

CHAPTER  3	DEVELOPMENT OF GRAPE ACTIVITY IN SANGLI DISTRICT GRAPES INTO RAISINS
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### 3.1 GRAPE CULTIVATION, PRODUCTION AND EXPORTS

#### 3.1.1 History of grape cultivation

According to the discoveries made recently by the scientists in Western Kazakhstan, grapes are among the oldest plants on the earth. They have discovered clear imprints of vines and their leaves in creataceous chalk deposits which date back 90 to 95 million years, a time at which dinosaurs flourished. Therefore, it is evident that grape is possibly as old as mankind. Most of the varieties of grapes belong to Afghanistan, Iran, USSR and Aisa.

### 3.1.1.1 India

In India, grapes have been under cultivation in the times of Susruta and Charaka (1356 A.D.). The ancient Aryans knew about grape culture as well as the preparation of beverages from it. Since 11th century B.C., but much of its antiquity, was not known until the muslim invasion. Muslim invaders introduced grape fruit from Iran and Afghanistan by the end of 12th century. Later grapes were taken to south by Mohammed Bin Tughlak when he shifted his capital to Daulatabad in 1338. He introduced three varieties viz. Abi (Bhokri), Fakhri and Sahebi. In 16th century, emperor Akbar introduced and encouraged grape cultivation in India. His successors are reported to have discouraged viticulture on grounds of religion and the 17th and 18th centuries consequently witnessed a decline of grape growing. More recently, in 1832, French priests introduced the crop in Mysore (Karnataka). Since then grape cultivation become more and more popular in south India. Still grape cultivated area of India is only 0.1 per cent of the total cultivated area of the world. Table 3.1 shows area under grape cultivation in India. It can be noticed that Maharashtra has the lion's share in grape area in the country. Karnatak and Andhra Pradesh are the other two important states in this context.

Table 3.1

Area under grape cultivation in India

State	Area (Hectares)
Maharashtra	6,000
Karnatak	2,500
Andhra Pradesh	1,500
Tamil Nadu	900
Punjab	400
Haryana	400
Rajstan	100
Gujrat	100
Others	100
Total	12,000

**Source:** Bhujbal, B.G. (1988), Draksha Bag, Continental Prakashan, Pune, Pp.2-3.

**3.1.1.2 Maharashtra**

As the frontiers of the Moghal rule extended westwards, grape culture advanced along and gradually spread to Ahmednagar, Daultabad and Aurangabad districts of Maharashtra. Concerted efforts were made in Maharashtra and Karnataka to rehabilitate grape cultivation. In 1921 Ganesh Khind Fruit Research Centre was established at Pune for promoting horticulture. In 1930 'Adarsh Godrej Farm' was

established at Nasik and grape cultivation was developed in that area. An important research output at this time was that of G.S. Cheema who developed a new variety of grapes viz., selection 7 which was later named as 'Cheema Sahebi' Grape cultivation was accelerated with the establishment of 'Maharashtra Rajya Draksha Bagayatdar Sangh' at Baramati in 1940. Later it was shifted to Pune in 1969. Now it has three branches one each at Sangli, Nasik and Solapur, Sangha is the landmark in the development of grape cultivation in Maharashtra.

In 1950, Gopal Krishna, Director of Horticulture, Maharashtra Government, made great efforts to popularise grape cultivation in Maharashtra. The establishment of Agricultural University at Rahuri in 1968, accelerated research and development in grape cultivation. Social and political personalities like Ravsaheb Gaikwad, S.N. Boravake, Annasaheb Shembekar made tremendous efforts for spread of grape cultivation in Maharashtra. Due to efforts of these and other people and institutions area under grape cultivation in Maharashtra state increased quite rapidly over eighties and nineties which can be observed vide Table 3.2.

Table 3.2

Area under grape cultivation in Maharashtra State

Year	Area (Hectares)
1982-83	2,917
1983-84	2,896
1984-85	4,862
1985-86	5,306
1986-87	5,668
1987-88	6,448
1988-89	7,242
1989-90	11,762
1990-91	15,210
1991-92	15,292
1992-93	15,726
1993-94	16,631
1994-95	21,085

Source: Districtwise Agricultural Statistical Information of Maharashtra, Part II (1995-96), Commissionerate of Agriculture, Pune.

3.1.1.3 Sangli.

In Sangli district in 1958 first attempt in grape cultivation was made by Pachure, a rich farmer of village Nandre. In the year 1960 Dagadulal Dhanaraj Bothara started grape cultivation in Tasgaon whose canes were supplied by M.C.Mehta of Nipani (Karnatak). Later in the year 1965-66, Ganpati Shankar Mhetre (Tasgaon) and Vasantao Arve (Borgaon) started grape cultivation. Both are the pioneers in this field. Vasantao Arve later developed the new variety of grape named 'Tas-E-Ganesh' in 1977. But in mid-sixties and seventies grape growers were confronted with the problems of

inadequate hard materials, fertilisers, fungicides as also constraints in marketing the produce. But the unstinted efforts of Ganpatrao Mhetre, Vasantrao Arve, P.S.Thakur (Agricultural Officer), Shreepad Dabolkar through their project 'Vaidnyanik Drakshakul' explored the possibilities of scientific grape cultivation for getting maximum yield, helped in overcoming the production problems. Additionally, the branch of Maharashtra Rajya Draksha Bagayatdar Sangha, established at Sangli in 1978, provided necessary backward linkages for production which gave impetus to rapid growth in grape activity in the region since nineteen eighties Table 3.3 bears testimony to this.

Table 3.3

Area under grape cultivation in Sangli

Year	Area (Hectares)
1982-83	661
1983-84	627
1984-85	1,062
1985-86	1,062
1986-87	1,062
1987-88	1,062
1988-89	1,391
1989-90	2,234
1990-91	2,535
1991-92	2,536
1992-93	2,660
1993-94	2,720
1994-95	3,142

Source: Office of the District Horticulture Department, Sangli.

### 3.1.2 Production of grapes

In India grape is cultivated under conditions that are entirely different from the major grape-growing countries of the world. Peculiarities of Indian viticulture are the array of climate and soils, evergreen nature of vines without entering into dormancy in subtropical and tropical regions of the country, greater degree of apical dominance exhibited by the vine and heavy fertilization. The grape cultivation is more developed in south India than north India because it is free from heavy rainfall, rigorous winter, frost, etc. which adversely affect the flowering and fruiting. Again, this region is also free from heavy unseasonal rains and from continuous periods of cloudy weather. Thus the climatic condition in South India is more favourable for grape cultivation. When we compare per hectare productivity in respect of grapes in India with rest of the world, it reveals an interesting picture which is shown in Table 3.4.

Table 3.4

## Per hectare productivity of grapes

Country	Productivity (tonnes/ha.)
Iran	5.2
Korea	9.0
Japan	11.0
Jordan	10.0
Switzerland	14.7
U.S.A.	15.6
Israel	16.0
Germany	19.0
India	21.7
Netherlands	27.0

Source: Shanmugavelu, K.G. (1989), Viticulture in India, Agro-Botanical Publishers, Bikaner P.6.

Interestingly enough, the Indian productivity per hectare is far higher than many of the European and other countries thereby establishing the Indian capability as an efficient producer. Apparently, it may be due to intensive cultivation practices adopted by the Indian growers. However, from the point of view of total acreage and production, India does not stand in comparison with other grape growing regions of the world. It is because area under cultivation is less in India compared to other countries. All the same, production of grapes has been increasing in India, in which contribution of Maharashtra is important. In Maharashtra, the share of sangli district is substantial. Table 3.5 shows



the average yield per hectare and total production in Maharashtra and Sangli district.

**Table 3.5**  
**Production and productivity of grape**

Year	Maharashtra		Sangli District	
	Average Yield (ton./ha)	Production ('00 M.T.)	Average Yield (ton./ha)	Production ('00 M.T.)
1982-83	12.8	374.2	12.6	83.3
1983-84	12.0	346.2	16.2	101.6
1984-85	17.3	843.1	15.3	162.5
1985-86	13.6	720.2	7.8	82.8
1986-87	13.0	738.5	9.8	104.0
1987-88	15.6	1005.9	13.4	142.3
1988-89	22.4	1620.0	24.2	336.7
1989-90	17.0	1996.1	20.4	455.8
1990-91	16.1	2454.6	20.3	516.9
1991-92	18.7	2861.1	21.9	555.3
1992-93	23.9	3757.8	27.1	728.0
1993-94	24.3	4042.4	31.4	856.5
1994-95	22.0	4631.0	26.1	819.6

**Source:** Districtwise Agricultural Statistical Information of Maharashtra, Part II (1995-96), Commissionerate of Agriculture, Pune.

It can be observed from the table that average productivity per hectare of grapes has almost doubled in Maharashtra whereas slightly more than double in case of Sangli district. As against this aggregate production of grapes in Maharashtra shot up by 12 times as against 10 times in Sangli district during 1982-95.

Different varieties of grapes are produced in India. Introduction of grape varieties started in India as early as 1838. Panjab was perhaps the first state to take up comprehensive introductions and the array of grape varieties was introduced from United States of America, Australia, Afghanistan and Russia. Thereafter, grape varieties have been introduced at various centres in India and more than 1,000 varieties of grapes are now available at various experimental stations and Agricultural Universities. The most used varieties for cultivation in India are Muscat Humburg, Cordinal, Perlette, Thompson-Seedless (Sultanina), Tokey, Concord, Anab-E-Shahi, Pusa Seedless, Delaware, Catawba, Ohanez, Red Malaga, Emperor, Italia, Muscat of Alexandria, etc. All these are the table purpose grapes.

In Maharashtra five varieties are cultivated on commercial basis; they are Thompson Seedless, Anab-E-Shahi, Kalisahebi, Bangalore Purple, Cheema Sahebi. In Sangli, Thompson Seedless, Anab-E-Shahi and Sharad Seedless are the three varieties which are cultivated most. Additionally, other two varieties which are developed by the growers of the same district are Tasgaon Chaman and Tas-E-Ganesh. All these varieties are produced in Sangli district. Details of area as well as production of each variety in Sangli district are given in Tables 3.6 and 3.7 respectively.

Table 3.6

## Taluka and varietywise area under grape in Sangli district

Taluka	Variety	Area under grape (in hectares)			
		1991-92	1992-93	1993-94	1994-95
Jat	Thompson seedless	242	258	260	165
	Sharad seedless	8	13	15	15
	Anab-E-Shahi	-	-	-	-
	Total	250 (8.37)	271 (8.58)	275 (8.14)	180 (3.87)
Tasgaon	Thompson seedless	1160	1198	1245	2100
	Sharad seedless	16	28	45	76
	Anab-E-Shahi	3	3	3	3
	Total	1179 (39.48)	1229 (38.94)	1293 (38.30)	2179 (46.93)
Khanapur	Thompson seedless	418	512	540	510
	Sharad seedless	5	8	12	12
	Anab-E-Shahi	-	-	-	-
	Total	423 (14.16)	520 (16.47)	552 (16.35)	522 (11.24)
Walwa	Thompson seedless	316	320	340	140
	Sharad seedless	4	5	9	9
	Anab-E-Shahi	-	1	1	1
	Total	320 (10.71)	326 (10.32)	350 (10.36)	150 (3.23)
Miraj	Thompson seedless	521	545	580	875
	Sharad seedless	7	12	23	23
	Anab-E-Shahi	1	1	1	1
	Total	529 (17.71)	558 (17.68)	604 (17.89)	899 (19.36)
Atpadi	Thompson seedless	110	136	158	55
	Sharad seedless	-	2	6	6
	Anab-E-Shahi	-	-	-	-
	Total	110 (3.68)	138 (4.37)	164 (4.85)	61 (1.31)

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Taluka	Variety	Area under grape (in hectares)			
		1991-92	1992-93	1993-94	1994-95
Shirala	Thompson seedless	-	-	-	-
	Sharad seedless	-	-	-	-
	Anab-E-Shahi	-	-	-	-
	Total	-	-	-	-
Kavathe Mahankal	Thompson seedless	14	108	127	655
	Sharad seedless	3	7	11	-
	Anab-E-Shahi	-	-	-	-
	Total	17 (0.56)	115 (3.64)	138 (4.08)	655 (14.10)
Sangli District	Thompson seedless	2939	3077	3250	4497
	Sharad seedless	43	75	121	141
	Anab-E-Shahi	4	4	5	5
	Total	2986 (100.00)	3156 (100.00)	3376 (100.00)	4643 (100.00)

**Note:** Figures in parantheses are percentages to totals  
**Source:** District Horticulture Department, Sangli

**Table 3.7**  
**Taluka and varietywise grape production in Sangli district**

Taluka	Variety	Production of grapes in tonnes			
		1991-92	1992-93	1993-94	1994-95
Jat	Thompson seedless	6050	5160	5200	5430
	Sharad seedless	200	260	300	305
	Anab-E-Shahi	-	-	-	-
	Total	6250 (8.37)	5420 (8.58)	5500 (8.14)	5735 (6.23)
Tasgaon	Thompson seedless	29000	23960	24900	42000
	Sharad seedless	400	560	900	836
	Anab-E-Shahi	75	60	60	60
	Total	29475 (39.50)	24580 (38.94)	25860 (38.30)	42896 (46.63)

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Khanapur	Thompson seedless	12450	10240	10800	12800
	Sharad seedless	125	160	240	240
	Anab-E-Shahi	-	-	-	-
	Total	12575 (16.85)	10400 (16.48)	11040 (16.35)	13040 (14.17)
Walwa	Thompson seedless	7900	6400	6800	6850
	Sharad seedless	100	100	180	145
	Anab-E-Shahi	-	20	20	15
	Total	8000 (10.72)	6520 (10.32)	7000 (10.36)	7010 (7.62)
Miraj	Thompson seedless	13025	10900	11600	17500
	Sharad seedless	175	240	460	60
	Anab-E-Shahi	25	20	20	20
	Total	13225 (17.72)	11160 (17.68)	12080 (17.89)	17580 (19.11)
Atpadi	Thompson seedless	2750	2720	3160	1300
	Sharad seedless	-	240	120	120
	Anab-E-Shahi	-	-	-	-
	Total	2750 (3.68)	2960 (4.68)	3280 (4.85)	1420 (1.54)
Shirala	Thompson seedless	-	-	-	-
	Sharad seedless	-	-	-	-
	Anab-E-Shahi	-	-	-	-
	Total	-	-	-	-
Kavathe Mahankal	Thompson seedless	2350	2160	2540	3900
	Sharad seedless	75	140	220	-
	Anab-E-Shahi	-	-	-	-
	Total	2425 (3.24)	2300 (3.64)	2760 (4.08)	3900 (4.24)
Sangli District	Thompson seedless	73450	61540	65000	89780
	Sharad seedless	1075	1500	2420	2106
	Anab-E-Shahi	100	80	100	965
	Total	74625 (100.00)	63120 (100.00)	67520 (100.00)	91981 (100.00)

**Note:** Figures in parantheses are percentages to totals  
**Source:** District Horticulture Department, Sangli

As regards area, persual of Table 3.6 reveals that of the 8 talukas in the district. Shirala alone is without grape cultivation. It is heavy rainfall tract of the district. Jat, Walwa and Atpadi talukas have marginal areas under the crop; moreover, the data reveals a declining tendency therein. Khanapur and Miraj talukas have nearabout 11 and 16 per cent respectively of the district land covered by vineyards. The absolute area has been increasing. Kavathe Mahankal has exhibited a sudden upsurge in the area in 1994-95, the terminal year of the data from marginal area in the previous year. One has to see whether the change stays on or gets back to original level in later years. The core area of the crop in the district is Tasgaon taluka sharing about 40 per cent in the district area. Here too, during 1991-94 the area varied marginally around 1,200 hectares, but, surprisingly, crossed 2,000 figure in 1994-95, pushing its share upto 46 per cent. In sum, referring to the year 1994-95, Tasgaon, Miraj, Khanapur and Kavathe Mahankal talukas together had 90 per cent land under grape, Tasgaon having half this share.

As regards the variety grown, Thompson Seedless is the most favoured one. Shared Seedless appears just a fancy while Anab-E-Shahi is negligible. Since most of the area under grape in Sangli district is used for cultivation of

the Thompson Seedless variety, obviously, the largest chunk of the grape produce is of this variety, as can be perceived from Table 3.7 Tasgaon taluka is in the forefront in production too commanding nearly 40 per cent of the district output. The year 1994-95 exhibits a sudden spurt in production in Tasgaon taluka consequent upon similar development in the area. Typically, Tasgaon's share in the area and production of the district for the four years under reference are perfectly matching. Furthermore, Tasgaon, Miraj and Khanapur Talukas together commanded 71 to 74 per cent of the district produce during 1991-92, 1992-93 and 1993-94, and 80 per cent in 1994-95. This later phenomenon is likely to continue during the years after 1994-95.

### **3.1.3 Export of grapes**

Grapes are next only to mangoes, in quality and value of fruits exported from India. India started exporting grapes since late seventies in which the role of Maharashtra is important. The share of Sangli district in total export of Maharashtra is remarkable. The grape growers of Sangli district started exporting grapes with the help 'Drakshakul'. At that time it exported to gulf countries only by air freight. All the produce has to be sent by air only due to its perishability. Immediately after unloading, the produce

has to be disposed off at the earliest. The interest in export market encouraged member-growers of 'Drakshakul' to accelerate research work in storage and improved trials. In 1980 grape growers of Sangli district had exported grapes after fumigation and per-cooling treatment. With import of GRAPE-GUARD paper in 1982, export of grapes by oceanic shipment commenced. Due to grape-guard the produce remained fresh and had better keeping quality than the produce sent by air. The establishment of MAHAGRAPE, marketing organisation for grapes has further strengthened the hands. Most of the exports in the past, had been destined to markets in the Middle East and Gulf. However with the development of technology for export by ocean freight after pre-cooling, under refrigerated condition, now the focus of export has turned to European markets.

The share of Maharashtra in total export is the largest. There are two reasons responsible for this. Firstly, grape-growing areas of Maharashtra are close to international airport and seaport i.e. Mumbai, which is 160 KMS from pune, 180 KMS from Nasik, 400 KMS each from Solapur and Sangli. So the grape-growers from this area can easily supply the grapes to Mumbai almost overnight. Another important reason is the sustained efforts made by the progressive growers from this area in increasing exports. Table 3.8



gives the aggregate figures of grape exports during 1990-91 and 1995-96.

**Table 3.8**  
**Exports of grapes from India**

Year	Volume (tones)	Evalue (Rs.in crore)
1990-91	5,348	8.55
1991-92	11,147	18.62
1992-93	10,801	21.78
1993-94	15,932	33.92
1994-95	18,000	42.00
1995-96	25,000	50.00

**Source:** 'Draksha Niryat Yanda Anakhi Vadnar', Sakal, 15, February, 1997.

This data for the recent years brings home a sudden shift in grape exports in 1991-92 compared to the previous year. Exports appear to have slightly more than doubled both in Volume and value terms. Thereafter, the uptrend has persisted with the exports rising with leaps and bounds and have more than doubled between 1991-92 and 1995-96. Quite remarkable growth it is! The exports are directed mainly to the Middle East countries.

### 3.2 DEVELOPMENT OF GRAPE PROCESSING INDUSTRY : AN HISTORICAL ACCOUNT

Grape is the fruit from which different products can be prepared through processing activity; they are wine, raisins, juice, squash, jam, jelly, juice concentrate, etc. Of these products, grapes are more suitable for wine and raisin-making. In Sangli district, raisin making is the only grape processing industry. Hence the present study deals only with raisin making.

Raisin from grapes form an important by-product industry in several grape growing countries in the world. Raisins have been a staple food for centuries. Preserving the grape by drying probably antedates preserving by fermentation. After wine production manufacture of raisins is the second most important product of grapes. In fact, production of raisins antedates that of wine. The word 'raisin' is derived from 'raisins sec' which in French literally means dried grapes. Any dried grape, therefore, has some right to be called as raisin. By usage, however, the terms has become limited mainly to the dried grapes of a few varieties. The origin of raisin making is in Egypt. Various fruits were put in the coffins of Egyptian mummies; grape was one of them. With the passage of time, people came to know that the grape

remains good in dried form also. On this observation and tradition, Nicolas Appert invented the method of drying grapes in sunshine without any process for which the French Government gave a reward of 1,20,000 Francs in 1810 A.D. Thus, the production of raisins was started. Raisins are produced in various countries of the world like U.S.A., Australia, Iran, Afghanistan, Greece, China, Russia, South Africa, Turkey etc. According to FAO Production Book 1994, world production of raisins amounted to 1.1 million M.T., out of which the U.S.A. produced 377,000 M.T. Asia 5,05,000 M.T. Europe 95,000 M.T. and Australia 44,000 M.T. India could not acquire any noteworthy position in the world production of raisins. Actually, till about a decade back, India depended for her raisin requirements entirely on imports.

### **India**

In India, nearly 90 per cent of the harvested grapes are marketed as fresh produce for table purpose. Area under grapes is increasing along with the field. Due to this, during the glut particularly, market price tends to dwindle. This necessitates suitable techniques for processing grapes. Raisin-making is one of the best alternatives to utilising grapes as they are in glut season. There is wide demand for raisins in India. India spends about Rs. 20 crore per year

for import of raisins from Afghanistan, Iran, Greece and Australia. This itself reveals that there is wide scope to raisin industry in India. With the introduction of the Thompson Seedless variety in peninsular India, it has now become possible to produce raisins of good to excellent quality. Prevalence of dry weather in March to May for most of the South and Central India makes the production of even "natural raisins". Experiments conducted at Punjab Agricultural University revealed the possibility of production of excellent raisins from locally produced Thompson Seedless variety having a TSS of 20 to 22 per cent by soda dip method. This gives satisfactory results. However, production of naturals is ruled out in North India because of pre-monsoon raisins.

The study made by Bindra and Brar gives us the various suitable areas for raisin-making in India. According to them, large tracts of Mid-Himalayas are eminently suited for grape production for purpose of raisin making. Places like Chini Valley, Ladakh, Lahaul, Spiti and Kulu are all suited for this purpose. The real handicap there is the availability of irrigation water. Since raisins are easy to transport as compared to other perishable agricultural products, renewed efforts should be made to develop this industry there. Kashmir valley is also free from rains at

the time of ripening of Thompson seedless grapes which ripens there in the first week of October. By adopting appropriate technology whole of the Kashmir valley could be a possible source of excellent raisins. Thus, there are three important grape-growing zones in India viz., peninsular India, Himalayan tract, as well as the plains of North-West India. With increasing acreage of Thompson seedless variety of grapes in Maharashtra, Karnataka and Andhra Pradesh, raisin-making activity got an impetus in these states and reached to the level of 10,000 M.T., 1,500 M.T. and 100 M.T. respectively in 1991. Thus, raisin production is picking up each year and India is estimated to produce annually 12,000 to 15,000 M.T. now. But country's total requirement of raisin is about 20,000 M.T. To bridge the gap. India imported about 6,000 M.T. raisins worth about Rs.15 crore during 1991-92. Over and above this, certain quantity of raisins is said to be smuggled in via Pakistan and Nepal.

Thus, this grape processing activity is quite significant for India and that is why about 4.6 per cent of the grapes produce is used for raisin-making and hardly 1 per cent grapes is used for wine-making, whereas the world over nearly 80 to 90 per cent of grape production is used for wine-making. In sum, the raisin industry is vital for the growth and development of grape production in the country.

Raisin making activity has additional merit as under :

- 1) Raisins, being less perishable than grapes, help the farmers to stabilize the price of fresh grapes in the market.
- 2) Raisin-making helps to particularly salvage grape crop under adverse weather conditions.
- 3) Raisin industry is highly labour intensive and provides great avenues of employment, particularly of women, in the countryside during the process of drying, sorting, grading, packing and other related areas like transport, storage, marketing, etc.
- 4) With the development of raisin industry, India can save foreign exchange outflow. In the near future the country may reach to the state of earning foreign exchange through this industry.
- 5) The export is contributing to the nutritional kitty of the nation.

Thus the raisin industry has good scope for rapid growth in Indian economy.

## **Maharashtra**

Maharashtra is one of the important centres of raisin production in India. There are various reasons responsible for it; important being that the cultivation of grapes is substantial in Maharashtra. Another reason is that the agro-climatic conditions in some parts of Maharashtra are suitable for raisin production. Hence, it has become an important agro-industry. Sangli and Solapur districts of the state are major producers of raisins and together had produced nearly 10,000 M.T. in 1991.

## **Sangli**

Sangli is an important place of raisin production. Raisin-making in Sangli district was taken up by 'Tasgaon Vaidnyanik Sheti Seva And Drakshakul Pvt. Ltd.' Since 1974, but actual process was finalised in 1975. Initially, raisins were made by dehydrators specially designed for the purpose. Such early experiments in raisin-making were conducted on the farm of a progressive farmer vasantrao Arve of Borgaon. It was observed that raisin-making with the help of locally made dryers was costlier and involved an expertise not readily available to the farmers at large. It also created problems related to bunch manipulation and handling of grapes. As a result, now raisins are made by sun-drying method. Now,

raisins are produced on the east side of the Sangli district. Sheds are established near Junoni. This area is an ideal place for drying of raisins as it has hot temperature and less humidity. The quality of the product can be maintained in this climate. So various raisin producers take their grapes to this area for drying and ultimately raisin-making.

### **3.3 GRAPE PROCESSING AT INSTITUTIONAL AND GROWER LEVEL**

As has already been pointed out that raisin-making activity is initially started at grower level in 1975. Vasantro Arve was pioneer of the activity. Later on other growers followed the method and thereby raisin production by individual growers became a wide-scale activity. As a further step in the endeavour, stray efforts also were made to institutionalise the activity. With the initiative of Babanrao Birnale of Sangli a co-operative processing unit was established in 1984-85 at Sangli. A large number of grape growers of the region became members of the co-operative. The membership gradually reached to 700. Main objective of establishment of the co-operative was to guard the grape-growers from severe market fluctuations by providing them adequate processing facilities to make profitable gains. The co-operative effort managed to reach to the level of producing about 300 M.T. annually. Of this produce, about 90 per



cent were green raisins and the balance 10 per cent were yellow raisins. These raisins were directly marketed to the traders of Delhi and Mumbai who used to come to the production place. This institutional experiment proved rather short-lived upto 1992, beyond which the activity has been frozen on the grounds of uneconomical production. The co-operative is presently in a dormant position, but not liquidated. If proper leadership emerges, it is possible to receive the functioning of this pioneer institution.

Another institutional effort in the field of raisin-making was made in 1994 with the establishment of the 'Shrikrishna Fal Utpadak Sahakari Society' in the co-operative sector with a membership of 70. This co-operative too was to cushion the grape-growers from the volatility of prices in the grape market by providing an alternative channel through processing activity. It was also to create necessary infrastructure facilities for the growers for raisin-making. This society by itself did undertake production of raisins, but provided only the infrastructure. Therefore, it can be well described as a common facility Centre. The society established sheds which were made available to the members by charging rent at Re.1 per kilogram of grapes processed. Water and electricity was also made available to them at cost. Actual processing activity was under-

taken by the intending growers at their cost. The infrastructure facility provided by the co-operative was a boon to the growers who could not invest themselves for an independent set-up. Existence of such a kind of co-operative encouraged the grape-growers for undertaking the raisin-making activity and consequently in giving the momentum to the raisin industry in Sangli district.

Eventhough raisin-making has this kind of an institutional base; quite large number of growers are found to have their own infrastructure for the purpose. However, if the co-operative activity flares up to dimensions more than at present certainly the grower-processors would; in the long run; reap larger pecuniary benefits than at present both in processing and in marketing activities.

PHOTOGRAPH

PROCESSING OF GRAPE INTO RAISINS

1. Processing shed : Outside view



2. Processing shed : Inside view : Shelving after dipping





3. Processing of grapes : Water cleaning



4. Processing of grapes : Dipping into the chemical





5. Transfer of grapes to dipping section

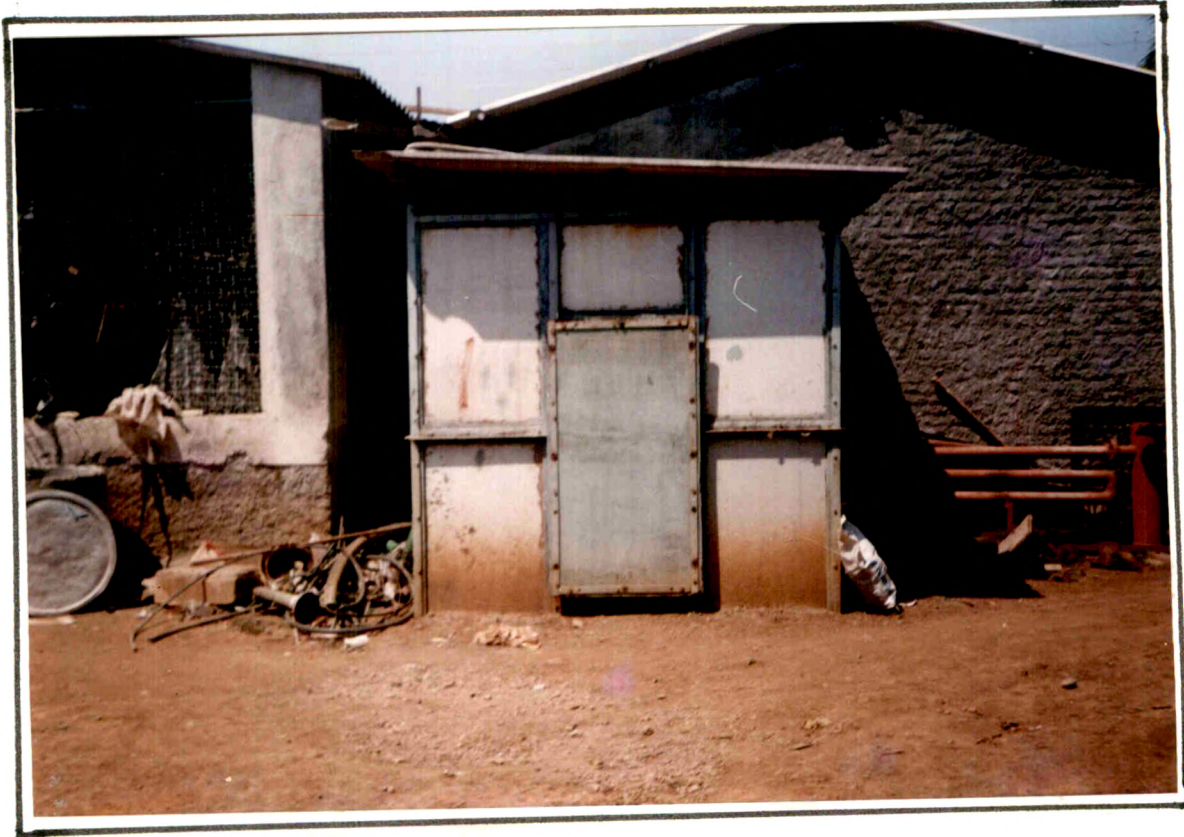


6. Processing of grapes : Mechanical dipping into the chemicals

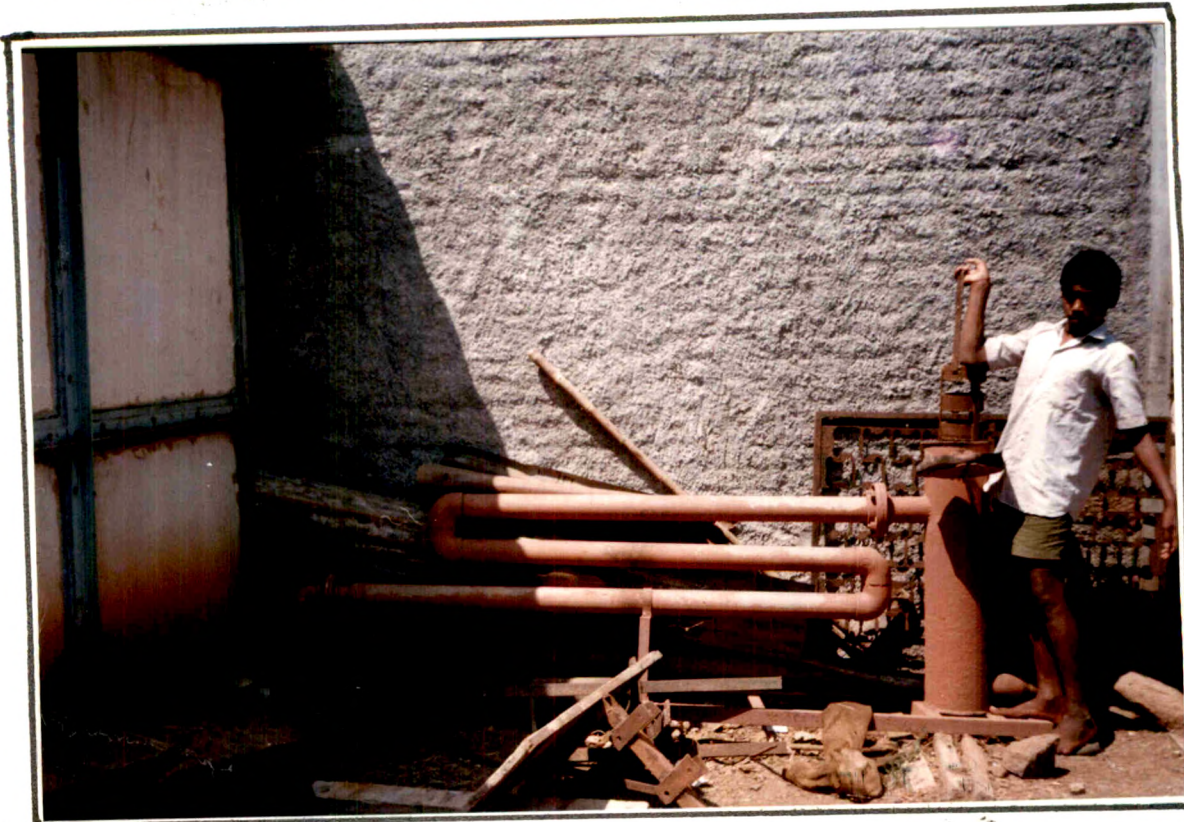




7. Sulphur fumigation chamber

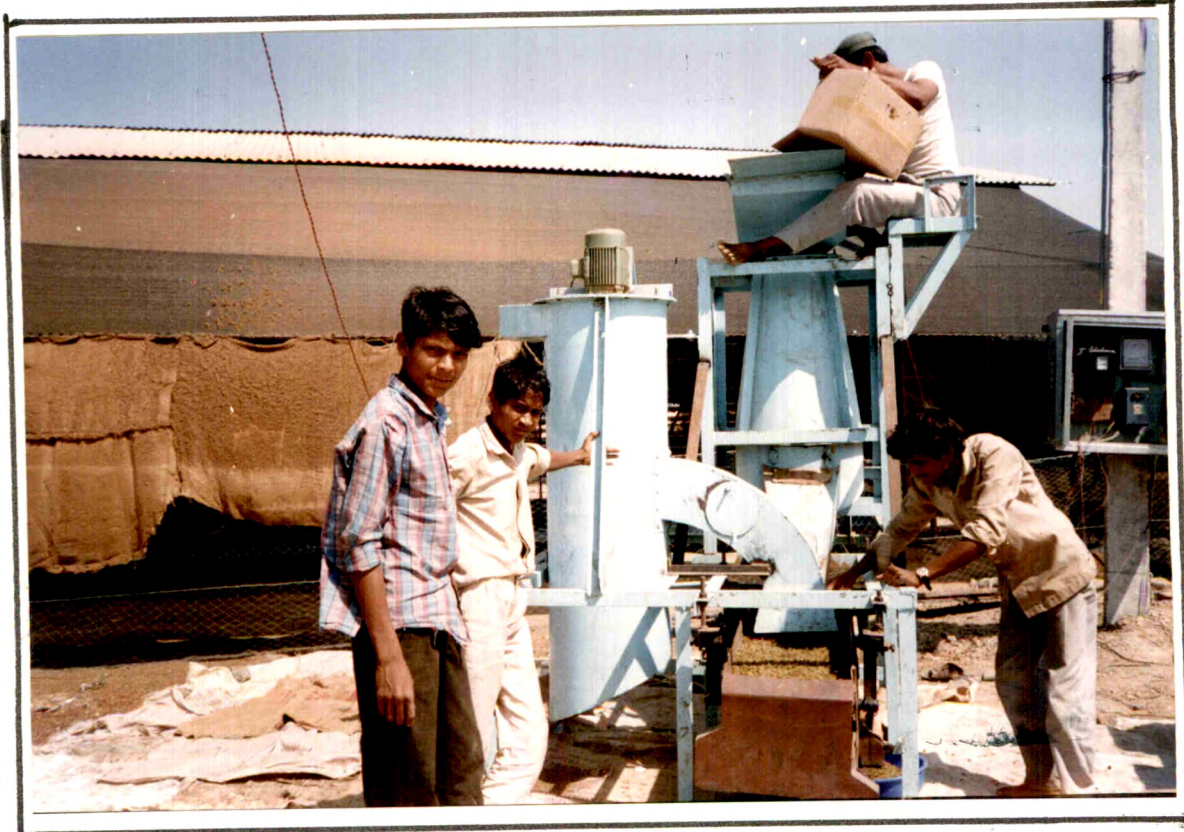


8. Sulphur released in fumigation chamber





9. Mechanical grading of raisins



10. Manual grading of raisins

