CHAPTER	PROCESSING OF
4	GRAPES INTO RAISINS

Grapes produced in Sangli district are of the variety of table grapes. In times of excess production of grapes, the producers divert a part of produce to raisin making and thus avoid glut in the market and consequent crash of the price. It is, therefore, interesting to delve into the details pertaining to the processing activity. This chapter examines the various methods of processing of grapes into green and yellow raisins and then studies the establishment, processing and managerial costs of processing into green and yellow raisins with reference to the small, medium and large firms. Additionally, a thought is given to the financial aspet of the processing firms before closing this chapter.

4.1 SOURCES OF RAW MATERIAL

As is noticed in the previous chapter, agriculture is the most important economic activity in Sangli district. In recent years, horticulural activity has increased with pace. Grape occupies an important position in total fruit production. During 1995-96 and 1996-97, area under cultivation of grape was 4,025 and 4,425 hectares respectively. Total production of grapes in 1994-95 was 91,981 tonnes. Three varieties cultivated in Sangli district are Thompson seedless, Sharad seedless and Anab-E-Shahi. However, Thompson seedless is the most common variety; its area under cultivation and total production in 1994-95 were 4,497 hectores and 89,780 tonnes respectively. Thompson seedless is the most useful variety of grapes for raisin making.

Sangli district has been in the forefront in the production of grapes. All talukas except Shirala cultivate grapes. But the share of Tasgaon, Miraj and Khanapur is noreworthy. Hence, local production of grapes became an important source of raw material for raisin industry in Sangli district. Raisin making activity is totally dependent upon loacal production of grapes. In addition, sometimes grapes are purchased from Solapur district and also from Karnataka State especially from Bijapur. But share of these

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grapes in the total is negligible. Local production of grapes is the main source of raw material. All the same, practically often it is very difficult to decide share of grapes which is used as raw material for producing raisin from total production of grapes, because it varies every year. It is more depended on market situation of grapes. If the price of grapes collapses in the market, then the cultivators decide to use the grapes for raisin-making than selling grapes at uneconomic price in the market to protect themselves from economic loss. In that case, share of grapes used as raw material increases in total production of grapes. As against this, if the graps get high price in the market, then the cultivaters prefer to sell the grapes as they are in the market to get the advantage of good market conditions. Consequently, the share of grapes from total production used as raw material falls. Thus, the share of produce used for raisin making fluctuates widely from year to year as it largely depends upon the market conditions of grapes every year.

4.2 GRAPE PROCESSING : MODUS OPERANDI AND PRODUCTS

4.2.1 Pre-requisites of quality raisins

There are several factors which affect the quality of raisins. These factors can be discussed briefly as below.

(1) Processsing efficiency

Processing should be efficient applying appropriate technology for production of raisins of quality. If the treatment given to all the bunches is not uniform it may lead to differential colour and quality developement.

Dipping should not be excessive so that there are several small checks on the skin and not a few big ones. Excessive over-dipping may even cause the berries to get peeled and collect dust and sand which is difficult to remove. In that case, the raisins cake easily in storage.

In sufficient dehydration or storage of raisins under high humidity conditios may lead to 'Sugaring' of raisins which refer to formation of crystals of sugar in the pulp and on the surface of raisins. Drying should be adequate so that moisture gets reduced to less than 15 per cent. This should be achieved at fairly low temperature of 50 to 60°C and low relative humidity of 25 to 30 per cent.

(2) Fruit maturity

During processing, fully ripe grapes respond best to various treatments. Raisins from immature fruits are

deeply wrinkled, hard, rough and tough. Fully mature grapes also have highest TSS and hence the best raisin quality. A low TSS results in a more or less proportional decrease in yield besides a fall in qulaity of the produce. Best quality raisins are produced from Thompson seedless having TSS at least 20 to 22 per cent.

(3) Fruit colour

Two factors regarding fruit colour are imporatant. First is the hue and intensity and second is the uniformity. For processing, the furit should be of brilliant uniform colour. Preferring of natural bloom leads to brightly co-loured raisins which is very desirable. Protection of trays from rains is important to prevent dull and unattrative colouration. Undue and excessive handling of bunches leading to loss of bloom also spoils the colour.

(4) Condition of beery surface

The berry surface must be perfectly clean at the time of processing. Berries with juice stacking on surface may have dust cemented on it which may be so tightly held or so deeply embedded in the pulp that thorough cleaning may not be possible. Broken berries and those picked by birds cause

this condition.

(5) Extent of dehydration

Grapes are dried at 10 to 15 per cent moisture. Above 18 per cent moisture, the raisin may deteriorate in storage. Raisins having less than five per cent mositure may be classified as badly dried raisins which may have burnt the taste.

(6) Size of berry

Evidently the size of raisins will deepend upon the size of grape berries. Fruit size for the same cultivar depends upon several factors such as agro-climatic conditinos, cultural practices and crop load. Bold berry produces bold raisin which is preferred.

(7) Presence of mould and yeast

Presence of mould and yeast and certain other decaying organisms are very harmful to reisins. They may grow if the drying is too slow, for example, due to unfavourable weather especially when the pulp of the berries is cracked. At the time of processing the growers should be careful to

discard all bunches showing fermented or decayed berries.

4.2.2 Methods of producing raisins

Several methods are used in the world to produce raisins using solar energy or hot-air. However, use of sunshine is the most extensively employed method. Further, berries may be pretreated before drying and there are different techniques of this pretreatment. In Sangli district, two types of rainsis viz., green raisins and yellow raisins, are produced. Before going into these details, it would be appropriate to acquaint with the different methods of rainsin production used the world over.

(1) Natural raisins

Naturals are the most demanded raisins the world over. These raisins have dark brown colour and rather tough texture. In this method, grapes are spread on paper or wooden trays. Precaution is taken that the trays should receive maximum of sunshine. When the berries are so dry that by pressing with fingers juice cannot be squeezed out of them, they are ready for curing. The paper trays are rolled into cigar like roles without turning the edges. For about 20 days they remain in the vineyards. During this period, the berries

develop uniform moisture content. Before storing, they are fumigated with sulhpur dioxide to prevent any rotting.

(2) Golden bleached raisins

These raisins are golden yellow to brilliant lemon. Golden bleached raisins are prepared in California and Australia. Thoroughly selected Thompson seedless berries are dipped for two to three seconds in 0.2 to 0.5 per cent caustic soda near boiling point. The fruit is then immediately washed in cold water. The fruit is exposed to fumes of sulphur dioxide gas in the air tight chamber. One hundred to two hundred grammes of sulphur are enough for one quintal of grapes. The dehydration is done in hot air dehydrator at temperature varying from 60 to 70°C. Since fuel is involved in production of hot air, cost of production of these raisins is rather high.

(3) Greek process

Raisins produced by this method are light in colour, non-sticky and soft in texture. In this method, Thompson seedless bunches are treated with a mixture of 4.5 per cent potassium carbonate and 0.5 per cent sodium carbonate along with 1 per cent emulsified olive oil. Duration of dipping is about 5 minutes. Dipped grapes are drained and

spread in trays without washing in open sun. The fruit is turned after two days and the trays are stacked one upon the other after two turnings.

(4) Soda-dip method

Raisins formed by this method have light brown or golden colour, are of softer and pliable texture and shining appearance. In this method, Thompson seedless bunches are treated for 2 to 3 seconds in 0.2 to 0.3 per cent caustic soda at near boiling temperature. After the treatment the grapes are rinsed in cold water. In this method, grapes are dried in the open sun or may be tunnel dehydrated. Some time a very small quantity of olive oil is added into dipping solution.

(5) Soda-oil method

In this method, Thompson seedless grapes are treated for production of raisins. In Australia this method is widely used. The pretreatment consists of a dip or spray with solution constaining 2.5 per cent potassium caronate 0.2 per cent caustic postash and one litre of fully emulsified olive oil. After dipping, the grapes are drained and spread evenly in the drying racks. To hasten drying, a second spray of the above-mentioned solution may be done four days after

the first spray/dipping. Becasue of sun-drying, the produce
in medium to dark brown in colour. Raisins are quite tender,
non-sticky but a little oily.

(6) Cold dipped method

More recently, raisin making process has made a
quantum jump with the introduction of this method. Most of
the raisin producers in Australia and India have started
using this technique. This technique is widely used in Sangli
district for making green raisins. In this method, grape
bunches are dipped in water emulsion of dipping oil, i.e.,
Ethly oleate made in potassium carbonate solution. For making
the dipping emulsion of 100 litre water, 2.5 Kgs. potassium
carbonate and 1.5 litre dipping oil (Ethyl oleate) is re-
quired. This emulsion is sufficient for the dipping of 1,0C0
Kgs. grapes. The dipping period of the grapes is 3 minutes
which is considered as a standard period of dipping. Attempts
are made to dip the grape in the solution at the temperatue
of 25°C for good results. If the temperature of dipping
emulsion falls then it adversely affects the quality of the
raisins. Again, for better quality, the berry of 20 brix
sugar content is used for processing. After dipping, the
grapes are drained and spread evenly on the drying racks. In
this drying stage, two booster sprays of the above-mentioned

solution, but of one-third intensity of that solution are given. The first spray is given on the third day and the second one on the fifth day after dipping. There is a tendency to give the spray immediately after the rain as the dipping oil from the grapes goes away due to rain. Thus by this method the grapes are dried within three weeks. The raisins thus obtained retain lighter colour and mealy texture. In this method, the drying time is reduced to about one week as against four weeks required earlier. The imporatant condition for drying in this method is that it required dry climate, moderate heat and less humidity. Such type of climate is useful for drying; it is available in the east of Sangli district particularly at Junoni and Agalgaon. This is the reason why raisin making units are concentrated at these places.

(7) Suplhur-bleached method

Raisins produced by this process are yellow and waxy in colour. This method is used for making yellow raisins in Sangli district. In this method, grape bunches are dipped in water emulsion of potassium carbonate and dipping oil (Ethyel oleate). For making the emulsion of 100 litre water 2.5 Kgs. potassium carbonate and 1.5 litre dipping oil is required. This dipping emulsion is sufficient for 1,000 Kgs.

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of grapes. The grapes are dipped for 3 minutes in the emul-
sion. After that the fruit is exposed to fumes of sulphure
dioxide gas in a air-tight chamber; 2 to 3 gms. Sulphur is
sufficient for 1 Kg. grapes. The process continues from two
to four hours till the berries acquire uniform light yellow
colour. After the sulphur fumigation, grapes are spread on
the racks for drying. Thus, in this method, dehydration is
done in Sun rather than in artificial deydrators as in the
case of golden bleached rainsins. Over-exposure to the Sun
leads to browning of berries. Therefore, the bunches at the
end of the trays should be pushed towards the centre to
protect them from the Sun. Within 3 weeks raisins are ready.
Production of yellow raisins is done in Miraj, Tasgaon and
Kawathe Mahankal talukas of Sangli district. Yellow raisins
have a wide market in south India.

4.2.3 The case of Sangli district

In Sangli district two methods are widely used for
raisin-making. These are cold-dipped method for producing
green raisins and sulphur-bleached method for producing
yellow raisins. These methods, suit the climatic conditions
of Sangli district and are good for getting quality products.
Of late, production of green raisins has found more favour
with the firms due to consumer preference for the same.

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Second-ranking of yellow raisins is for a technical reason. Yellow raisins are given sulphur fumigation before spreading them for drying. Often people are averse to the taste of suplhur accompanying the yellow raisins, though this taste vanishes when used in cooking. It is interesting to note that the markets for the two products have a north-south division. Green raisins are favoured in north India while yellow raisins are widely demand in south India.

4.3 COST OF PRODUCTION OF RAISINS

As is mentioned in Chapter 1, cost of production of raisins is divided into establishment cost, processing cost and managerial cost. This sub-section deals with the establishment cost. These calculations are done with reference to the size of the firm and per kilogram of raisins produced by the sample firms.

4.3.1 Per kilogram establishment cost of green raisins

Raisin manufacturing firms are classified in three categories, viz. small, medium and large. This classification is done according to the quantity of raisin production. The small firms are those which produce 0-15 tonnes of raisins, medium firms are those which produce 16 to 30 tonnes of

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raisins and finally the large firms are those which produce more than 30 tonnes of raisins. The cost analysis has been done separately for small, medium and large firms and presented in Tables 4.1, 4.2 and 4.3 respectively.

Table 4.1

Per kilogram establishment cost of green raisins by size of firm : (a) Small firms

(Rs/Kg)

Respondent	Land Cost	Cost of shed assets other than land	Labour cost	Transport cost of material	Aggregate cost
G-1	0.25 (12.82)	1.68 (86.15)	0.01 (0.51)	0.01 (0.51)	1.95 (100.00)
G-4	0.04 (6.89)	0.53 (91.37)	0.01 (1.37)	0.01 (0.86)	0.58 (100.00)
G-5	0.14 (8.00)	1.54 (88.00)	0.06 (3.42)	0.01 (0.57)	1.75 (100.00)
G-7	0.22 (8.00)	2.49 (90.54)	0.03 (1.09)	0.01 (0.36)	2.75 (100.00)
G-8	0.14 (5.36)	2.36 (90.42)	0.11 (4.21)	0.01 (0.30)	2.61 (100.00)
G-9	1.42 (62.28)	0.84 (36.84)	0.01 (0.43)	0.01 (0.43)	2.28 (100.00)
Universe Average	0.36 (18.18)	1.57 (79.29)	0.03 (1.51)	0.01 (0.40)	1.98 (100.00)

Note: Figures in parentheses are percentages to aggregate cost

Source: Field Survey

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Table 4.2

Per Kilogram establishment cost of green raisin by size of firm : (b) Medium firm

(Rs/Kg)

Respondent	Land cost	Cost of shed assets other than land	Labour cost	Transport cost of material	Aggre-gate cost
G-3	0.1 (6.71)	1.37 (91.94)	0.01 (0.67)	0.01 (0.67)	1.49 (100.00)
G-6	0.1 (6.36)	1.41 (89.80)	0.04 (2.54)	0.02 (1.27)	1.57 (100.00)
Universe Average	0.1 (6.53)	1.39 (90.84)	0.03 (1.63)	0.02 (0.98)	1.53 (100.00)

Note : Figures in parentheses are percentages to aggregate cost

Source: Field Survey

Table 4.3

Per Kilogram establishment cost of green raisin by size of firm : (c) Large firms

(Rs/Kg)

Respondent	Land cost	Cost of shed assets other than land	Labour cost	Transport cost of material	Aggregate cost
G-2	0.15 (15.62)	0.81 (84.37)	0.002 (0.20)	0.01 (0.72)	0.96 (100.00)
G-10	0.02 (2.10)	0.90 (94.73)	0.03 (3.15)	0.01 (0.94)	0.95 (100.00)
Universe Average	0.08 (8.42)	0.85 (89.47)	0.01 (1.05)	0.01 (0.84)	0.95 (100.00)

Note : Figures in parentheses are percentages to aggregate cost

Source: Field Survey

Table 4.1 depicts the picture of small firms. Average establishment cost of small firms was Rs. 1.98 per kilogram of green raisins produced. It appears that aggregate cost per kilogram varied from Rs. 2.75 to Rs. 0.58. Respondent G-7 has the highest establishment cost and G-4 the lowest. Typically, nearly 79 per cent cost is due to the construction of the shed and equipping it with the necessary intrastructure. Next to this is land cost sharing nearly 18 per cent in the overall average cost of Rs.1.98 per kilogram of raisins produced.

Medium firm scenario is given in Table 4.2. Avarge establishment cost of the medium firms is Rs. 1.53 per kilogram of green raisins produced. There are only two respondents in this group. Significantly, asset cost is quite higher at 91 per cent here compared to 79 per cent of the small firm; land cost is lower.

Finally, persual of Table 4.3 reveals that the large firms had average establishment cost to the tune Rs. 0.95 per kilogram of green raisins produced. Asset cost percentage remained closer, though slightly low, with the medium firms.

After having analysed the establishment cost independently by the size of the firm, a cross section analysis may be attempted (Table 4.4)

Table 4.4

Establishment cost : Comparative scenario of firm sizes

(Rs/Kg)

Particulars	Small Firm	Medium Firm	Large Firm
1. Land Cost	0.36 (18.18)	0.10 (6.53)	0.08 (8.42)
2. Cost of shed assets other than land	1.57 (79.29)	1.39 (90.84)	0.85 (88.47)
3. Labour cost	0.03 (1.51)	0.30 (1.63)	0.01 (1.05)
4. Transport cost of material	0.01 (0.40)	0.02 (0.98)	0.01 (0.84)
Aggregate cost	1.98 (100.00)	1.53 (100.00)	0.96 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Table 4.1, 4.2 and 4.3

From Table 4.4 following conclusions can be drawn

(1)   Aggregate establishment cost per kilogram of green raisins produced declined with increase in the firm size indicating thereby an inverse relationship between size of the firm and the establish-

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ment cost of the raisins. Compared to the large firms, average establishment cost of medium firms is one-and-a-half times and that of small firms double.

(2) Land cost as percentage of aggregate establishment cost is much higher in case of small firms than medium and large firms.

(3) The share of cost of shed other than land in establishment cost is maximum. The cost of shed other than land as percentage of aggregate establishment cost remained more or less the same with medium and large firms, though medium firms had slight edge over large firms, and lower with small firms.

(4) In case of labour cost its percentage to establishment cost was the highest in case of medium firms followed by small firms and large firms in that order.

(5) The percentage share of transport cost of establishment marterial in total establishment cost is negligible in each type of firms; however, small firms have less than half the percentge of medium and large firms.

In sum, larger the size fot he firm, lower the per kilogram cost of establishment. Infrastructure cost other than the land has the lion's share in the establishment cost ranging between 80 and 90 per cent. Land cost is the second best but appears to be quite high in case of small firms compared with the others.

4.3.2 Per kilogram establishment cost of yellow raisins

Similar to green raisins, the cost analysis of yellow raisins also needs to be done separately for small, medium and large firms. However, the sample large firms were not at all available. Therefore, the analysis is restricted to only small and medium firms (Table 4.5 and 4.6).

Table 4.5

Per kilogram establishment cost of yellow raisins by size of firm : (a) Small firms

(Rs/Kg)

Respondent	Land cost	Cost of shed assets other than land	Labour cost	Transport cost of material	Aggre-gate cost
Y-1	0.12 (15.78)	0.63 (82.89)	0.01 (1.31)	0.01 (0.65)	0.76 (100.00)
Y-2	1.42 (43.69)	1.55 (47.69)	0.20 (6.15)	0.08 (2.46)	3.25 (100.00)
Y-3	1.00 (60.60)	0.48 (29.09)	0.15 (9.09)	0.02 (1.21)	1.65 (100.00)
Y-5	0.33 (6.53)	4.49 (88.91)	0.18 (3.56)	0.04 (0.79)	5.05 (100.00)
Universe Average	0.71 (26.49)	1.78 (66.41)	0.13 (4.85)	0.03 (1.11)	2.68 (100.00)

Note :   Figures   in parentheses are percentages to aggregate cost

Source: Field Survey

Table 4.6

Per kilogram establishment cost of yellow raisins by size of firm : (b) Medium firms

(Rs/Kg)

Respondent	Land cost	Cost of shed assets other than land	Labour cost	Transport cost of material	Aggre-gate cost
Y-4	0.37 (46.25)	0.38 (47.5)	0.04 (5.00)	0.01 (0.87)	0.80 (100.00)
Universe Average	0.37 (46.25)	0.38 (47.5)	0.04 (5.00)	0.01 (0.87)	0.80 (100.00)

Note :   Figures   in parentheses are percentages to aggregate cost

Source: Field Survey

Table 4.5 depicts the picture of small firms. On persual of this table it appears that the aggregate cost per kilogram varied from Rs.0.78 to Rs.5.05 and for the universe as a whole it averaged Rs. 2.68. The respondent Y-5 has the highest establishment cost as it is the smallest unit of the group. It is because of the exceptionally high value of this firm, the universe average has shot up to Rs. 2.68; otherwise it would be less Rs.2.

The case of medium firm is shown in Table 4.6. In this group, there is only one firm. Therefore, the details may not be fully representative of the category. Eventhen, the figures may be used as nearest approximations for comparison with other categories. Its average cost of establishment has turned out to be Rs. 0.80 only.

Now, a comparative analysis of both the firm sizes can be done by juxtaposing the results as in Table 4.7.

Table 4.7

Establishment cost of yellow raisins: Comparative scenario of firm sizes

(Rs./Kg.)

Particulars	Small Firm	Medium Firm
1. Land Cost	0.71 (26.49)	0.31 (46.25)
2. Cost of shed assets other than land	1.78 (66.17)	0.38 (47.5)
3. Labour cost	0.13 (4.85)	0.04 (5.00)
4. Transport cost of material	0.03 (1.11)	0.01 (0.87)
Aggregate cost	2.68 (100.00)	0.80 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Table 4.5 and 4.6   .

Observation on Table 4.7 follows :

(1)   Aggregate establishment cost per kilogram of yellow raisins declined with increase in the firm size indicating thereby an inverse relationship between size of the firm and establishment cost of raisins.

(2)   Land cost as percentage of aggregate establishment cost is more in case of medium firm than small firms.

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(3)   Share of cost of shed assets other than land in estab-
        lihsment cost is a major component in case of both the
        firms; however, it is much higher with small firms.

(4)   The percentage of labour cost to aggregate cost is mar
        ginally higher in medium firm.

(5)   The share of transport cost of material to aggregate
        cost is negligible in case of both kinds of firms.

        On the whole, larger firms are found to be more
economical in the production of yellow raisins also.

**4.3.3 Per kilogram establishment cost : green and yellow
raisins compared**

        Having considered the establishment cost of the
two products in isolation, it is worthwhile to see their
comparative position. The relevant data are brought together
in Table 4.8.

Table 4.8

Comparison of establishment of green and yellow raisins

Particulars	Green raisins				Yellow raisins			
1. Aggregate Cost by size of firm (Rs/Kg)								
(A) Small firms	1.98				2.68			
(B) Medium firms	1.53				0.80			
(C) Large firms	0.96				-			
2. Cost components as percentages of aggregate cost by size of firms (%)	1	2	3	4	1	2	3	4
(A) Small firms	18.18	79.29	1.51	0.40	26.49	66.41	4.85	1.11
(B) Medium firms	6.53	90.84	1.63	0.98	46.25	47.5	5.00	0.87
(C) Large firms	8.42	89.47	1.05	0.84	-	-	-	-

Note :   The columns under item 2 in the table are indicative of (1) land cost; (2) cost of shed assets other than land; (3)labour cost; (4) transport cost of material

Source :   Table 4.4 and 4.7

Observation on Table 4.8 follow :

(1)   Aggregate establishment cost per kilogram is the highest in case of small firms of both the products and it diminishes with increasing size of the firm.

(2)   The percentage of land cost has a falling tendncy with increase in the size of the firms producing green raisins while it increases with firm size of yellow raisins. It is due to the fact that most of the time the production of yellow raisins takes place on such

lands which are useful for other purposes. Hence, per acre land cost is higher. This is not the case of the land used for green raisins.

(3)   The share of cost of shed assets other than land is noticeably higher for green raisins.

(4)   The share of labour cost in aggregate cost is considerably less in case of green raisins.

(5)   The percentage of transport cost is lower for green raisins.

In sum, on account of establishment cost, production of green raisins is cheaper than yellow raisins.

4.3.4 Per kilogram processing cost of green raisins

Similar to establishment cost, here too the cost analysis is done with reference to the size of the firms. Itemwise data of processing cost per kilogram of green raisins according to size of firm are presented in Table 4.9, 4.10 and 4.11.

Table 4.9

Per kilogram processing cost of green raisins by size of firm : (a) Small firms

(Rs/Kg)

Respondent	Cost of raw material	Transport cost of raw material	Cost of assets	Cost of chemicals	Cost of labour	Water charges	Electricity Charges	Aggregate Cost
1	2	3	4	5	6	7	8	9
G-1	40.4	1.01	1.29	1.77	2.96	0.16	0.03	47.62
	(84.83)	(2.12)	(2.70)	(3.71)	(6.21)	(0.33)	(0.06)	(100.00)
G-4	40.4	1.01	0.36	1.77	0.8	0.1	0.01	44.45
	(90.88)	(2.27)	(0.80)	(3.98)	(1.79)	(0.22)	(0.02)	(100.00)
G-5	44.24	1.10	0.88	3.11	3.13	0.1	0.04	52.51
	(84.25)	(2.09)	(1.67)	(5.92)	(5.96)	(0.01)	(0.07)	(100.00)
G-7	40.4	1.01	1.61	1.77	0.93	0.1	0.05	45.87
	(88.07)	(2.20)	(3.50)	(3.85)	(2.02)	(0.21)	(0.10)	(100.00)
G-8	40.4	1.21	0.62	2.04	2.24	0.19	0.04	46.74
	(86.43)	(2.58)	(1.32)	(4.36)	(4.79)	(6.40)	(0.08)	(100.00)
G-9	43.28	1.29	0.77	1.67	0.71	0.07	0.06	47.85
	(90.44)	(2.69)	(1.60)	(3.49)	(1.48)	(0.14)	(0.12)	(100.00)
Universe Average	41.52	1.10	0.92	2.02	1.79	0.10	0.03	47.50
	(87.48)	(2.32)	(1.93)	(4.21)	(3.65)	(0.21)	(0.08)	(100.00)

Note :   Figrues   in parentheses are percentages to aggregate cost

Source :   Field survey

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Table 4.10

Per kilogram processing cost of green raisins by size of firm : (b) Medium firms

(Rs/Kg)

Respondent	Cost of raw material	Transport cost of raw material	Cost of assets	Cost of chemicals	Cost of labour	Water charges	Electricity Charges	Aggregate Cost
1	2	3	4	5	6	7	8	9
G-3	40.4 (84.84)	1.01 (2.22)	1.45 (3.18)	2.46 (5.41)	0.14 (0.30)	0.006 (0.01)	0.01 (0.02)	45.47 (100.00)
G-6	42.42 (85.33)	0.77 (1.54)	1.14 (2.29)	1.32 (2.65)	3.82 (7.68)	0.22 (0.44)	0.02 (0.04)	49.71 (100.00)
Universe Average	41.41 (87.05)	0.89 (1.88)	1.29 (2.73)	1.89 (3.97)	1.98 (4.16)	0.11 (0.23)	0.015 (0.03)	47.55 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Field survey

Table 4.11

Per kilogram processing cost of green raisins by size of firm : (c) Large firms

(Rs/Kg)

Respondent	Cost of raw material	Transport cost of raw mate.	Cost of assets	Cost of chemicals	Cost of labour	Water charges	Electricity Charges	Aggregate Cost
1	2	3	4	5	6	7	8	9
G-2	40.4 (92.76)	0.80 (1.83)	0.59 (1.35)	1.55 (3.55)	0.19 (0.43)	0.01 (0.02)	0.01 (0.02)	43.55 (100.00)
G-10	40.4 (89.49)	1.01 (2.23)	0.38 (0.84)	2.08 (4.60)	1.18 (2.61)	0.09 (0.19)	0.009 (0.01)	45.14 (100.00)
Universe Average	40.4 (91.12)	0.90 (2.03)	0.48 (1.09)	1.81 (4.07)	0.68 (1.52)	0.05 (0.11)	0.0095 (0.01)	44.34 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Field survey

As per Table 4.9, the average processing cost of small firms is Rs.47.50. It appears that aggregate processing cost per kilogram varied from Rs. 44.45 to Rs. 52.51. Largest chunk of the cost items is the raw material commanding 87.48 per cent of the aggregate cost.

Table 4.10 depicts the pictrue of medium firms. The average prcoessing cost of medium firm is Rs. 47.59, in which the share of raw material is 87.05 per cent.

Large firm scenario is given in Table 4.11. The large firms processed the raw material at an average cost of Rs. 44.34. Raw material cost averaged 91.12 per cent.

Now a comparative picture of the three firm sizes can be taken in order to establish meaningful conclusions about the relationship between the size of the firm and the processing cost of the firms producing green raisins. Necessary data is put in juxtaposition in Table 4.12.

Table 4.12

Processing cost of green raisins : comparative scenario of firm sizes (Rs./Kg)

Particulars	Small Firm	Medium Firm	Large Firm
1. Cost of raw material	41.52 (87.48)	41.41 (87.05)	40.4 (91.12)
2. Transport cost of raw material	1.10 (2.32)	0.89 (1.88)	0.90 (2.03)
3. Cost of assets	0.92 (1.93)	1.29 (2.73)	0.48 (1.09)
4. Cost of chemical	2.02 (4.21)	1.89 (3.97)	1.81 (4.07)
5. Cost of labour	1.79 (3.65)	1.98 (4.16)	0.68 (1.52)
6. Water charges	0.10 (0.21)	0.11 (0.23)	0.05 (0.11)
7. Electricity Charges	0.03 (0.08)	0.01 (0.03)	0.009 (0.02)
Aggregate cost	47.50 (100.00)	47.59 (100.00)	44.34 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Table 4.9, 4.10 and 4.11

Foollowing inferences emerge from the persual of Table 4.12

(1)   Aggregate processing cost is the lowest for large firms and it is more or less the same for small and medium firms.

(2)   Cost of raw material is the most important component of
        aggregate cost in all types of firms. Its share in the
        aggregate cost is the highest (91.12 per cent) in large
        firms.

(3)   The proportion of transport cost of raw material is the
        least in case of medium firms.

(4)   The proportion of cost of assets is the lowest in large
        firms.

(5)   Percentage share of cost of chemicals is the highest in
        small firms.

(6)   Percentage of cost of labour is significantly low in
        large firms vis-a-vis medium and large firms.

(7)   Water and electricity charges are much less important
        cost items in aggregate cost having shares below 0.25
        per cent and 0.10 per cent respectively.

4.3.5 Per kilogram processing cost of yellow raisins

        Similar to green raisins, the analysis of process-
ing cost of yellow raisins also has been done separately for
small and medium firms, large firm being non-existent in the
sample. Itemwise data on processing cost per kilogram of
yellow raisins is presented in Table 4.13 and 4.14.

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Table 4.13

Per kilogram processing cost of yellow raisins by size of firm : (a) Small firms

(Rs/Kg)

Respondent	Cost of raw material	Transport cost of raw mate.	Cost of assets	Cost of chemicals	Cost of labour	Water charges	Electricity Charges	Aggregate Cost
1	2	3	4	5	6	7	8	9
Y-1	32.0 (87.71)	0.31 (0.84)	1.36 (3.72)	1.28 (3.50)	1.00 (2.74)	0.5 (1.37)	0.03 (0.08)	36.48 (100.00)
Y-2	34.28 (77.29)	0.10 (0.22)	1.26 (2.84)	1.96 (4.41)	6.27 (14.13)	0.42 (0.94)	0.06 (0.13)	44.35 (100.00)
Y-3	48.00 (82.50)	1.5 (2.57)	0.62 (1.06)	1.21 (2.07)	6.76 (11.61)	0.07 (0.12)	0.02 (0.04)	58.18 (100.00)
Y-5	33.33 (89.71)	1.04 (2.79)	1.28 (3.44)	0.80 (2.15)	0.5 (1.34)	0.12 (0.32)	0.08 (0.21)	37.15 (100.00)
Universe Average	36.90 (83.84)	0.73 (1.65)	1.13 (2.56)	1.31 (2.97)	3.63 (8.24)	0.27 (0.61)	0.04 (0.09)	44.01 (100.00)

Note : Figrues in parentheses are percentages to aggregate cost
Source : Field survey

Table 4.14

Per kilogram processing cost of yellow raisins by size of firm : (b) Medium firms

(Rs/Kg)

Respondent	Cost of raw material	Transport cost of raw mate.	Cost of assets	Cost of chemicals	Cost of labour	Water charges	Electricity Charges	Aggregate Cost
1	2	3	4	5	6	7	8	9
Y-4	40.0 (94.65)	0.25 (0.59)	0.18 (0.42)	0.77 (1.82)	1.05 (2.48)	0.01 (0.02)	0.003 (0.01)	42.26 (100.00)
Universe Average	40.00 (94.65)	0.25 (0.59)	0.18 (0.42)	0.77 (1.82)	1.05 (2.48)	0.01 (0.02)	0.003 (0.01)	42.26 (100.00)

Note : Figrues in parentheses are percentages to aggregate cost
Source : Field survey

Table 4.13 depicts the pictrue of small firms producing yellow raisins. From the table it appears that the aggregate processing cost varied from Rs.36.48 to Rs.58.18. Respondent Y-3 has the highest processing cost (Rs.58.18). The universal average of processing cost is Rs. 44.01. Of this almost 84 per cent is shared by raw material and 8 per cent by labour.

Medium firm scenario is given in Table 4.14. It reveals that the average processing cost of medium firm producing yellow raisins is Rs. 42.26. It is a single respondent sample and hence may not be fully representative as regards figures. Eventhan, cost significance would not change. Raw material cost exceeds 90 per cent whereas labour cost is 2.5 per cent.

Now comparison of firm sizes may be attempted with the help of data presented in Table 4.15

Table 4.15

Processing cost of yellow raisins : comparative scenario of firm sizes

(Rs./Kg.)

Particulars	Small Firm	Medium Firm
1. Cost of raw material	36.90 (83.84)	40.00 (94.65)
2. Transport cost of raw material	0.73 (1.65)	0.25 (0.59)
3. Cost of assets	1.13 (2.56)	0.18 (0.42)
4. Cost of chemical	1.31 (2.97)	0.77 (1.82)
5. Cost of labour	3.63 (8.24)	2.48 (0.01)
6. Water charges	0.27 (0.61)	0.01 (0.02)
7. Electricity Charges	0.04 (0.09)	0.003 (0.01)
Aggregate cost	44.01 (100.00)	42.26 (100.00)

Note : Figrues in parentheses are percentages to aggregate cost

Source : Table 4.13 and 4.14

Observation on Table 4.15 are as under:

(1)   Aggregate processing cost is lower for medium firms and hence appears to be inversely related to the size of firm.

(2)   With reference to the cost components as percentages of aggregate cost.

(A) Cost of raw material varied directly with size;

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(B) Transport cost of raw material, cost of assets, cost of chemicals, cost of labour, water and electricity charges varied inversely with size and

(3) The proportion of electricity and water charges is neligible in aggregate cost, more so with electricity charges.

4.3.6 Per kilogram processing cost: green and yellow raisins compared

Similar to establishment cost, in case of processing cost too comparision of the cost items may be attempted between green raisins and yellow raisins. Details of Table 4.16 can be used as the basis.

Table 4.16

Comparison of establishment of green and yellow raisins

Particulars	Green raisins							Yellow raisins						
1. Aggregate Cost by size of firm (Rs/Kg)														
(A) Small firms	47.50							44.01						
(B) Medium firms	47.59							42.26						
(C) Large firms	44.34							-						
2. Cost components as percentages of aggregate cost by size of firms (%)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
(A) Small firms	87.48	2.32	1.93	4.21	3.65	0.21	0.08	83.84	1.65	2.56	2.97	8.24	0.61	0.09
(B) Medium firms	87.05	1.88	2.73	3.97	4.16	0.23	0.03	94.65	0.59	0.42	1.82	2.48	0.02	0.01
(C) Large firms	91.12	2.03	1.09	4.07	1.52	0.11	0.02	-	-	-	-	-	-	-

Note : The columns under item 2 in the table are indicative of (1) cost of raw material;
(2) transport cost of raw material; (3) cost of assets; (4) cost of chemicals;
(5) cost of labour; (6) water charges; (7) electricity charges.
Source : Table 4.12 and 4.15

Figures in Table 4.16 would establish following interences:

(1) The aggregate processing cost is higher for green raisins than yellow raisins.

(2) The cost of raw material varied directly with the size of firms in case of both the commodities. The proportion of this cost in aggregate cost is remarkable in both the products.

(3) Transport cost of raw material of green raisins is higher.

(4) The cost of assets is higher in small firms producing yellow raisins compared to green raisins, as against this, medium firms producing yellow raisins are better placed.

(5) Green raisins are costlier in using chemicals.

(6) Cost of labour is more in medium firm producing green raisins but it is pretty high is small firms producing yellow raisins.

(7) Water charges are relatively higher in medium firm producing green raisins while they are much higher in smaller firms producing yellow raisins.

(8)   Electricity charges are very negligible in case of both
        products and varied inversely with the size of the firm
        in case of both the products.

        Overall conclusion is that the aggregate process-
ing cost of green raisins is higher than yellow raisins. This
conclusion is exactly opposite of the one for establishment
cost wherein production of green raisins is found to be
cheaper.

4.3.7 Per kilogram managerial cost of green raisins

        Now the cost analysis of managerial cost with
reference to the size of the firms. Itemwise data of manage-
rial cost per kilogram of green raisins according to the size
of the firm are presented in Tables 4.17, 4.18 4.19.

Table 4.17

Per kilogram managerial cost of green raisins by size of firm : (a) Small firms

(Rs./Kg)

Respondent	Cost of managerial work	Cost of office premises	Cost of salaries of staff	Aggregate cost
G-1	0.56 (100.00)	-	-	0.56 (100.00)
G-4	0.56 (100.00)	-	-	0.56 (100.00)
G-5	0.64 (100.00)	-	-	0.64 (100.00)
G-7	0.5 (100.00)	-	-	0.5 (100.00)
G-8	0.64 (100.00)	-	-	0.64 (100.00)
G-9	0.64 (88.89)	0.07 (9.72)	-	0.71 (100.00)
Universe average	0.59 (98.33)	0.01 (1.67)	-	0.60 (100.00)

Note :   Figures in parentheses are percentages to aggregate cost

Source :   Field survey

Table 4.18

Per kilogram managerial cost of green raisins by size of firm : (b) Medium firms

(Rs./Kg)

Respondent	Cost of managerial work	Cost of office premises	Cost of salaries of staff	Aggregate cost
G-3	0.22 (100.00)	-	-	0.22 (100.00)
G-6	0.33 (100.00)	0.22 (26.50)	0.27 (32.53)	0.83 (100.00)
Universe average	0.275 (52.88)	0.11 (21.15)	0.135 (25.96)	0.52 (100.00)

Note :   Figures in parentheses are percentages to aggregate cost

Source :   Field survey

Table 4.19

Per kilogram managerial cost of green raisins by size of firm : (c) Large firms

(Rs./Kg)

Respondent	Cost of managerial work	Cost of office premises	Cost of salaries of staff	Aggregate cost
G-2	0.15 (100.00)	-	-	0.15 (100.00)
G-10	0.15 (100.00)	-	-	0.15 (100.00)
Universe average	0.15 (100.00)	-	-	0.15 (100.00)

Note : Figures in parentheses are percentages to aggregate cost

Source : Field survey

Table 4.17 shows that the average managerial cost of small firms per kilogram of raisins is Rs.0.60. The cost has varied from Rs.0.5 to Rs. 0.72. The share of cost of managerial work is the most dominating item in total managerial cost. Most of the small firms do not have any office premises. Only one firm in the sample made expenditure on this cost item. All the managerial activities are done by the owner himself and for that specialised managerial staff is not appointed by any firm.

Table 4.18 shows the picture of medium firm. In this group there are only two sample firms. Average managerial cost of medium firms Rs. 0.50 which is lower than that of the smaller firms in the activity. One of the two sample firms has the office premises and salaried staff employed. Obviously its cost composition differs from the self employed entrepreneur firm.

Large firm scenario is given in Table 4.19 reveals its average managerial cost to the tune of only Rs. 0.15. Inspite of being large, the firms work without any special office premise and salaried staff.

Now a comparative picture of the three firm sizes can be taken in order to establish meaningful conclusions about the relationship between size of the firm and managerial cost of the firms producing green raisins (Table 4.20).

Table 4.20

Managerial cost of green raisins : Comparative scenario

(Rs/Kg)

Particulars	Small Firm	Medium Firm	Large Firm
1. Cost of managerial work	0.59 (98.33)	0.275 (52.88)	0.15 (100.00)
2. Cost of office premises	0.01 (1.67)	0.11 (21.15)	-
3. Cost of salaries of staff	-	0.135 (25.96)	-
Aggregate cost	0.60 (100.00)	0.52 (100.00)	0.15 (100.00)

Note : Figrues in parentheses are percentages to aggregate cost

Source : Table 4.17, 4.18 and 4.19

Following inferences emerge from persual of Table 4.20.

(1) Aggregate managerial cost varies inversely with size of the firm. Aggregate managerial cost of large firm is one fourth of the small firm and 29 per cent of the medium firm.

(2) The cost of managerial work is the most important component of the aggregate cost in all types of firms.

(3) Spending for office premises and appointing office staff is, by and large, not favoured by the entrepreneurs. Usually the firms use production sheds for

office work. They are only stray cases of firms making special office premise and oppointing separate staff.

On the whole, it can be concluded that the share of managerial cost in total cost is negligible in all types of firms and it varies inversely with the size of firm.

4.3.2 Per kilogram managerial cost of yellow raisins

Data culled in connection with yellow raisins can be presented and analysed similar to green raisins. Table 4.21 and 4.22 present the survey data.

Table 4.21

Per kilogram managerial cost of yellow raisins by size of firm : (a) Small firms

(Rs./Kg)

Respondent	Cost of managerial work	Cost of office premises	Cost of salaries of staff	Aggregate cost
Y-1	0.75 (100.00)	-	-	0.75 (100.00)
Y-2	0.96 (100.00)	-	-	0.96 (100.00)
Y-3	0.78 (100.00)	-	-	0.78 (100.00)
Y-5	3.28 (100.00)	-	-	3.28 (100.00)
Universe average	1.44 (100.00)	-	-	1.44 (100.00)

Note : Figures in parentheses are percentages to aggregate cost

Source : Field survey

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Table 4.22

**Per kilogram managerial cost of yellow raisins by
size of firm : (b) Medium firms**

(Rs./Kg)

Respondent	Cost of managerial work	Cost of office premises	Cost of salaries of staff	Aggregate cost
Y-4	0.25 (100.00)	-	-	0.25 (100.00)
Universe average	0.25 (100.00)	-	-	0.25 (100.00)

Note :   Figures in parentheses are percentages to
aggregate cost

Source :   Field survey

Table 4.21 depicts the picture of small firms. It
is noticed that all firms spent money only on one cost item;
i.e. managerial work and did not incur expenditure on office
premises and salaried staff. Average managerial cost of small
firms producing yellow raisins is Rs.1.44. It varies from Rs.
0.75 to Rs. 3.28. Actually, it is because of the extremely
large figure of respondent Y-5 that the average cost has been
pushed up to Rs. 1.44. If this respondent is excluded, the
average would be below Re.1.

In Table 4.22 the medium firm has registered
Rs.0.25   as   the   average   managerial   cost.

Now it will be possible to attempt an inter-firm comparison of managerial cost per kilogram and thereby note the size cost relationship. The relevant data are brought together in Table 4.23.

Table 4.23

Managerial cost of yellow raisins : Comparative scenario of firm sizes

(Rs/Kg)

Particulars	Small Firm	Medium Firm
1. Cost of managerial work	1.44 (100.00)	0.25 (100.00)
2. Cost of office premises	–	–
3. Cost of salaries of staff	–	–
Aggregate cost	1.44 (100.00)	0.25 (100.00)

Note :   Figrues in parentheses are percentages to aggregate cost

Source :   Table 4.21 and 4.22

Following inferences can be drawn from the Table 4.23

(1)   Similar to green raisins, in case of yellow raisins also the managerial cost varies inversely with the size of the firm.

(2)   In case of cost component, the share of cost of manage-
      rial work is 100 per cent. It means that no firm in
      both size groups spends for office premises and sal-
      aries of managerial work.

(3)   The share of managerial cost in aggregate ccst of
      producing yellow raisins is negligible.

4.3.9 Per kilogram managerial cost: Inter product comparison

       Final figures of per kilogram managerial cost of
green and yellow raisins can now be placed side by side for
inter product comparison.

Table 4.24

Per kilogram managerial cost : Comparative scenario

Particulars	Green raisins			Yellow raisins		
1. Per kilogram managerial cost by size of firm (Rs/Kg)						
(A) Small firms		0.60			1.44	
(B) Medium firms		0.52			0.25	
(C) Large firms		0.15			-	
2. Share of cost group in the aggregate cost (%)	1	2	3	1	2	3
(A) Small firms	98.33	1.67	-	100.00	-	-
(B) Medium firms	52.88	21.15	25.96	100.00	-	-
(C) Large firms	100.00	-	-	-	-	-

Note :   The columns under item 2 in the table are indica-
             tive of (1) Cost of managerial work; (2) cost of
             office premises and (3) cost of salaries of mana-
             gerial staff.
Source :   Table 4.20 and 4.23

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Table 4.24 would lead to the following conclusions.

(1)   Yellow raisins need higher managerial cost per kilogram compared to green raisins in case of small firm. But in case of medium firm the managerial cost of green raisins is higher than the yellow raisins.

(2)   The managerial cost varies invrsely with the size in case of both the products.

(3)   With reference to the cost component the share of cost of managerial work is the highest in case of both the products, because the owner himself does the managerial activities and so the managerial staff is not required. Exceptions apart. All the managerial activities take palce in the shed or in the house of the producer, so the firms do not spend on office premises separately.

(4)   The share of managerial cost in aggregate cost is too low in case of green as well as yellow raisins.

4.4 FINANCIAL POSITION OF GRAPE PROCESSING UNIT

Basically, financial strength of any business unit depends directly on the form of organisations that it has adopted. A proprietory firm is bound to be limited in strength and capacity as the resources of an individual are limited and also his capacity to raise the funds from outside

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sources. Partnership form helps in strengthening the capital base. Joint stock company and cooperative societies are still higher forms of organization working with broader capital base and undertaking large-scale business activity.

In case of grape processing industry in Sangli district, there is not a single firm functioning at a higher level of organisational form. Most of the firms are working in partnership organisational set-up. A single attempt was made to establish a firm under cooperative organisational setup, but it has not succeeded. There has been a total absence of joint stock organisation. The production capacities of the business units are circumscribed by their financial capability.

Sources of finance

Finance is the life-blood of every business. Higher the capacity of the business unit to raise finance, larger will be its sphere of operation. In case of raisin industry of Sangli district, as has been said earlier, most of the firms are ogranised as proprietory units. Hence, they would be relying principally on their own savings made mostly through the income received from agricultural activity and borrowing from outside source would play just a supplementary

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role. The sources of borrowings are banks, friends, relatives
and credit societies. There is no subsidy from the government
for raisin making activity.

4.4.1 Sources of finance for green raisins

Financial details also are presented on the lines
of the three fold classification of sample firms producing
green raisins into small, medium and large. Table 4.25, 4.26
and 4.27 give the necessary details in this context.

Table 4.25

Sources of finance of green raisins : (a) Small firm

(in Rs.)

Firm	Owned fund	Bank	Friends & relatives	Credit society	Total
G-1	1,50,000 (33.33)	-	1,50,000 (33.33)	1,50,000 (33.33)	4,50,C00 (100.C0)
G-4	1,00,000 (100.00)	-	-	-	1,00,C00 (100.00)
G-5	3,10,000 (77.5)	90,000 (22.5)	-	-	4,00,000 (100.00)
G-7	1,50,000 (33.33)	3,00,000 (66.67)	-	-	4,50,000 (100.00)
G-8	-	2,50,000 (55.56)	-	2,00,000 (44.44)	4,50,000 (100.00)
G-9	50,000 (33.33)	1,00,000 (66.67)	-	-	1,50,000 (100.00)

Note :   Figures in parentheses are percentages to totals
Source :   Field survey

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Table 4.26

Sources of finance of green raisins: (b) Medium firm

(in Rs.)

Firm	Owned fund	Bank	Friends & relatives	Credit society	Total
G-3	N.A. (50.00)	N.A. (50.00)	-	-	N.A. (100.00)
G-6	2,00,000 (50.00)	2,00,000 (50.00)	-	-	4,00,000 (100.00)

Note :

(1) N.A.: Not available

(2) Figures in parantheses are percentage to totals

Source : Field survey

Table 4.27

Sources of finance of green raisins : (c) Large firm

(in Rs.)

Firm	Owned fund	Bank	Friends & relatives	Credit society	Total
G-2	7,50,000 (88.23)	-	1,00,000 (11.76)	-	8,50,000 (100.00)
G-10	6,00,000 (63.15)	3,50,000 (36.84)	-	-	9,50,000 (100.00)

Note : Figures in parentheses are percentages to totals

Source : Field survey

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Table 4.25 depicts the picture of small firms producing green raisins. They have a tendency to rely on their own means as far as possible and then explore the outside sources of finance. The most preferred other source is bank. Only one sample firm borrowed from credit society. The medium firm scenario is given in Table 4.26. The medium firms are dependent on own savings and bank equally. Table 4.27 exhibits the position of large firm. They rely for their finance largely on their own funds and borrowing from bank and friends and relatives follow in decreasing order.

4.4.2 Sources of finance of yellow raisins

Now follows the case of firms producing yellow raisins with reference to the small and medium firms. Tables 4.28 and 4.29 show the details

Table 4.28

Sources of finance of yellow raisins : (a) Small firm
(in Rs.)

Firm	Owned fund	Bank	Friends & relatives	Credit society	Total
Y-1	60,000 (100.00)	-	-	-	60,000 (100.00)
Y-2	1,00,000 (100.00)	-	-	-	1,00,000 (100.00)
Y-3	24,000 (100.00)	-	-	-	24,003 (100.00)
Y-5	1,50,000 (100.00)	-	-	-	1,50,003 (100.00)

Note :   Figures in parentheses are percentages to totals
Source :   Field survey

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Table 4.29

Sources of finance of yellow raisins : (b) Medium firm

(in Rs.)

Firm	Owned fund	Bank	Friends & relatives	Credit society	Total
Y-4	1,50,000 (100.00)	—	—	—	1,50,000 (100.00)

Note : Figures in parentheses are percentages to totals

Source : Field survey

Table 4.29 depicts the picture of small firms producing yellow raisins. It appears that they solely depend upon own savings for financing their activity. The probable reasons are that the total production is low relative to green raisins and most of the units work at domestic level and not on commercial basis. In case of the solitary medium firm also in the sample, the producer has chosen the course of own finance rather than borrow from outside sources even to meet partial requirement of money.

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In conclusion, as raisin industry includes mostly proprietory firms, the requirement of finance is comparatively less. Most of the producers rely on their own savings and the role of outside finance is supplementary. If need be, other sources of finance are banks, credit societies, friends and relatives. Thus, as the scale of operation is relatively small, this industry comes under tiny sector.