	10625	8500
3	Total income (Rs)			294525	336600	336600	350625	280500
4	Variable cost			151261.5	166387.702	183026.5	201329.1	221462.03
5	Fixed cost			2150	2150	2150	2150	2150
6	Total cost			153411.5	168537.702	185176.5	203479.1	223612.03
7	Profit/Loss			141113.5	168062.298	151423.5	147145.9	56887.969
8	B/C ratio			1.92	2.00	1.82	1.72	1.25

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety :Maldaha

District : Dang
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				97785			76335
a.	Human labor	Day	50	350	17500	25	350	8750
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	4	1600	6400	1	1600	1600
d.	Pump set, water pond	hour	15	150	2250	20	150	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1500	6000			
g.	Sapling	Number	110	40	4400			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	25	25	625
	DAP	Kg	15	50	750	20	50	1000
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			2800			3000
l.	Training and Pruning					2	1250	2500
m	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11734.2			9160.2
p.	Others	Rs			2700			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2100			2100
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			111619.2			87595.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	45	70	95
2	Production (Kg/ha)				2125	3825	5950	8075
3	Total income (Rs)				74375	133875	208250	282625
4	Variable cost	109519.2	85495.2	94044.72	103449.192	113794.1	125173.5	137690.87
5	Fixed cost	2100	2100	2100	2100	2100	2100	2100
6	Total cost	111619.2	87595.2	96144.72	105549.192	115894.1	127273.5	139790.87
7	Profit/Loss	-111619.2	-87595.2	-96144.7	-31174.192	17980.89	80976.48	142834.13
8	B/C ratio						1.64	2.02
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			115	120	125	125	100
2	Production (Kg/ha)			9775	10200	10625	10625	8500
3	Total income (Rs)			342125	357000	371875	371875	297500
4	Variable cost			151460	166605.958	183266.6	201593.2	221752.53
5	Fixed cost			2100	2100	2100	2100	2100
6	Total cost			153560	168705.958	185366.6	203693.2	223852.53
7	Profit/Loss			188565	188294.042	186508.4	168181.8	73647.47
8	B/C ratio			2.23	2.12	2.01	1.83	1.33

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Dasahari

District : Dhanusa
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95610			77935
a.	Human labor	Day	50	350	17500	30	350	10500
b.	Bullock labor	Day	1	850	850	1	850	850
c.	Tractor	hour	3	1600	4800	1	1600	1600
d.	Pump set, water pond	hour	15	125	1875	20	125	2500
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1250	5000			
g.	Sapling	Number	110	40	4400			0
h.	Manure	Kg	2000	2	4000	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	25	25	625
	DAP	Kg	15	50	750	20	50	1000
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			2200			3000
l.	Training and Pruning					2	1000	2000
m	Equipments	Number	4	1250	5000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11473.2			9352.2
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109208.2			89412.2

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	40	65	85
2	Production (Kg/ha)				2125	3400	5525	7225
3	Total income (Rs)				76500	122400	198900	260100
4	Variable cost	107083.2	87287.2	96015.92	105617.512	116179.3	127797.2	140576.91
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	109208.2	89412.2	98140.92	107742.512	118304.3	129922.2	142701.91
7	Profit/Loss	-109208.2	-89412.2	-98140.9	-31242.512	4095.737	68977.81	117398.09
8	B/C ratio					1.03	1.53	1.82
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			100	115	120	125	100
2	Production (Kg/ha)			8500	9775	10200	10625	8500
3	Total income (Rs)			306000	351900	367200	382500	306000
4	Variable cost			154634.6	170098.059	187107.9	205818.7	226400.52
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			156759.6	172223.059	189232.9	207943.7	228525.52
7	Profit/Loss			149240.4	179676.941	177967.1	174556.3	77474.483
8	B/C ratio			1.95	2.04	1.94	1.84	1.34

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Maldaha

District : Sarlahi
Propagation Layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95585			80060
a.	Human labor	Day	45	350	15750	32	350	11200
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	4	1700	6800	1	1700	1700
d.	Pump set, water pond	hour	15	150	2250	20	150	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	110	40	4400			0
h.	Manure	Kg	2250	2	4500	2500	2	5000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1200	2400
m.	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11470.2			9607.2
p.	Others	Rs			2700			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109180.2			91792.2

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)				25	50	70	100	
2	Production (Kg/ha)				2125	4250	5950	8500	
3	Total income (Rs)				80750	161500	226100	323000	
4	Variable cost	107055.2	89667.2	98633.92	108497.312	119347	131281.7	144409.92	
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125	
6	Total cost	109180.2	91792.2	100758.9	110622.312	121472	133406.7	146534.92	
7	Profit/Loss	-109180.2	-91792.2	-100759	-29872.312	40027.96	92693.25	176465.08	
8	B/C ratio						1.69	2.20	
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			115	120	130	125	105	
2	Production (Kg/ha)			9775	10200	11050	10625	8925	
3	Total income (Rs)			371450	387600	419900	403750	339150	
4	Variable cost			158850.9	174736.006	192209.6	211430.6	232573.62	
5	Fixed cost			2125	2125	2125	2125	2125	
6	Total cost			160975.9	176861.006	194334.6	213555.6	234698.62	
7	Profit/Loss			210474.1	210738.994	225565.4	190194.4	104451.38	
8	B/C ratio			2.31	2.19	2.16	1.89	1.45	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Mango
Variety : Dasahari

District : Chitwan
Propagation Layering/Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				96185			77235
a.	Human labor	Day	50	350	17500	28	350	9800
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	3	1700	5100	1	1700	1700
d.	Pump set, water pond	hour	12	150	1800	18	150	2700
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	110	60	6600			0
h.	Manure	Kg	2250	2	4500	2250	2	4500
i.	Fertilizer							
	Urea	Kg	25	25	625	25	25	625
	DAP	Kg	12	50	600	15	50	750
	Potash	Kg	10	36	360	10	36	360
j.	Plant protection chemical	Rs			2500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1200	2400
m	Equipments	Number	3	1250	3750			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11542.2			9268.2
p.	Others	Rs			2700			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109852.2			88628.2

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				25	50	75	100
2	Production (Kg/ha)				2125	4250	6375	8500
3	Total income (Rs)				85000	170000	255000	340000
4	Variable cost	107727.2	86503.2	95153.52	104668.872	115135.8	126649.3	139314.27
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	109852.2	88628.2	97278.52	106793.872	117260.8	128774.3	141439.27
7	Profit/Loss	-109852.2	-88628.2	-97278.5	-21793.872	52739.24	126225.7	198560.73
8	B/C ratio						1.98	2.40
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			120	130	135	135	110
2	Production (Kg/ha)			10200	11050	11475	11475	9350
3	Total income (Rs)			408000	442000	459000	459000	374000
4	Variable cost			153245.7	168570.265	185427.3	203970	224367.02
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			155370.7	170695.265	187552.3	206095	226492.02
7	Profit/Loss			252629.3	271304.735	271447.7	252905	147507.98
8	B/C ratio			2.63	2.59	2.45	2.23	1.65

5. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Litchi
Variety : Local

District : Palpa
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				96160			79990
a.	Human labor	Day	42	325	13650	30	325	9750
b.	Bullock labor	Day	5	900	4500	2	900	1800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	15	120	1800	20	100	2000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1300	6500			
g.	Sapling	Number	165	30	4950			0
h.	Manure	Kg	3200	2	6400	4500	2	9000
i.	Fertilizer							
	Urea	Kg	30	25	750	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2500	4	1600	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3500
l.	Training and Pruning					2	1200	2400
m.	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11539.2			9598.8
p.	Others	Rs			2500			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2425			2425
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			1050			1050
3	Total cost	Rs			110124.2			92013.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
	No of plants in production :				135	Price (Rs/ Kg) :		40
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				12	25	45	60
2	Production Kg/Ha				1620	3375	6075	8100
3	Total income (Rs)				64800	135000	243000	324000
4	Variable cost	107699.2	89588.8	98547.68	108402.448	119242.7	131167	144283.66
5	Fixed cost	2425	2425	2425	2425	2425	2425	2425
6	Total cost	110124.2	92013.8	100972.68	110827.448	121667.7	133592	146708.66
7	Profit/Loss	-110124	-92013.8	-100972.7	-46027.448	13332.31	109408	177291.34
8	B/C ratio					1.11	1.82	2.21
9	Cost per Kg					36.05	21.99	18.11
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			80	95	100	100	70
2	Production (Kg/ha)			10800	12825	13500	13500	9450
3	Total income (Rs)			432000	513000	540000	540000	378000
4	Variable cost			158712.02	174583.227	192041.5	211245.7	232370.27
5	Fixed cost			2425	2425	2425	2425	2425
6	Total cost			161137.02	177008.227	194466.5	213670.7	234795.27
7	Profit/Loss			270862.98	335991.773	345533.5	326329.3	143204.73
8	B/C ratio			2.68	2.90	2.78	2.53	1.61
9	Cost per Kg			14.92	13.80	14.40	15.83	24.85

Condition of Litchi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling, Pit digging	No/day	24		
Manuring and pit filling	No/day	8		
Seedling planting	No/day	5		
Irrigation	No/day	2		
Mulching	No/day	3		
Total		42		
Materials Utilization				
Manure	Kg/Plant	20		
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
Micronutrient	Kg/Plant	1	after 10 years	
No of seedling	Plants/ha	150	Mortality	10%
Life span	Years	25-40		
Production start				
Layering seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	135		
Price	Rs/Kg	40		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Kapilwastu
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				102735			82340
a.	Human labor	Day	46	350	16100	30	350	10500
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	4	1650	6600	2	1650	3300
d.	Pump set, water pond	hour	15	125	1875	20	125	2500
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1400	5600			
g.	Sapling	Number	165	40	6600			0
h.	Manure	Kg	3200	2	6400	4500	2	9000
i.	Fertilizer							
	Urea	Kg	30	25	750	30	25	750
	DAP	Kg	25	50	1250	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2500	4	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3200			3500
l.	Training and Pruning					2	1000	2000
m	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				12328.2			9880.8
p.	Others	Rs			2500			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2370			2370
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			520			520
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			117433.2			94590.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	50	70
2	Production (Kg/Ha)				2025	4050	6750	9450
3	Total income (Rs)				91125	182250	303750	425250
4	Variable cost	115063.2	92220.8	101442.88	111587.168	122745.9	135020.5	148522.52
5	Fixed cost	2370	2370	2370	2370	2370	2370	2370
6	Total cost	117433.2	94590.8	103812.88	113957.168	125115.9	137390.5	150892.52
7	Profit/Loss	-117433	-94590.8	-103812.9	-22832.168	57134.12	166359.5	274357.48
8	B/C ratio					1.46	2.21	2.82
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			90	95	100	100	72
2	Production Kg/Ha			12150	12825	13500	13500	9720
3	Total income (Rs)			546750	577125	607500	607500	437400
4	Variable cost			163374.77	179712.25	197683.5	217451.8	239197
5	Fixed cost			2370	2370	2370	2370	2370
6	Total cost			165744.77	182082.25	200053.5	219821.8	241567
7	Profit/Loss			381005.23	395042.75	407446.5	387678.2	195833
8	B/C ratio			3.30	3.17	3.04	2.76	1.81

Condition of Litchi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling. Pit digging	No/day	25		
Manuring and pit filling	No/day	10		
Seedling planting	No/day	5		
Irrigation	No/day	2		
Mulching	No/day	3		
Total		45		
Materials Utilization				
Manure	Kg/Plant	20		
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
Micronutrient	Kg/Plant	1	after 10 years	
No of seedling	Plants/ha	150	Mortality	10%
Life span	Years	25-40		
Production start				
Layering seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	135		
Price	Rs/Kg	45		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Rautahat
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				101688			83240
a.	Human labor	Day	45	350	15750	30	350	10500
b.	Bullock labor	Day	2	900	1800	1	900	900
c.	Tractor	hour	4	1650	6600	2	1650	3300
d.	Pump set, water pond	hour	15	125	1875	20	125	2500
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1250	6250			
g.	Sapling	Number	165	30	4950			0
h.	Manure	Kg	3200	2	6400	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	8	36	288	15	36	540
j.	Plant protection chemical	Rs			2500	4	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2750			3500
l.	Training and Pruning					2	1000	2000
m	Equipments	Number	6	900	5400			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				12202.56			9988.8
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2375			2375
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			116265.56			95603.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	45	65
2	Production (Kg/Ha)				2025	4050	6075	8775
3	Total income (Rs)				81000	162000	243000	351000
4	Variable cost	113890.6	93228.8	102551.68	112806.848	124087.5	136496.3	150145.91
5	Fixed cost	2375	2375	2375	2375	2375	2375	2375
6	Total cost	116265.6	95603.8	104926.68	115181.848	126462.5	138871.3	152520.91
7	Profit/Loss	-116266	-95603.8	-104926.7	-34181.848	35537.47	104128.7	198479.09
8	B/C ratio					1.28	1.75	2.30
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		80	95	100	100	70	
2	Production Kg/Ha		10800	12825	13500	13500	9450	
3	Total income (Rs)		432000	513000	540000	540000	378000	
4	Variable cost		165160.51	181676.557	199844.2	219828.6	241811.5	
5	Fixed cost		2375	2375	2375	2375	2375	
6	Total cost		167535.51	184051.557	202219.2	222203.6	244186.5	
7	Profit/Loss		264464.49	328948.443	337780.8	317796.4	133813.5	
8	B/C ratio		2.58	2.79	2.67	2.43	1.55	

Condition of Litchi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling. Pit digging	No/day	25		
	Manuring and pit filling	No/day	10		
	Seedling planting	No/day	5		
	Irrigation	No/day	2		
	Mulching	No/day	3		
	Total		45		
	Materials Utilization				
	Manure	Kg/Plant	20		
	Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
	Micronutrient	Kg/Plant	1	after 10 years	
	No of seedling	Plants/ha	150	Mortality	10%
	Life span	Years	25-40		
	Production start				
	Layering seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
	Production Process				
	No of Plants in production	Number	135		
	Price	Rs/Kg	40		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Sunsari
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				98213			83640
a.	Human labor	Day	42	350	14700	30	350	10500
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	3	1600	4800	2	1600	3200
d.	Pump set, water pond	hour	15	130	1950	20	130	2600
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	165	30	4950			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	8	36	288	15	36	540
j.	Plant protection chemical	Rs			2500	4	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1200	2400
m.	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11785.56			10036.8
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2300			2300
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			112298.56			95976.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				12	25	50	60
2	Production (Kg/Ha)				1620	3375	6750	8100
3	Total income (Rs)				56700	118125	236250	283500
4	Variable cost	109998.6	93676.8	103044.48	113348.928	124683.8	137152.2	150867.42
5	Fixed cost	2300	2300	2300	2300	2300	2300	2300
6	Total cost	112298.6	95976.8	105344.48	115648.928	126983.8	139452.2	153167.42
7	Profit/Loss	-112299	-95976.8	-105344.5	-58948.928	-8858.82	96797.8	130332.58
8	B/C ratio						1.69	1.85
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			75	90	95	100	72
2	Production Kg/Ha			10125	12150	12825	13500	9720
3	Total income (Rs)			354375	425250	448875	472500	340200
4	Variable cost			165954.17	182549.582	200804.5	220885	242973.49
5	Fixed cost			2300	2300	2300	2300	2300
6	Total cost			168254.17	184849.582	203104.5	223185	245273.49
7	Profit/Loss			186120.83	240400.418	245770.5	249315	94926.506
8	B/C ratio			2.11	2.30	2.21	2.12	1.39

Condition of Litchi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling. Pit digging	No/day	25		
Manuring and pit filling	No/day	10		
Seedling planting	No/day	5		
Irrigation	No/day	2		
Mulching	No/day	3		
Total		45		
Materials Utilization				
Manure	Kg/Plant	20		
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
Micronutrient	Kg/Plant	1	after 10 years	
No of seedling	Plants/ha	150	Mortality	10%
Life span	Years	25-40		
Production start				
Layering seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	135		
Price	Rs/Kg	35		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Dhankuta
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				98210			80690
a.	Human labor	Day	50	325	16250	30	325	9750
b.	Bullock labor	Day	4	900	3600	2	900	1800
c.	Tractor	hour	0	0	0	0	0	0
d.	Pump set, water pond	hour	15	130	1950	20	130	2600
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	165	35	5775			0
h.	Manure	Kg	3200	2	6400	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2500	4	1250	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1250	2500
m.	Equipments	Number	5	1100	5500			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11785.2			9682.8
p.	Others	Rs			2500			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2375			2375
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			550			550
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			112370.2			92747.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				20	35	50	70
2	Production (Kg/Ha)				2700	4725	6750	9450
3	Total income (Rs)				113400	198450	283500	396900
4	Variable cost	109995.2	90372.8	99410.08	109351.088	120286.2	132314.8	145546.3
5	Fixed cost	2375	2375	2375	2375	2375	2375	2375
6	Total cost	112370.2	92747.8	101785.08	111726.088	122661.2	134689.8	147921.3
7	Profit/Loss	-112370	-92747.8	-101785.1	1673.912	75788.8	148810.2	248978.7
8	B/C ratio					1.62	2.10	2.68
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		80	95	95	95	70	
2	Production Kg/Ha		10800	12825	12825	12825	9450	
3	Total income (Rs)		453600	538650	538650	538650	396900	
4	Variable cost		160100.93	176111.021	193722.1	213094.3	234403.77	
5	Fixed cost		2375	2375	2375	2375	2375	
6	Total cost		162475.93	178486.021	196097.1	215469.3	236778.77	
7	Profit/Loss		291124.07	360163.979	342552.9	323180.7	160121.23	
8	B/C ratio		2.79	3.02	2.75	2.50	1.68	

Condition of Litchi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling. Pit digging	No/day	30		
Manuring and pit filling	No/day	10		
Seedling planting	No/day	5		
Irrigation	No/day	2		
Mulching	No/day	3		
Total		50		
Materials Utilization				
Manure	Kg/Plant	20		
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
Micronutrient	Kg/Plant	1	after 10 years	
No of seedling	Plants/ha	150	Mortality	10%
Life span	Years	25-40		
Production start				
Layering seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	135		
Price	Rs/Kg	42		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Dhanusa
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				100685			84290
a.	Human labor	Day	45	350	15750	32	350	11200
b.	Bullock labor	Day	1	850	850	1	850	850
c.	Tractor	hour	4	1600	6400	2	1600	3200
d.	Pump set, water pond	hour	15	150	2250	20	150	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	165	30	4950			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2500	4	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3200			3500
l.	Training and Pruning					2	1000	2000
m.	Equipments	Number	5	1250	6250			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				12082.2			10114.8
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2350			2350
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			115117.2			96754.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	50	70
2	Production (Kg/Ha)				2025	4050	6750	9450
3	Total income (Rs)				70875	141750	236250	330750
4	Variable cost	112767.2	94404.8	103845.28	114229.808	125652.8	138218.1	152039.87
5	Fixed cost	2350	2350	2350	2350	2350	2350	2350
6	Total cost	115117.2	96754.8	106195.28	116579.808	128002.8	140568.1	154389.87
7	Profit/Loss	-115117	-96754.8	-106195.3	-45704.808	13747.21	95681.93	176360.13
8	B/C ratio						1.68	2.14
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			85	90	95	95	72
2	Production Kg/Ha			11475	12150	12825	12825	9720
3	Total income (Rs)			401625	425250	448875	448875	340200
4	Variable cost			167243.86	183968.248	202365.1	222601.6	244861.74
5	Fixed cost			2350	2350	2350	2350	2350
6	Total cost			169593.86	186318.248	204715.1	224951.6	247211.74
7	Profit/Loss			232031.14	238931.752	244159.9	223923.4	92988.262
8	B/C ratio			2.37	2.28	2.19	2.00	1.38

Condition of Litchi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling, Pit digging	No/day	26		
Manuring and pit filling	No/day	9		
Seedling planting	No/day	5		
Irrigation	No/day	2		
Mulching	No/day	3		
Total		45		
Materials Utilization				
Manure	Kg/Plant	20		
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
Micronutrient	Kg/Plant	1	after 10 years	
No of seedling	Plants/ha	150	Mortality	10%
Life span	Years	25-40		
Production start				
Layering seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in produciton	Number	135		
Price	Rs/Kg	35		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Banke
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				99985			84940
a.	Human labor	Day	45	350	15750	32	350	11200
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	4	1650	6600	2	1650	3300
d.	Pump set, water pond	hour	15	120	1800	20	120	2400
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	165	35	5775			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	30	25	750	30	25	750
	DAP	Kg	18	50	900	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2250	3	1600	4800
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1100	2200
m.	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11998.2			10192.8
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1875			1875
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			113858.2			97007.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	50	72
2	Production (Kg/Ha)				2025	4050	6750	9720
3	Total income (Rs)				70875	141750	236250	340200
4	Variable cost	111983.2	95132.8	104646.08	115110.688	126621.8	139283.9	153212.33
5	Fixed cost	1875	1875	1875	1875	1875	1875	1875
6	Total cost	113858.2	97007.8	106521.08	116985.688	128496.8	141158.9	155087.33
7	Profit/Loss	-113858	-97007.8	-106521.1	-46110.688	13253.24	95091.07	185112.67
8	B/C ratio					1.10	1.67	2.19
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			85	90	95	100	75
2	Production (Kg/ha)			11475	12150	12825	13500	10125
3	Total income (Rs)			401625	425250	448875	472500	354375
4	Variable cost			168533.56	185386.914	203925.6	224318.2	246749.98
5	Fixed cost			1875	1875	1875	1875	1875
6	Total cost			170408.56	187261.914	205800.6	226193.2	248624.98
7	Profit/Loss			231216.44	237988.086	243074.4	246306.8	105750.02
8	B/C ratio			2.36	2.27	2.18	2.09	1.43

Condition of Litchi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling. Pit digging	No/day	24		
	Manuring and pit filling	No/day	10		
	Seedling planting	No/day	5		
	Irrigation	No/day	2		
	Mulching	No/day	3		
	Total		44		
Materials Utilization					
	Manure	Kg/Plant	20		
	Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
	Micronutrient	Kg/Plant	1	after 10 years	
	No of seedling	Plants/ha	150	Mortality	10%
	Life span	Years	25-40		
Production start					
	Layering seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
Production Process					
	No of Plants in production	Number	135		
	Price	Rs/Kg	35		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Kailali
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				93738			85740
a.	Human labor	Day	42	350	14700	32	350	11200
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	4	1650	6600	2	1650	3300
d.	Pump set, water pond	hour	15	150	2250	20	150	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	165	35	5775			0
h.	Manure	Kg	3200	2	6400	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	8	36	288	15	36	540
j.	Plant protection chemical	Rs			2500	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum			2800			3500
l.	Training and Pruning					2	1200	2400
m	Equipments	Number	5	100	500			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				11248.56			10288.8
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2375			2375
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			107361.56			98403.8

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	45	70
2	Production (Kg/Ha)				2025	4050	6075	9450
3	Total income (Rs)				76950	153900	230850	359100
4	Variable cost	104986.6	96028.8	105631.68	116194.848	127814.3	140595.8	154655.34
5	Fixed cost	2375	2375	2375	2375	2375	2375	2375
6	Total cost	107361.6	98403.8	108006.68	118569.848	130189.3	142970.8	157030.34
7	Profit/Loss	-107362	-98403.8	-108006.7	-41619.848	23710.67	87879.23	202069.66
8	B/C ratio					1.18	1.61	2.29
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		80	90	95	95	72	
2	Production Kg/Ha		10800	12150	12825	12825	9720	
3	Total income (Rs)		410400	461700	487350	487350	369360	
4	Variable cost		170120.88	187132.965	205846.3	226430.9	249073.98	
5	Fixed cost		2375	2375	2375	2375	2375	
6	Total cost		172495.88	189507.965	208221.3	228805.9	251448.98	
7	Profit/Loss		237904.12	272192.035	279128.7	258544.1	117911.02	
8	B/C ratio		2.38	2.44	2.34	2.13	1.47	

Condition of Litchi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling. Pit digging	No/day	24		
	Manuring and pit filling	No/day	9		
	Seedling planting	No/day	4		
	Irrigation	No/day	2		
	Mulching	No/day	3		
	Total		42		
	Materials Utilization				
	Manure	Kg/Plant	20		
	Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
	Micronutrient	Kg/Plant	1	after 10 years	
	No of seedling	Plants/ha	150	Mortality	10%
	Life span	Years	25-40		
	Production start				
	Layering seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
	Production Process				
	No of Plants in production	Number	135		
	Price	Rs/Kg	40		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety : Local

District : Surkhet
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95738			79840
a.	Human labor	Day	45	350	15750	28	350	9800
b.	Bullock labor	Day	1	900	900	1	900	900
c.	Tractor	hour	4	1600	6400	2	1600	3200
d.	Pump set, water pond	hour	15	130	1950	20	130	2600
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	165	35	5775			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	8	36	288	15	36	540
j.	Plant protection chemical	Rs			2750	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1250	2500
m	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11488.56			9580.8
p.	Others	Rs			2750			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			109351.56			91545.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				15	30	50	75
2	Production (Kg/Ha)				2025	4050	6750	10125
3	Total income (Rs)				70875	141750	236250	354375
4	Variable cost	107226.6	89420.8	98362.88	108199.168	119019.1	130921	144013.09
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	109351.6	91545.8	100487.88	110324.168	121144.1	133046	146138.09
7	Profit/Loss	-109352	-91545.8	-100487.9	-39449.168	20605.92	103204	208236.91
8	B/C ratio					1.17	1.78	2.42
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			90	95	95	97	72.75
2	Production Kg/Ha			12150	12825	12825	13095	9821.25
3	Total income (Rs)			425250	448875	448875	458325	343743.75
4	Variable cost			158414.4	174255.842	191681.4	210849.6	231934.53
5	Fixed cost			2125	2125	2125	2125	2125
6	Total cost			160539.4	176380.842	193806.4	212974.6	234059.53
7	Profit/Loss			264710.6	272494.158	255068.6	245350.4	109684.22
8	B/C ratio			2.65	2.54	2.32	2.15	1.47

Condition of Litchi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, Pit digging	No/day	25		
	Manuring and pit filling	No/day	10		
	Seedling planting	No/day	5		
	Irrigation	No/day	2		
	Mulching	No/day	3		
	Total		45		
Materials Utilization					
	Manure	Kg/Plant	20		
	Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)	
	Micronutrient	Kg/Plant	1	after 10 years	
	No of seedling	Plants/ha	150	Mortality	10%
	Life span	Years	25-40		
Production start					
	Layering seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
Production Process					
	No of Plants in produciton	Number	135		
	Price	Rs/Kg	35		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Litchi
Variety :Local

District : Shyanja
Propagation : Seed/Air layering

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				122485			105465
a.	Human labor	Day	48	325	15600	30	325	9750
b.	Bullock labor	Day	4	800	3200	1	800	800
c.	Tractor	hour	0	0	0	0	0	0
d.	Pump set, water pond	hour	15	125	1875	15	125	1875
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	165	35	5775			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	25	25	625	30	25	750
	DAP	Kg	15	50	750	25	50	1250
	Potash	Kg	10	36	360	15	36	540
j.	Plant protection chemical	Rs			2500	4	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			3000			3500
l.	Training and Pruning					2	1000	2000
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			10000			10000
o.	Interest on variable cost				14698.2			12655.8
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	5000	60000	12	5000	60000
2	Fixed cost				2125			2125
a.	Land tax	Rs			300			300
b.	Water tax	Rs			550			550
c.	Depreciation cost of farm equipments	Rs			525			525
d.	Repair and maintenance of farm equipments	Rs			750			750
3	Total cost	Rs			139308.2			120245.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				12	25	48	70
2	Production (Kg/Ha)				1620	3375	6480	9450
3	Total income (Rs)				68040	141750	272160	396900
4	Variable cost	137183.2	118120.8	129932.88	142926.168	157218.8	172940.7	190234.73
5	Fixed cost	2125	2125	2125	2125	2125	2125	2125
6	Total cost	139308.2	120245.8	132057.88	145051.168	159343.8	175065.7	192359.73
7	Profit/Loss	-139308	-120246	-132057.9	-77011.168	-17593.8	97094.34	204540.27
8	B/C ratio					0.89	1.55	2.06
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		80	85	90	92	72	
2	Production Kg/Ha		10800	11475	12150	12420	9720	
3	Total income (Rs)		453600	481950	510300	521640	408240	
4	Variable cost		209258.2	230184.023	253202.4	278522.7	306374.93	
5	Fixed cost		2125	2125	2125	2125	2125	
6	Total cost		211383.2	232309.023	255327.4	280647.7	308499.93	
7	Profit/Loss		242216.8	249640.977	254972.6	240992.3	99740.066	
8	B/C ratio		2.15	2.07	2.00	1.86	1.32	

Condition of Litchi Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling. Pit digging	No/day	27			
Manuring and pit filling	No/day	11			
Seedling planting	No/day	5			
Irrigation	No/day	2			
Mulching	No/day	3			
Total		48			
Materials Utilization					
Manure	Kg/Plant	20			
Chemical fertilizer	Kg/Plant	0.4	1st year (0.4), 2nd to fifth (0.5), After 5 (1) and after 10 (1.5)		
Micronutrient	Kg/Plant	1	after 10 years		
No of seedling	Plants/ha	150	Mortality	10%	
Life span	Years	25-40			
Production start					
Layering seedlings	Years	3			
By seed	Years	5			
Secondary production		Vegetables			
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in production	Number	135			
Price	Rs/Kg	45			

6. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Kiwi
Variety : Hey wart/local

District : Dolakha
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				298625			113005
a.	Human labor	Day	60	325	19500	36	325	11700
b.	Bullock labor	Day	10	800	8000	2	800	1600
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	15	275	4125	20	275	5500
e.	Fencing	Lum	0	0	100000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	330	225	74250			0
h.	Manure	Kg	9000	2	18000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	12	25	300	15	25	375
	DAP	Kg	25	50	1250	30	50	1500
	Potash	Kg	25	36	900	30	36	1080
j.	Plant protection chemical	Rs			4500	3	2000	6000
k.	Bordeaux mixture and micro nutrient	Lum			5000			5000
l.	Training and Pruning					5	1550	7750
m.	Equipments	Number	6	1000	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				35835			13560.6
p.	Others/neting cost	Rs			3000			2500
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2975			2800
a.	Land tax	Rs			325			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			1050			1000
d.	Repair and maintenance of farm equipments	Rs			1100			1000
3	Total cost	Rs			337435			129365.6

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
	No of plants in production :				240	Price (Rs/ Kg) :		145
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				4	10	22	28
2	Production (Kg/ha)				960	2400	5280	6720
3	Total income (Rs)				139200	348000	765600	974400
4	Variable cost	334460	126565.6	145550.44	167383.006	192490.5	221364	254568.63
5	Fixed cost	2975	2800	2800	2800	2800	2800	2800
6	Total cost	337435	129365.6	148350.44	170183.006	195290.5	224164	257368.63
7	Profit/Loss	-337435	-129366	-148350.4	-30983.006	152709.5	541436	717031.37
8	B/C ratio					1.78	3.42	3.79
9	Cost per Kg					81.37	42.46	38.30
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			35	38	42	45	48
2	Production (Kg/ha)			8400	9120	10080	10800	11520
3	Total income (Rs)			1218000	1322400	1461600	1566000	1670400
4	Variable cost			292753.92	336667.012	387167.1	445242.1	512028.44
5	Fixed cost			2800	2800	2800	2800	2800
6	Total cost			295553.92	339467.012	389967.1	448042.1	514828.44
7	Profit/Loss			922446.08	982932.988	1071633	1117958	1155571.6
8	B/C ratio			4.12	3.90	3.75	3.50	3.24
9	Cost per Kg			35.18	37.22	38.69	41.49	44.69

Condition of Kiwi Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling, pit digging	Number	10			
Manuring and pit filling	Number	30			
Seedling planting	Number	5			
Irrigation	Number	5			
Mulching	Number	10			
Total		60			
Materials Utilization					
Manure	Kg/Plant	30			
Chemical fertilizer	Kg/Plant	1.5			
Micronutrient	Kg/Plant	1			
No of seedling	Plants/ha	300	Mortality	10%	
Male Female ratio	Ratio	1 male for 8 female		40 male in 1 ha	
Life span	Years	25-30		Male	Tomari
				Female	Alison
					Bruno
By seed	Years	5			Monte
Secondary production		Vegetables			Hey wart
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in production	Number	240			
Price	Rs/Kg	145			

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Kiwi
Variety : Local

District : Illam
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				297510			110697
a.	Human labor	Day	60	350	21000	35	350	12250
b.	Bullock labor	Day	8	850	6800	2	850	1700
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	12	275	3300	20	275	5500
e.	Fencing	Lum	0	0	105000			
f.	Layout	Day	3	1500	4500			
g.	Sapling	Number	330	200	66000			0
h.	Manure	Kg	9000	2	18000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	12	25	300	15	25	375
	DAP	Kg	25	50	1250	28	50	1400
	Potash	Kg	10	36	360	27	36	972
j.	Plant protection chemical	Rs			4500	3	1500	4500
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					4	1500	6000
m.	Equipments	Number	8	1000	8000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost (14%)				35701.2			13283.64
p.	Others	Rs			5000			3000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2995			2845
a.	Land tax	Rs			320			320
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			1050			1100
d.	Repair and maintenance of farm equipments	Rs			1100			900
3	Total cost	Rs			336206.2			126825.64

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				3.5	9	19	25
2	Production Kg/Ha				840	2160	4560	6000
3	Total income (Rs)				117600	302400	638400	840000
4	Variable cost	333211.2	123980.6	142577.74	163964.396	188559.1	216842.9	249369.35
5	Fixed cost	2995	2845	2845	2845	2845	2845	2845
6	Total cost	336206.2	126825.6	145422.74	166809.396	191404.1	219687.9	252214.35
7	Profit/Loss	-336206	-126826	-145422.7	-49209.3964	110995.9	418712.1	587785.65
8	B/C ratio					1.58	2.91	3.33
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			30	36	45	45	36
2	Production Kg/Ha			7200	8640	10800	10800	8640
3	Total income (Rs)			1008000	1209600	1512000	1512000	1209600
4	Variable cost			286774.75	329790.967	379259.6	436148.6	501570.84
5	Fixed cost			2845	2845	2845	2845	2845
6	Total cost			289619.75	332635.967	382104.6	438993.6	504415.84
7	Profit/Loss			718380.25	876964.033	1129895	1073006	705184.16
8	B/C ratio			3.48	3.64	3.96	3.44	2.40

Condition of Kiwi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	25		
	Manuring and pit filling	Number	20		
	Seedling planting	Number	5		
	Irrigation	Number	5		
	Mulching	Number	5		
	Total		60		
	Materials Utilization				
	Manure	Kg/Plant	30		
	Chemical fertilizer	Kg/Plant	1.5		
	Micronutrient	Kg/Plant	1		
	No of seedling	Plants/ha	300	Mortality	10%
	Male Female ratio	Ratio	8:01		
	Life span	Years	25-30		
	Production start				
	By seed	Years	3 to 4		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
	Production Process				
	No of Plants in produciton	Number	240		
	Price	Rs/Kg	140		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Kiwi
Variety : Local

District : Makwanpur
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				302022			113380
a.	Human labor	Day	60	400	24000	35	400	14000
b.	Bullock labor	Day	8	1000	8000	1	1000	1000
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	15	200	3000	20	200	4000
e.	Fencing	Lum	0	0	100000			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	330	215	70950			0
h.	Manure	Kg	9000	2	18000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	10	25	250	12	25	300
	DAP	Kg	27	50	1350	30	50	1500
	Potash	Kg	27	36	972	30	36	1080
j.	Plant protection chemical	Rs			6000	5	1500	7500
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					4	1500	6000
m.	Equipments	Number	7	1000	7000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				36242.64			13605.6
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2300			2300
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			340564.64			129285.6

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				5	10	17	24
2	Production (Kg/ha)				1200	2400	4080	5760
3	Total income (Rs)				180000	360000	612000	864000
4	Variable cost	338264.6	126985.6	146033.44	167938.456	193129.2	222098.6	255413.4
5	Fixed cost	2300	2300	2300	2300	2300	2300	2300
6	Total cost (Rs)	340564.6	129285.6	148333.44	170238.456	195429.2	224398.6	257713.4
7	Profit/Loss	-340565	-129286	-148333.4	9761.544	164570.8	387601.4	606286.6
8	B/C ratio				1.06	1.84	2.73	3.35
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			30	36	40	48	40
2	Production (Kg/ha)			7200	8640	9600	11520	9600
3	Total income (Rs)			1080000	1296000	1440000	1728000	1440000
4	Variable cost			293725.41	337784.221	388451.9	446719.6	513727.58
5	Fixed cost			2300	2300	2300	2300	2300
6	Total cost (Rs)			296025.41	340084.221	390751.9	449019.6	516027.58
7	Profit/Loss			783974.59	955915.779	1049248	1278980	923972.42
8	B/C ratio			3.65	3.81	3.69	3.85	2.79

Condition of Kiwi Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling, pit digging	Number	27			
Manuring and pit filling	Number	15			
Seedling planting	Number	5			
Irrigation	Number	5			
Mulching	Number	10			
Total		62			
Materials Utilization					
Manure	Kg/Plant	30			
Chemical fertilizer	Kg/Plant	1.5			
Micronutrient	Kg/Plant	1			
No of seedling	Plants/ha	300	Mortality	10%	
Male Female ratio	Ratio	8:01			
Life span	Years	25-30			
Production start					
By seed	Years	5			
Secondary production		Vegetables			
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in produciton	Number	238			
Price	Rs/Kg	150			

AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Kiwi
Variety : Local

District : Dhading
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				303164			115858
a.	Human labor	Day	56	400	22400	38	400	15200
b.	Bullock labor	Day	9	1000	9000	1	1000	1000
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	15	250	3750	18	250	4500
e.	Fencing	Lum	0	0	100000			
f.	Layout	Day	5	1000	5000			
g.	Sapling	Number	330	220	72600			0
h.	Manure	Kg	9000	1.9	17100	10500	2	21000
i.	Fertilizer							
	Urea	Kg	10	25	250	12	25	300
	DAP	Kg	24	50	1200	27	50	1350
	Potash	Kg	24	36	864	28	36	1008
j.	Plant protection chemical	Rs			5000	4	1500	6000
k.	Bordeaux mixture and micro nutrient	Lum			6000			6000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	8	1000	8000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost (14%)				36379.68			13902.96
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				1800			1800
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			341343.68			131560.96

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				5	10	18	25
2	Production (Kg/ha)				1200	2400	4320	6000
3	Total income (Rs)				162000	324000	583200	810000
4	Variable cost	339543.7	129761	149225.1	171608.87	197350.2	226952.7	260995.64
5	Fixed cost	1800	1800	1800	1800	1800	1800	1800
6	Total cost	341343.7	131561	151025.1	173408.87	199150.2	228752.7	262795.64
7	Profit/Loss	-341344	-131561	-151025.1	-11408.8696	124849.8	354447.3	547204.36
8	B/C ratio					1.63	2.55	3.08
SN	Year		8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)		33	38	40	45	40	
2	Production (Kg/ha)		7920	9120	9600	10800	9600	
3	Total income (Rs)		1069200	1231200	1296000	1458000	1296000	
4	Variable cost		300144.99	345166.733	396941.7	456483	524955.46	
5	Fixed cost		1800	1800	1800	1800	1800	
6	Total cost		301944.99	346966.733	398741.7	458283	526755.46	
7	Profit/Loss		767255.01	884233.267	897258.3	999717	769244.54	
8	B/C ratio		3.54	3.55	3.25	3.18	2.46	

Condition of Kiwi Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	23		
	Manuring and pit filling	Number	18		
	Seedling planting	Number	5		
	Irrigation	Number	5		
	Mulching	Number	5		
	Total		56		
	Materials Utilization				
	Manure	Kg/Plant	30		
	Chemical fertilizer	Kg/Plant	1.5		
	Micronutrient	Kg/Plant	1		
	No of seedling	Plants/ha	300	Mortality	10%
	Male Female ratio	Ratio	8:01		
	Life span	Years	25-30		
	Production start				
	Grafted seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
	Production Process				
	No of Plants in produciton	Number	235		
	Price	Rs/Kg	135		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

**Crop : Kiwi
Variety : Local**

**District : Parbat
Propagation: Cutting**

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				347670			131755
a.	Human labor	Day	57	500	28500	35	500	17500
b.	Bullock labor	Day	10	1000	10000	2	1000	2000
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	15	350	5250	20	350	7000
e.	Fencing	Lum	0	0	100000			
f.	Layout	Day	5	1500	7500			
g.	Sapling	Number	330	300	99000			0
h.	Manure	Kg	10000	2	20000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	18	25	450	15	25	375
	DAP	Kg	25	50	1250	30	50	1500
	Potash	Kg	20	36	720	30	36	1080
j.	Plant protection chemical	Rs			5000	4	1200	4800
k.	Bordeaux mixture and micro nutrient	Lum						5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	6	1000	6000			
n.	Land lease value	Rs/Year			35000			35000
o.	Interest on variable cost (14%)				41720.4			15810.6
p.	Others	Rs			5000			5000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2350			2300
a.	Land tax	Rs			350			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			391740.4			149865.6

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				3	10	14	21
2	Production (Kg/ha)				720	2400	3360	5040
3	Total income (Rs)				115200	384000	537600	806400
4	Variable cost	389390.4	147565.6	169700.44	195155.506	224428.8	258093.2	296807.13
5	Fixed cost	2350	2300	2300	2300	2300	2300	2300
6	Total cost	391740.4	149865.6	172000.44	197455.506	226728.8	260393.2	299107.13
7	Profit/Loss	-391740	-149866	-172000.4	-82255.506	157271.2	277206.8	507292.87
8	B/C ratio					1.69	2.06	2.70
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			27	33	38	42	35.7
2	Production (Kg/ha)			6480	7920	9120	10080	8568
3	Total income (Rs)			1036800	1267200	1459200	1612800	1370880
4	Variable cost			341328.2	392527.43	451406.5	519117.5	596985.15
5	Fixed cost			2300	2300	2300	2300	2300
6	Total cost			343628.2	394827.43	453706.5	521417.5	599285.15
7	Profit/Loss			693171.8	872372.57	1005493	1091382	771594.85
8	B/C ratio			3.02	3.21	3.22	3.09	2.29

Condition of Kiwi Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling, pit digging	Number	27		
Manuring and pit filling	Number	15		
Seedling planting	Number	5		
Irrigation	Number	5		
Mulching	Number	5		
Total		57		
Materials Utilization				
Manure	Kg/Plant	30		
Chemical fertilizer	Kg/Plant	1.5		
Micronutrient	Kg/Plant	1		
No of seedling	Plants/ha	300	Mortality	10%
Male Female ratio	Ratio	8:01		
Life span	Years	25-30		
Production start				
Grafted seedlings	Years	3		
By seed	Years	5-Apr		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	237		
Price	Rs/Kg	160		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Kiwi
Variety : Local

District : Lamjung
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				292700			117655
a.	Human labor	Day	58	400	23200	39	400	15600
b.	Bullock labor	Day	9	1000	9000	2	1000	2000
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	16	280	4480	20	280	5600
e.	Fencing	Lum	0	0	90000			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	330	225	74250			0
h.	Manure	Kg	8500	2	17000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	12	25	300	15	25	375
	DAP	Kg	25	50	1250	30	50	1500
	Potash	Kg	20	36	720	30	36	1080
j.	Plant protection chemical	Rs			5000	4	1500	6000
k.	Bordeaux mixture and micro nutrient	Lum			4500			5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost (14%)				35124			14118.6
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2300			2300
a.	Land tax	Rs			325			300
b.	Water tax	Rs			475			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			330124			134073.6

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				5	10	18	27
2	Production Kg/Ha				1200	2400	4320	6480
3	Total income (Rs)				168000	336000	604800	907200
4	Variable cost	327824	131773.6	151539.64	174270.586	200411.2	230472.8	265043.78
5	Fixed cost	2300	2300	2300	2300	2300	2300	2300
6	Total cost	330124	134073.6	153839.64	176570.586	202711.2	232772.8	267343.78
7	Profit/Loss	-330124	-134074	-153839.6	-8570.586	133288.8	372027.2	639856.22
8	B/C ratio					1.66	2.60	3.39
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			32	36	41	45	38.25
2	Production (Kg/ha)			7680	8640	9840	10800	9180
3	Total income (Rs)			1075200	1209600	1377600	1512000	1285200
4	Variable cost			304800.34	350520.396	403098.5	463563.2	533097.71
5	Fixed cost			2300	2300	2300	2300	2300
6	Total cost			307100.34	352820.396	405398.5	465863.2	535397.71
7	Profit/Loss			768099.66	856779.604	972201.5	1046137	749802.29
8	B/C ratio			3.50	3.43	3.40	3.25	2.40

Condition of Kiwi Fruits				
Human labor Requirement (First year)				
	Activities	Units	Labor	
	Land leveling, pit digging	Number	25	
	Manuring and pit filling	Number	20	
	Seedling planting	Number	5	
	Irrigation	Number	5	
	Mulching	Number	5	
	Total		60	
	Materials Utilization			
	Manure	Kg/Plant	30	
	Chemical fertilizer	Kg/Plant	1.5	
	Micronutrient	Kg/Plant	1	
	No of seedling	Plants/ha	300	Mortality 10%
	Male Female ratio	Ratio	8:01	
	Life span	Years	25-30	
	Production start			
	Grafted seedlings	Years	3	
	By seed	Years	5	
	Secondary production		Vegetables	
	Note : Benefit and cost are equal for secondary crops			
	Production Process			
	No of Plants in production	Number	240	
	Price	Rs/Kg	140	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Kiwi
Variety : Local

District : Dadeldhura
Propagation: Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				292800			114955
a.	Human labor	Day	60	350	21000	36	350	12600
b.	Bullock labor	Day	9	1200	10800	2	1200	2400
c.	Tractor	hour			0			0
d.	Pump set, water pond	hour	15	300	4500	20	275	5500
e.	Fencing	Lum	0	0	95000			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	330	200	66000			0
h.	Manure	Kg	9000	2	18000	10500	2	21000
i.	Fertilizer							
	Urea	Kg	14	25	350	15	25	375
	DAP	Kg	25	50	1250	30	50	1500
	Potash	Kg	25	36	900	30	36	1080
j.	Plant protection chemical	Rs			5000	4	1500	6000
k.	Bordeaux mixture and micro nutrient	Lum			6000			5000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1200	6000			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				35136			13794.6
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	2000	24000	12	2000	24000
2	Fixed cost				2150			2150
a.	Land tax	Rs			350			350
b.	Water tax	Rs			400			400
c.	Depreciation cost of farm equipments	Rs			400			400
d.	Repair and maintenance of farm equipments	Rs			1000			1000
3	Total cost	Rs			330086			130899.6

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				5	9	16	24
2	Production (Kg/ha)				1200	2160	3840	5760
3	Total income (Rs)				174000	313200	556800	835200
4	Variable cost	327936	128749.6	148062.04	170271.346	195812	225183.9	258961.43
5	Fixed cost	2150	2150	2150	2150	2150	2150	2150
6	Total cost	330086	130899.6	150212.04	172421.346	197962	227333.9	261111.43
7	Profit/Loss	-330086	-130900	-150212	1578.654	115238	329466.1	574088.57
8	B/C ratio					1.58	2.45	3.20
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			30	35	40	43	36.55
2	Production (Kg/ha)			7200	8400	9600	10320	8772
3	Total income (Rs)			1044000	1218000	1392000	1496400	1271940
4	Variable cost			297805.65	342476.496	393848	452925.2	520863.94
5	Fixed cost			2150	2150	2150	2150	2150
6	Total cost			299955.65	344626.496	395998	455075.2	523013.94
7	Profit/Loss			744044.35	873373.504	996002	1041325	748926.06
8	B/C ratio			3.48	3.53	3.52	3.29	2.43

Condition of Kiwi Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling, pit digging	Number	25			
Manuring and pit filling	Number	20			
Seedling planting	Number	5			
Irrigation	Number	5			
Mulching	Number	5			
Total		60			
Materials Utilization					
Manure	Kg/Plant	30			
Chemical fertilizer	Kg/Plant	1.5			
Micronutrient	Kg/Plant	1			
No of seedling	Plants/ha	300	Mortality	10%	
Male Female ratio	Ratio	5:01			
Life span	Years	25-30			
Production start					
Grafted seedlings	Years	3			
By seed	Years	5			
Secondary production		Vegetables			
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in produciton	Number	235			
Price	Rs/Kg	145			

7. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Banana
Variety : Local

District : Morang
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				139790			98174
a.	Human labor	Day	95	400	38000	55	400	22000
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	6	1600	9600			0
d.	Pump set, water pond	hour	10	250	2500	15	250	3750
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	20	26	520	30	26	780
	DAP	Kg	30	50	1500	40	50	2000
	Potash	Kg	10	37	370	12	37	444
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	800	3200
m	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			30000			30000
o.	Interest on variable cost				16774.8			11780.88
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1710			1710
a.	Land tax	Rs			300			300
b.	Water tax	Rs			510			510
c.	Depreciation cost of farm equipments	Rs			400			400
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			158274.8			111664.88

Note : From 2 years : Cost increased by 10%

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		12	15
2	Production (Kg/ha)		10800	13500
3	Total income (Rs)		302400	378000
4	Variable cost	156564.8	109954.9	120950.37
5	Fixed cost	1710	1710	1710
6	Total cost	158274.8	111664.9	122660.37
7	Profit/Loss	-158274.8	190735.1	255339.63
8	B/C ratio		2.71	3.08
9	Cost per Kg		10.34	9.09

Condition of Banana Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	40		
	Manuring and pit filling	Number	30		
	Seedling planting	Number	10		
	Irrigation	Number	5		
	Mulching	Number	10		
	Total		95		
	Materials Utilization				
	Manure	Kg/Plant	3		
	Chemical fertilizer	Kg/Plant	0.1		
	Micronutrient	Kg/Plant	1		
	No of seedling	Plants/ha	1000	Mortality	10%
	Life span	Years	1 to 3		
	Production start				
	By sucker	Years	2		
	Production Process				
	No of Plants in produciton and produciton	Number	900	80-100 fruits per sucker	
	Price	Rs/Kg	28		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Banana
Variety : William Hybrid/Tissue Culture

District : Dhading
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				138815			99721
a.	Human labor	Day	85	450	38250	58	400	23200
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	5	1600	8000			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	1100	20	22000			0
h.	Manure	Kg	3000	2	6000	4200	2	8400
i.	Fertilizer							
	Urea	Kg	35	26	910	25	26	650
	DAP	Kg	40	50	2000	35	50	1750
	Potash	Kg	15	37	555	158	37	5846
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	1000	4000
m.	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			26000			26000
o.	Interest on variable cost				16657.8			11966.52
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			157297.8			113512.52

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		15	20
2	Production (Kg/ha)		13500	18000
3	Total income (Rs)		405000	540000
4	Variable cost	155472.8	111687.5	122856.27
5	Fixed cost	1825	1825	1825
6	Total cost	157297.8	113512.5	124681.27
7	Profit/Loss	-157297.8	291487.5	415318.73
8	B/C ratio		3.57	4.33

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Banana
Variety : Malbhog

District : Bara
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				130680			88004
a.	Human labor	Day	88	400	35200	60	400	24000
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	8	1600	12800			0
d.	Pump set, water pond	hour	10	250	2500	15	250	3750
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1500	4500			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	3000	2	6000	4000	2	8000
i.	Fertilizer							
	Urea	Kg	20	26	520	22	26	572
	DAP	Kg	30	50	1500	35	50	1750
	Potash	Kg	10	36	360	12	36	432
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					5	500	2500
m	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				15681.6			10560.48
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1815			1815
a.	Land tax	Rs			300			300
b.	Water tax	Rs			515			515
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			148176.6			100379.48

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		12	18
2	Production (Kg/ha)		10800	16200
3	Total income (Rs)		378000	567000
4	Variable cost	146361.6	98564.48	108420.93
5	Fixed cost	1815	1815	1815
6	Total cost	148176.6	100379.5	110235.93
7	Profit/Loss	-148176.6	277620.5	456764.07
8	B/C ratio		3.77	5.14

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Banana
Variety : Local

District : Pyuthan
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				130446			91374
a.	Human labor	Day	85	400	34000	52	400	20800
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	6	1600	9600			0
d.	Pump set, water pond	hour	10	250	2500	15	250	3750
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	3000	2	6000	4200	2	8400
i.	Fertilizer							
	Urea	Kg	25	26	650	30	26	780
	DAP	Kg	30	50	1500	40	50	2000
	Potash	Kg	8	37	296	12	37	444
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	800	3200
m	Equipments	Number	3	1200	3600			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				15653.52			10964.88
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1710			1710
a.	Land tax	Rs			300			300
b.	Water tax	Rs			510			510
c.	Depreciation cost of farm equipments	Rs			400			400
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			147809.52			104048.88

Note : From 2 years : Cost increased by 10%

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		10	15
2	Production (Kg/ha)		9000	13500
3	Total income (Rs)		261000	391500
4	Variable cost	146099.52	102338.9	112572.77
5	Fixed cost	1710	1710	1710
6	Total cost	147809.52	104048.9	114282.77
7	Profit/Loss	-147809.52	156951.1	277217.23
8	B/C ratio		2.51	3.43

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Banana
Variety : Jhapali Malbhog

District : Dang
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				129516			99121
a.	Human labor	Day	85	400	34000	55	400	22000
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	6	1600	9600			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	3000	2	6000	4500	2	9000
i.	Fertilizer							
	Urea	Kg	20	26	520	25	26	650
	DAP	Kg	30	50	1500	35	50	1750
	Potash	Kg	8	37	296	158	37	5846
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	1000	4000
m	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			26000			26000
o.	Interest on variable cost				15541.92			11894.52
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			146882.92			112840.52

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		15	18
2	Production (Kg/ha)		13500	16200
3	Total income (Rs)		486000	583200
4	Variable cost	145057.92	111015.5	122117.07
5	Fixed cost	1825	1825	1825
6	Total cost	146882.92	112840.5	123942.07
7	Profit/Loss	-146882.92	373159.5	459257.93
8	B/C ratio		4.31	4.71

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Banana
Variety : William Hybrid

District : Bardiya
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				123310			83254
a.	Human labor	Day	82	350	28700	56	350	19600
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	8	1600	12800			0
d.	Pump set, water pond	hour	10	200	2000	15	200	3000
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	3000	2	6000	4200	2	8400
i.	Fertilizer							
	Urea	Kg	25	26	650	22	26	572
	DAP	Kg	35	50	1750	35	50	1750
	Potash	Kg	10	36	360	12	36	432
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					5	500	2500
m.	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				14797.2			9990.48
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1800			1800
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			139907.2			95044.48

BENEFIT COST RATIO				
SN	Year	Investment Phase	2	3
1	Production (Kg/plant)		13	18
2	Production (Kg/ha)		11700	16200
3	Total income (Rs)		351000	486000
4	Variable cost	138107.2	93244.48	102568.93
5	Fixed cost	1800	1800	1800
6	Total cost	139907.2	95044.48	104368.93
7	Profit/Loss	-139907.2	255955.5	381631.07
8	B/C ratio		3.69	4.66

8. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Papaya
Variety : Pusa Delicious

District : Udayapur
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				140646			96174
a.	Human labor	Day	90	400	36000	55	400	22000
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	6	1600	9600			0
d.	Pump set, water pond	hour	10	260	2600	15	250	3750
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	5	1200	6000			
g.	Sapling	Number	1100	18	19800			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	25	26	650	30	26	780
	DAP	Kg	30	50	1500	40	50	2000
	Potash	Kg	8	37	296	12	37	444
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	800	3200
m	Equipments	Number	4	1050	4200			
n.	Land lease value	Rs/Year			25000			25000
o.	Interest on variable cost				16877.52			11540.88
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1775			1775
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			450			450
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			159298.52			109489.88

Note : From 3-5 years : Cost increased by 10%

BENEFIT COST RATIO						
SN	Year	Investment Phase	2	3	4	5
1	Production (Kg/plant)		12	16	22	18.7
2	Production (Kg/ha)		9600	12800	17600	14960
3	Total income (Rs)		384000	512000	704000	598400
4	Variable cost	157523.5	107714.9	118486.37	130335.005	143368.5
5	Fixed cost	1775	1775	1775	1775	1775
6	Total cost	159298.5	109489.9	120261.37	132110.005	145143.5
7	Profit/Loss	-159299	274510.1	391738.63	571889.995	453256.5
8	B/C ratio		3.51	4.26	5.33	4.12

Condition of Papaya Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	40		
	Manuring and pit filling	Number	25		
	Seedling planting	Number	10		
	Irrigation	Number	5		
	Mulching	Number	10		
	Total		90		
	Materials Utilization				
	Manure	Kg/Plant	10		
	Chemical fertilizer	Kg/Plant	0.1		
	Micronutrient	Kg/Plant	0.1-0.5		
	No of seedling	Plants/ha	1000	Mortality	10%
	Life span	Years	5		
	Production start				
	By seed	Years	2		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
	Production Process				
	No of Plants in produciton	Number	800	15-20 fruits per plant	
	Price	Rs/Kg	40		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Papaya
Variety : Pusa Dwarf

District : Jhapa
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				133722			104365
a.	Human labor	Day	95	400	38000	58	400	23200
b.	Bullock labor	Day	7	1000	7000	1	1000	1000
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	1100	15	16500			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	20	26	520	30	26	780
	DAP	Kg	27	50	1350	35	50	1750
	Potash	Kg	7	36	252	160	36	5760
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					4	1000	4000
m.	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			26000			26000
o.	Interest on variable cost				16046.64			12523.8
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			151593.64			118713.8

BENEFIT COST RATIO						
SN	Year	Investment Phase	2	3	4	5
1	Production (Kg/plant)		6	12	22	20
2	Production (Kg/ha)		4800	9600	17600	16000
3	Total income (Rs)		201600	403200	739200	672000
4	Variable cost	149768.6	116888.8	128577.68	141435.448	155579
5	Fixed cost	1825	1825	1825	1825	1825
6	Total cost	151593.6	118713.8	130402.68	143260.448	157404
7	Profit/Loss	-151594	82886.2	272797.32	595939.552	514596
8	B/C ratio		1.70	3.09	5.16	4.27

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Papaya
Variety : Coyembotor

District : Dhanusa
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				127052			85754
a.	Human labor	Day	80	350	28000	55	350	19250
b.	Bullock labor	Day	0	0	0	0	0	0
c.	Tractor	hour	8	1650	13200			0
d.	Pump set, water pond	hour	10	150	1500	15	150	2250
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1500	4500			
g.	Sapling	Number	1100	16	17600			0
h.	Manure	Kg	4500	2	9000	6000	2	12000
i.	Fertilizer							
	Urea	Kg	20	26	520	22	26	572
	DAP	Kg	30	50	1500	35	50	1750
	Potash	Kg	12	36	432	12	36	432
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Cleaning					5	500	2500
m.	Equipments	Number	4	1200	4800			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				15246.24			10290.48
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			144123.24			97869.48

BENEFIT COST RATIO						
SN	Year	Investment Phase	2	3	4	5
1	Production (Kg/plant)		12	18	24	20
2	Production (Kg/ha)		9600	14400	19200	16000
3	Total income (Rs)		422400	633600	844800	704000
4	Variable cost	142298.2	96044.48	105648.93	116213.821	127835.2
5	Fixed cost	1825	1825	1825	1825	1825
6	Total cost	144123.2	97869.48	107473.93	118038.821	129660.2
7	Profit/Loss	-144123	324530.5	526126.07	726761.179	574339.8
8	B/C ratio		4.32	5.90	7.16	5.43
9	Cost per Kg			7.46	6.15	8.10

9. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Pomegranate
Variety : Bedana

District : Ramechhap
Propagation : Cutting

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				96260			74825
a.	Human labor	Day	55	330	18150	35	330	11550
b.	Bullock labor	Day	6	850	5100	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	215	2150	15	215	3225
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	25	8250			0
h.	Manure	Kg	2500	1.6	4000	5000	1.6	8000
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	25	50	1250			
	Potash	Kg	10	37	370			
j.	Plant protection chemical	Rs			5000	2	1500	3000
k.	Bordeaux mixture and Micro nutrient	Lum			3000			4000
l.	Training and Pruning					4	800	3200
m.	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11551.2			8979
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1725			1725
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			400			400
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			109536.2			85529

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
	No of plants in production :				260	Price (Rs/ Kg) :		75
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				3	9	12	15
2	Production (Kg/ha)				780	2340	3120	3900
3	Total income (Rs)				58500	175500	234000	292500
4	Variable cost	107811.2	83804	92184.4	101402.84	111543.1	122697.4	134967.18
5	Fixed cost	1725	1725	1725	1725	1725	1725	1725
6	Total cost	109536.2	85529	93909.4	103127.84	113268.1	124422.4	136692.18
7	Profit/Loss	-109536	-85529	-93909.4	-44627.84	62231.88	109577.6	155807.82
8	B/C ratio					1.55	1.88	2.14
9	Cost per Kg					48.41	39.88	35.05
SN	Year			8	9	10	11-15 Yr	
1	Production (Kg/plant)			19	24	30	25	
2	Production (Kg/ha)			4940	6240	7800	6500	
3	Total income (Rs)			370500	468000	585000	487500	
4	Variable cost			148463.9	163310.288	179641.3	197605.4	
5	Fixed cost			1725	1725	1725	1725	
6	Total cost			150188.9	165035.288	181366.3	199330.4	
7	Profit/Loss			220311.1	302964.712	403633.7	288169.6	
8	B/C ratio			2.47	2.84	3.23	2.45	
9	Cost per Kg			30.40	26.45	23.25	30.67	

Condition of Pomegranate Fruits					
Human labor Requirement (First year)					
Activities	Units	Labor			
Land leveling, pit digging	Number	25			
Manuring and pit filling	Number	15			
Seedling planting	Number	5			
Irrigation	Number	5			
Mulching	Number	5			
Total		55			
Materials Utilization					
Manure	Kg/Plant	20-30			
Chemical fertilizer	Kg/Plant	0.1-0.5			
Micronutrient	Kg/Plant	0.1-0.5			
No of seedling	Plants/ha	300	Mortality	10%	
Life span	Years	15			
Production start					
Grafted seedlings	Years	3			
By seed	Years	5			
Secondary production		Vegetables			
Note : Benefit and cost are equal for secondary crops					
Production Process					
No of Plants in production	Number	260	100-150 fruits per plant		
Price	Rs/Kg	75			

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Pomegranate
Variety : Local

District : Dolakha
Propagation : Seed/Cutting

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				92878			71890
a.	Human labor	Day	55	345	18975	32	345	11040
b.	Bullock labor	Day	6	900	5400	1	900	900
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	180	1800	15	180	2700
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1250	3750			
g.	Sapling	Number	330	20	6600			0
h.	Manure	Kg	2500	1.5	3750	4500	1.5	6750
i.	Fertilizer							
	Urea	Kg	18	26	468			
	DAP	Kg	25	50	1250			
	Potash	Kg	5	37	185			
j.	Plant protection chemical	Rs			4500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					4	1000	4000
m	Equipments	Number	4	800	3200			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11145.36			8626.8
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1815			1815
a.	Land tax	Rs			300			300
b.	Water tax	Rs			515			515
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			105838.36			82331.8

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				2	6	12	15
2	Production (Kg/ha)				520	1560	3120	3900
3	Total income (Rs)				41600	124800	249600	312000
4	Variable cost	104023.4	80516.8	88568.48	97425.328	107167.9	117884.6	129673.11
5	Fixed cost	1815	1815	1815	1815	1815	1815	1815
6	Total cost	105838.4	82331.8	90383.48	99240.328	108982.9	119699.6	131488.11
7	Profit/Loss	-105838	-82331.8	-90383.48	-57640.328	15817.14	129900.4	180511.89
8	B/C ratio						2.09	2.37
SN	Year			8	9	10	11-15 Yr	
1	Production (Kg/plant)			20	25	30	25	
2	Production (Kg/ha)			5200	6500	7800	6500	
3	Total income (Rs)			416000	520000	624000	520000	
4	Variable cost			142640.42	156904.465	172594.9	189854.4	
5	Fixed cost			1815	1815	1815	1815	
6	Total cost			144455.42	158719.465	174409.9	191669.4	
7	Profit/Loss			271544.58	361280.535	449590.1	328330.6	
8	B/C ratio			2.88	3.28	3.58	2.71	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Pomegranate
Variety : Local

District : Dadeldhura
Propagation : Seed/Cutting

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95742			69150
a.	Human labor	Day	54	325	17550	30	325	9750
b.	Bullock labor	Day	6	800	4800	1	800	800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	190	2280	15	190	2850
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	25	8250			0
h.	Manure	Kg	3000	1.5	4500	4500	1.5	6750
i.	Fertilizer							
	Urea	Kg	18	26	468			
	DAP	Kg	25	50	1250			
	Potash	Kg	12	37	444			
j.	Plant protection chemical	Rs			6000	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2000			500
l.	Training and Pruning					5	900	4500
m.	Equipments	Number	4	900	3600			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11489.04			8298
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1810			1810
a.	Land tax	Rs			300			300
b.	Water tax	Rs			510			510
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			109041.04			79258

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				4	9	12	15
2	Production (Kg/ha)				1040	2340	3120	3900
3	Total income (Rs)				78000	175500	234000	292500
4	Variable cost	107231	77448	85192.8	93712.08	103083.3	113391.6	124730.78
5	Fixed cost	1810	1810	1810	1810	1810	1810	1810
6	Total cost	109041	79258	87002.8	95522.08	104893.3	115201.6	126540.78
7	Profit/Loss	-109041	-79258	-87002.8	-17522.08	70606.71	118798.4	165959.22
8	B/C ratio					1.67	2.03	2.31
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			18	20	22	25	20
2	Production (Kg/ha)			4680	5200	5720	6500	5200
3	Total income (Rs)			351000	390000	429000	487500	390000
4	Variable cost			137203.86	150924.242	166016.7	182618.3	200880.17
5	Fixed cost			1810	1810	1810	1810	1810
6	Total cost			139013.86	152734.242	167826.7	184428.3	202690.17
7	Profit/Loss			211986.14	237265.758	261173.3	303071.7	187309.83
8	B/C ratio			2.52	2.55	2.56	2.64	1.92

10. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Pear
Variety : Pharping

District : Lalitpur
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				135760			85700
a.	Human labor	Day	70	500	35000	35	350	12250
b.	Bullock labor	Day	6	1000	6000	2	1000	2000
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	250	2500	15	250	3750
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	50	16500			0
h.	Manure	Kg	4500	2.2	9900	6000	2.2	13200
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	20	50	1000			
	Potash	Kg	10	37	370			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2000			3000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				16291.2			10284
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			153876.2			97809

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				10	20	25	35
2	Production (Kg/ha)				2400	4800	6000	8400
3	Total income (Rs)				72000	144000	180000	252000
4	Variable cost	152051.2	95984	105582.4	116140.64	127755	140530	154583.19
5	Fixed cost	1825	1825	1825	1825	1825	1825	1825
6	Total cost	153876.2	97809	107407.4	117965.64	129580	142355	156408.19
7	Profit/Loss	-153876	-97809	-107407.4	-45965.64	14420.3	37644.8	95591.808
8	B/C ratio					1.11	1.26	1.61
9	Cost per Kg					27.00	23.73	18.62
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			40	46	50	48	38
2	Production (Kg/ha)			9600	11040	12000	11520	9120
3	Total income (Rs)			288000	331200	360000	345600	273600
4	Variable cost			170041.51	187045.662	205750	226325	248957.78
5	Fixed cost			1825	1825	1825	1825	1825
6	Total cost			171866.51	188870.662	207575	228150	250782.78
7	Profit/Loss			116133.49	142329.338	152425	117450	22817.224
8	B/C ratio			1.68	1.75	1.73	1.51	1.09
9	Cost per Kg			17.90	17.11	17.30	19.80	27.50

Condition of Apple Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	40		
	Manuring and pit filling	Number	15		
	Seedling planting	Number	5		
	Irrigation	Number	5		
	Mulching	Number	10		
	Total		75		
Materials Utilization					
	Manure	Kg/Plant	25-40		
	Micronutrient	Kg/Plant	0.1-1		
	No of seedling	Plants/ha	300	Mortality	10%
	Life span	Years	25-40		
Production start					
	Grafted seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
Production Process					
	No of Plants in produciton	Number	240		
	Price	Rs/Kg	30		

11. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Pineapple
Variety : Local

District : Jhapa
Propagation : Sucker

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				311660			82350
a.	Human labor	Day	90	350	31500	35	350	12250
b.	Bullock labor	Day	6	900	5400	2	900	1800
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	200	2000	15	200	3000
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	2	1200	2400			
g.	Sapling	Number	20000	10	200000			0
h.	Manure	Kg	4500	1.8	8100	6000	1.8	10800
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	20	50	1000			
	Potash	Kg	10	37	370			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2000			3000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				37399.2			9882
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			350884.2			94057

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO							
	No of plants in production :				16000	Price (Rs/ Kg) :	21
SN	Year	Investment Phase	2	3	4		
1	Production (Kg/plant)	1	1.5	1.6	1.7		
2	Production (Kg/ha)	16000	24000	25600	27200		
3	Total income (Rs)	336000	504000	537600	571200		
4	Variable cost	349059.2	92232	101455	111600.7		
5	Fixed cost	1825	1825	1825	1825		
6	Total cost	350884.2	94057	103280	113425.7		
7	Profit/Loss	-14884.2	409943	434320	222574.3		
8	B/C ratio	0.957581	5.35845	5.20526	5.035895		
9	Cost per Kg	21.93	3.92	4.03	4.17		

12. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Guava
Variety : Local

District : Sindhupalchowk
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				103710			79300
a.	Human labor	Day	60	330	19800	30	330	9900
b.	Bullock labor	Day	6	850	5100	2	850	1700
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	200	2000	15	200	3000
e.	Fencing	Lum	0	0	10000			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	10	3300			0
h.	Manure	Kg	4500	1.7	7650	6000	1.7	10200
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	20	50	1000			
	Potash	Kg	10	37	370			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2000			3000
l.	Training and Pruning					5	1500	7500
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				12445.2			9516
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			117980.2			90641

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
	No of plants in production :							Price (Rs/ Kg) :	
SN	Year	Investment Phase	2	3	4	5	6	7	30
1	Production (Kg/plant)				10	20	28	35	
2	Production (Kg/ha)				2400	4800	6720	8400	
3	Total income (Rs)				72000	144000	201600	252000	
4	Variable cost	116155.2	88816	97697.6	107467.4	118214	130036	143039.1	
5	Fixed cost	1825	1825	1825	1825	1825	1825	1825	
6	Total cost	117980.2	90641	99522.6	109292.4	120039	131861	144864.1	
7	Profit/Loss	-117980	-90641	-99522.6	-37292.4	23960.9	69739	107135.9	
8	B/C ratio					1.20	1.53	1.74	
9	Cost per Kg					25.01	19.62	17.25	
SN	Year				8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)				40	44	48	48	38
2	Production (Kg/ha)				9600	10560	11520	11520	9120
3	Total income (Rs)				288000	316800	345600	345600	273600
4	Variable cost				157343	173077.3	190385	209423	230365.8
5	Fixed cost				1825	1825	1825	1825	1825
6	Total cost				159168	174902.3	192210	211248	232190.8
7	Profit/Loss				128832	141897.7	153390	134352	41409.17
8	B/C ratio				1.81	1.81	1.80	1.64	1.18
9	Cost per Kg				16.58	16.56	16.68	18.34	25.46

13. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Walnut
Variety : Thinsel

District : Rukum
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				95725			75375
a.	Human labor	Day	60	300	18000	35	300	10500
b.	Bullock labor	Day	6	800	4800	2	800	1600
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	5000			
f.	Layout	Day	4	1200	4800			
g.	Sapling	Number	135	25	3375			0
h.	Manure	Kg	4000	2	8000	5500	2	11000
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2000	2	1500	2500
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1200	2400
m.	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11487			9045
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1800			1800
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			109012			86220

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
	No of plants in production :				240	Price (Rs/ Kg) :		150
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)				0	0	0	0
2	Production (Kg/ha)				0	0	0	0
3	Total income (Rs)				0	0	0	0
4	Variable cost	107212	84420	92862	102148.2	112363	123599	135959.25
5	Fixed cost	1800	1800	1800	1800	1800	1800	1800
6	Total cost	109012	86220	94662	103948.2	114163	125399	137759.25
7	Profit/Loss	-109012	-86220	-94662	-103948.2	-114163	-125399	-137759.25
8	B/C ratio					0.00	0.00	0.00
9	Cost per Kg					#DIV/0!	#DIV/0!	#DIV/0!
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			15	30	35	28	25
2	Production (Kg/ha)			3600	7200	8400	6720	6000
3	Total income (Rs)			540000	1080000	1260000	1008000	900000
4	Variable cost			149555.18	164510.698	180962	199058	218963.74
5	Fixed cost			1800	1800	1800	1800	1800
6	Total cost			151355.18	166310.698	182762	200858	220763.74
7	Profit/Loss			388644.82	913689.302	1077238	807142	679236.26
8	B/C ratio			3.57	6.49	6.89	5.02	4.08
9	Cost per Kg			42.04	23.10	21.76	29.89	36.79

Condition of Apple Fruits				
Human labor Requirement (First year)				
Activities	Units	Labor		
Land leveling, pit digging	Number	40		
Manuring and pit filling	Number	15		
Seedling planting	Number	5		
Irrigation	Number	5		
Mulching	Number	10		
Total		75		
Materials Utilization				
Manure	Kg/Plant	25-40		
Micronutrient	Kg/Plant	0.1-1		
No of seedling	Plants/ha	300	Mortality	10%
Life span	Years	25-40		
Production start				
Grafted seedlings	Years	3		
By seed	Years	5		
Secondary production		Vegetables		
Note : Benefit and cost are equal for secondary crops				
Production Process				
No of Plants in production	Number	240		
Price	Rs/Kg	150		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Walnut
Variety : Thinsel (Dante)

District : Baitadi
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				97025			78775
a.	Human labor	Day	60	325	19500	40	325	13000
b.	Bullock labor	Day	8	750	6000	2	750	1500
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	12	225	2700	15	225	3375
e.	Fencing	Lum	0	0	5000			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	135	15	2025			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg						
	DAP	Kg						
	Potash	Kg						
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					4	1200	4800
m.	Equipments	Number	5	1000	5000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11643			9453
p.	Others	Rs			3000			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1850			1850
a.	Land tax	Rs			300			300
b.	Water tax	Rs			500			500
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			550			550
3	Total cost	Rs			110518			90078

Note : From 3-15 years : Cost increased by 10%
From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO										
SN	Year	Investment Phase	2	3	4	5	6	7		
1	Production (Kg/plant)				0	0	0	0	12	
2	Production (Kg/ha)				0	0	0	0	2880	
3	Total income (Rs)				0	0	0	0	475200	
4	Variable cost	108668	88228	97050.8	106755.88	117431	129175	142092.08		
5	Fixed cost	1850	1850	1850	1850	1850	1850	1850		
6	Total cost	110518	90078	98900.8	108605.88	119281	131025	143942.08		
7	Profit/Loss	-110518	-90078	-98900.8	-108605.88	-119281	-131025	-143942.08		
8	B/C ratio					0.00	0.00	3.30		
SN	Year			8	9	10	11-15 Yr	16-25 Yr		
1	Production (Kg/plant)			20	25	30	35	28		
2	Production (Kg/ha)			4800	6000	7200	8400	6720		
3	Total income (Rs)			792000	990000	1188000	1386000	1108800		
4	Variable cost			156301.28	171931.412	189125	208037	228840.71		
5	Fixed cost			1850	1850	1850	1850	1850		
6	Total cost			158151.28	173781.412	190975	209887	230690.71		
7	Profit/Loss			633848.72	816218.588	997025	1176113	878109.29		
8	B/C ratio			5.01	5.70	6.22	6.60	4.81		

14. AVERAGE COST OF PRODUCTION AND GROSS PROFIT PER HECTARE

Crop : Lime
Variety : Local

District : Palpa
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				101186			75975
a.	Human labor	Day	55	350	19250	36	350	12600
b.	Bullock labor	Day	6	850	5100	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	215	2150	15	215	3225
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	4	1000	4000			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	25	50	1250			
	Potash	Kg	8	37	296			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					3	900	2700
m.	Equipments	Number	4	1000	4000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				11130.46			8357.25
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1775			1775
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			450			450
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			114091.46			86107.25

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)			5	7	12	15	22
2	Production (Kg/ha)			1300	1820	3120	3900	5720
3	Total income (Rs)			104000	145600	249600	312000	457600
4	Variable cost	112316.5	84332.3	92765.5	102042.023	112246	123470.8	135817.93
5	Fixed cost	1775	1775	1775	1775	1775	1775	1775
6	Total cost	114091.5	86107.3	94540.5	103817.023	114021	125245.8	137592.93
7	Profit/Loss	-114091	-86107	9459.52	41782.98	135579	186754.2	320007.07
8	B/C ratio			1.10	1.40	2.19	2.49	3.33
9	Cost per Kg					36.55	32.11	24.05
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			25	28	30	32	25
2	Production (Kg/ha)			6500	7280	7800	8320	6500
3	Total income (Rs)			520000	582400	624000	665600	520000
4	Variable cost			149400	164339.698	180774	180773.7	180773.67
5	Fixed cost			1775	1775	1775	1775	1775
6	Total cost			151175	166114.698	182549	182548.7	182548.67
7	Profit/Loss			368825	416285.302	441451	483051.3	337451.33
8	B/C ratio			3.44	3.51	3.42	3.65	2.85
9	Cost per Kg			23.26	22.82	23.40	21.94	28.08

Condition of Sweet Orange Fruits					
Human labor Requirement (First year)					
	Activities	Units	Labor		
	Land leveling, pit digging	Number	25		
	Manuring and pit filling	Number	15		
	Seedling planting	Number	5		
	Irrigation	Number	5		
	Mulching	Number	5		
	Total		55		
Materials Utilization					
	Manure	Kg/Plant	15-40		
	Chemical fertilizer	Kg/Plant	0.2		
	Micronutrient	Kg/Plant	0.1-1		
	No of seedling	Plants/ha	300	Mortality	10%
	Life span	Years	16-25		
Production start					
	Grafted seedlings	Years	3		
	By seed	Years	5		
	Secondary production		Vegetables		
	Note : Benefit and cost are equal for secondary crops				
Production Process					
	No of Plants in produciton	Number	260	500-600 fruits per plant	
	Price	Rs/Kg	80		

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Lime
Variety : Banarasi

District : Kavre
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				96536			72200
a.	Human labor	Day	50	350	17500	30	350	10500
b.	Bullock labor	Day	5	900	4500	1	900	900
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	180	1800	15	180	2700
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	35	11550			0
h.	Manure	Kg	4500	1.6	7200	6000	1.6	9600
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	20	50	1000			
	Potash	Kg	8	37	296			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	1000	2000
m.	Equipments	Number	4	800	3200			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				10618.96			7942
p.	Others	Rs			2500			2500
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1825			1825
a.	Land tax	Rs			300			300
b.	Water tax	Rs			525			525
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			108979.96			81967

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO									
SN	Year	Investment Phase	2	3	4	5	6	7	
1	Production (Kg/plant)			3	5	9	12	15	
2	Production (Kg/ha)		780	1300	2340	3120	3900		
3	Total income (Rs)		62400	104000	187200	249600	312000		
4	Variable cost	107155	80142	88156.2	96971.82	106669	117335.9	129069.49	
5	Fixed cost	1825	1825	1825	1825	1825	1825	1825	
6	Total cost	108980	81967	89981.2	98796.82	108494	119160.9	130894.49	
7	Profit/Loss	-108980	-81967	-27581.2	5203.18	78706	130439.1	181105.51	
8	B/C ratio				1.05	1.73	2.09	2.38	
SN	Year			8	9	10	11-15 Yr	16-25 Yr	
1	Production (Kg/plant)			20	25	30	35	28	
2	Production (Kg/ha)			5200	6500	7800	9100	7280	
3	Total income (Rs)			416000	520000	624000	728000	582400	
4	Variable cost			141976	156174.086	171791	171791.5	171791.49	
5	Fixed cost			1825	1825	1825	1825	1825	
6	Total cost			143801	157999.086	173616	173616.5	173616.49	
7	Profit/Loss			272199	362000.914	450384	554383.5	408783.51	
8	B/C ratio			2.89	3.29	3.59	4.19	3.35	

**AVERAGE COST OF PRODUCTION AND GROSS PROFIT
PER HECTARE**

Crop : Lime
Variety : Local

District : Dailekh
Propagation : Seed

SN	Particulars	Unit	Quantity	First year Price	Value in Rs	Quantity	Second year Price	Value in Rs
1	Variable cost				98548			73200
a.	Human labor	Day	52	325	16900	35	325	11375
b.	Bullock labor	Day	6	850	5100	1	850	850
c.	Tractor	hour	0	0	0			0
d.	Pump set, water pond	hour	10	225	2250	15	225	3375
e.	Fencing	Lum	0	0	0			
f.	Layout	Day	3	1200	3600			
g.	Sapling	Number	330	40	13200			0
h.	Manure	Kg	4200	1.6	6720	5500	1.6	8800
i.	Fertilizer							
	Urea	Kg	15	26	390			
	DAP	Kg	22	50	1100			
	Potash	Kg	8	36	288			
j.	Plant protection chemical	Rs			2500	2	1500	3000
k.	Bordeaux mixture and micro nutrient	Lum			2500			3000
l.	Training and Pruning					2	900	1800
m.	Equipments	Number	3	1000	3000			
n.	Land lease value	Rs/Year			20000			20000
o.	Interest on variable cost				10840.28			8052
p.	Others	Rs			3000			3000
q.	Management Cost	Month	12	1500	18000	12	1500	18000
2	Fixed cost				1815			1815
a.	Land tax	Rs			300			300
b.	Water tax	Rs			515			515
c.	Depreciation cost of farm equipments	Rs			500			500
d.	Repair and maintenance of farm equipments	Rs			500			500
3	Total cost	Rs			111203.28			83067

Note : From 3-15 years : Cost increased by 10%

From 16-25 years : Cost same of 15 years but production decrease by 20%

BENEFIT COST RATIO								
SN	Year	Investment Phase	2	3	4	5	6	7
1	Production (Kg/plant)			5	8	12	15	21
2	Production (Kg/ha)		1300	2080	3120	3900	5460	
3	Total income (Rs)		110500	176800	265200	331500	464100	
4	Variable cost	109388.3	81252	98314.92	108146	118961.1	130857.16	
5	Fixed cost	1815	1815	1815	1815	1815	1815	1815
6	Total cost	111203.3	83067	91192.2	100129.92	109961	120776.1	132672.16
7	Profit/Loss	-111203	-83067	19307.8	76670.08	155239	210723.9	331427.84
8	B/C ratio					2.41	2.74	3.50
SN	Year			8	9	10	11-15 Yr	16-25 Yr
1	Production (Kg/plant)			25	30	32	35	32
2	Production (Kg/ha)		6500	7800	8320	9100	8320	8320
3	Total income (Rs)		552500	663000	707200	773500	707200	707200
4	Variable cost		143943	158337.162	174171	174170.9	174170.88	
5	Fixed cost		1815	1815	1815	1815	1815	1815
6	Total cost		145758	160152.162	175986	175985.9	175985.88	
7	Profit/Loss		406742	502847.838	531214	597514.1	531214.12	
8	B/C ratio		3.79	4.14	4.02	4.40	4.02	4.02

