

CHAPTER 2	AGRICULTURE AND AGRO-PROCESSING IN SANGLI DISTRICT
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2.1 GEOGRAPHICAL LOCATION AND TOPOGRAPHY

The district derives its name from headquarters town Sangli. Sangli was erstwhile princely state which now forms a part of the district. Sangli district was formed in 1949 by transferring Tasgaon, Khanapur (Vita), Walwa and Shirala tahsils from old Satara district. Two more talukas, Miraj and Jat, were formed out of the parts of erstwhile Indian states and merged in the new district. After this merger, initially it was named as South Satara District. However, since 1960 the district was renamed as Sangli. There are 8 tehsils and 708 inhabited villages in Sangli district at present.

2.1.1 Location

District Sangli is a part of the famous Deccan Plateau. It lies between 16°45' to 17°21' north latitude and 73°42' to 75° 41' east longitude. It is bound by districts Solapur and Satara in the north, Bijapur in the east, Belgaum and Kolhapur in the south. A narrow tapering part of the district, stretching towards the west also bounds the coastal district of Ratnagiri.

Sangli district covers an area of 8,601.5 Sq.Km. and has a population of 22,09,488 as per 1991 census. It ranks 21st in area and 18th in population among the 31 districts of Maharashtra state. In other words, Sangli is one of the smallest districts in the state both in terms of area and population.

2.1.2 Topography

2.1.2.1 Soil Foundations

Soil formations in Sangli district have been predominantly influenced by the three rainfall zones of the district. The Western zone, mainly Shirala tahsil which receives very heavy rainfall, has red laterite soils on upghats and reddish brown soils on hill slopes, the latter

being developed on parent material of trap rock. The central transition zone of Krishna Valley covering areas of Walwa, part of Tasgaon and part of Miraj tahsil, has deep black soils of alluvial origin. It is recognised as rich agricultural tract. The third is the eastern drier zone comprising areas of eastern parts of Khanapur, Miraj, Tasgaon and tahsils of Jat, Kavathe Mahankal and Atpadi which consists largely of granular black soils and poor shallow soils. Saline alkaline soils are met with in the low-lying patches in the areas of low rainfall.

2.1.2.2 Rivers

The Krishna and the Warna are the principal rivers of the district. The Yerala, the Morna, the Manganga, the Nanni, the Agrani and the Bor are the other small rivers flowing through this district. During rainy season the flood waters entail much soil erosion, while during the dry part, they resume a slender course. These rivers go dry in summer season.

2.1.2.3 Hill Ranges

There are two main systems of hills. The Sahyadri range and its off-shoots and the off-shoots of Mahadev range. The Sahyadri system includes the main range of the Sahyadri

which forms the western boundary of the district. One of the spurs of the Mahadeo range, known as Mahimanagad- Panhala spur stretches upto Khanapur. At Khanapur it splits in two branches one branch passes 32 Kms in the south till it ends in the old Panhala Fort. The other branch stretches south east to Belur about 81 Km. south-west of Jat. It forms the water parting between the valley of the Yerala, a tributary of the Krishna on the right and valley of the Man, a tributary of the Bhima on the left.

2.1.2.4 Minerals

There are no important mineral deposits except building stones, clay and limestones. The limestone is associated with trop formation and the quality is not uniform. Good clay for bricks and tiels is found on the banks of the rivers.

2.1.2.5 Temperature

The district does not experience abrupt changes in temperature. The seasons are considerably uniform. During the rainy season, climate is cool and is followed by sultry weather in October and November. Winter sets in thereafter till january end. Dry hot climate is experienced in February

and March followed by hot climate till monsoon sets in. In the western part of the district, the climate is cool and healthy in hot weather and is chilly during the rainy season. Temperate climate persists on the plains of Walwa and Miraj tahsils. The eastern part experiences hotter climate than the central and the western parts of the district.

2.1.2.6 Wind

Generally, the winds blow moderate. In the rainy season their velocity is high and the direction is from south-west to north-east, more frequently towards east. In the post-monsoon periods, the winds are predominantly from north east or east. By February, the winds flow in west and north west directions. This is predominant feature of the summer.

2.1.2.7 Rainfall

The rains start sometime in the middle of June and last till the end of September. Major portion of rainfall in the district is received between July and September. During the first half of the season, most of the days are cloudy with drizzling rains, whereas during the late half it rains torrentially. Rainfall is the heaviest in the regions of

Sahyadri. Western portion of Shirala tahsil gets an average rainfall over 2000 mm. in a year. The central and the eastern portion receives the annual rainfall measuring about 750 mm. The north-eastern portion receives the lowest rainfall in the district averaging about 500 mm. in a year. The eastern tahsils of Jat, Kavathe Mahankal, Atpadi and Khanapur are known as scarcity and drought prone areas. Table 2.1 shows the average rainfall in Sangli district during 1985-1996.

Table 2.1

Annual average rainfall in Sangli district

Year	Rainfall (mm)
1985	379.3
1986	433.6
1987	542.11
1988	657.89
1989	540.5
1990	510.9
1991	724.9
1992	464.4
1993	763.6
1994	657.2
1995	522.2
1996	564.4

Source: Zilla Samajik Va Arthik Samalachan, Sangli Zilla.

2.2 AGRICULTURAL SCENARIO

2.2.1 Area under cultivation

In sangli district agriculture is one of the important economic activities Agricultural production in the district is badly affected due to scarcity and uncertain rains especially in eastern zone, rocky and poor soil, inadequate irrigation facilities, poor use of fertilizers by the farmers, etc. Area under cultivation has varied from year to year as can be seen from Table 2.2.

Table 2.2

Area under cultivation in Sangli district

(Area in '00 hectares)

Year	Total Cropped Area
1960-61	6,600
1970-71	6,386
1980-81	6,576
1990-91	6,544
1991-92	6,705
1992-93	6,335
1993-94	6,500
1994-95	6,541

- Source:**
- (1) Zilla Samajik Va Arthik Samalochan, Sangli Zilla.
 - (2) Districtwise Agricultural Statistical Information, Part II (1995-96), Commissionerate of Agriculture, Pune.

2.2.2 Irrigation

The eastern zone of Sangli district, which consists of Jat, Kavathe Mahankal, Atpadi, and Khanapur talukas, gets very low rainfall. This is the scarcity and drought prone area of Sangli district. So it has become essential to provide irrigation facilities to overcome the problem of uncertain rain. The position of total irrigated area of Sangli district is presented in Table 2.3.

Table 2.3

Total irrigated area in Sangli district

(Area in '00 hectares)

Year	Total irrigated area
1960-61	483
1970-71	675
1980-81	687
1990-91	1,121
1991-92	1,292
1992-93	1,357
1993-94	1,190
1994-95	N.A.
1995-96	1,290

- Source:**
- (1) Zilla Samajik Va Arthik Samalochan, Sangli Zilla.
 - (2) Districtwise Agricultural Statistical Information, Part II (1995-96), Commissionerate of Agriculture, Pune.

Table 2.3 indicates that during the 35 years (1960 to 1996) there is an increase in total irrigated area of the district to the tune of two-and-a-half times. Wells are the chief source of irrigation. Khanapur, Walwa and Tasgaon talukas have some areas under government canals.

2.2.3 Cropping Pattern

Cropping pattern implies the proportion of area under different crops at a point of time. A change in cropping pattern implies a change in the proportion of area under different crops. Gross cropped area in Sangli district could be conveniently divided into two categories, viz., total food crops and total non food crops. Area under food crops could be divided into two sub-categories, viz. foodgrains and other crops like fruits, spices etc. Area under the sub category foodgrains is divided into pulses and cereals. Among cereals, jowar and bajra cover majority area. Table 2.4 shows the change in cropping pattern of the district during 35 years from 1960 to 1995.

Among the food crops jowar obviously is the predominant crop of the district. The next in importance is bajra, wheat and rice have comparatively small proportions in total cropped area. The area under different pulses is increasing

though it covers smaller proportion of land than the cereals. Groundnut is the most important non food crop in the district. However, area under this crop has shown a downtrend. Sugarcane, on the other hand, exhibits an uptrend with remarkable increase in area. Area under different oilseeds i.e. safflower, sunflower and soybean is continuously increasing. Briefly, non food crops are being favoured in place of the traditional foodcrops.

Tabel 2.4

Area under major crops in Sangli district

(Area in '00 hectares)

Crops	1960-61	1970-71	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95
Rice (Total)	132	167	208	172	158	176	150	156
Wheat	147	129	376	217	249	188	217	199
Khariif Jowar	1565	1147	1362	1491	1323	1247	1229	1128
Rabi Jowar	1040	1123	989	1218	1217	1326	1488	1356
Bajra	1322	1056	889	971	963	928	698	843
Other Cereals	62	53	78	76	64	95	120	122
Total Cereals	4268	3675	3902	4145	3974	3960	3902	3804
Tur	170	140	145	129	162	138	135	127
Gram	151	73	200	225	217	193	234	229
Other Pulses	408	414	576	453	514	729	438	610
Total Pulses	729	627	921	807	893	1060	807	966
Total foodgrains	4997	4302	4823	4952	4867	5020	4709	4770
Sugarcane (Harvested)	-	133	247	249	340	244	235	361
Cotton	48	43	31	19	19	13	13	22
Groundnut (Kharif)	832	758	434	447	558	430	336	351
Safflower	-	-	78	128	94	99	107	105
Sunflower	-	-	2	30	68	114	54	60
Groundnut (Summer)	-	-	-	19	19	6	7	4
Soybean	-	-	-	163	180	410	517	444
Total oil seeds	-	-	525	795	922	1081	1034	981

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

Intra district cropping pattern varies considerably according to the rainfall and soil conditions. Shirala in the west has heavy rainfall and hence has a high proportion

of gross cropped area under rice. It does not at all grow bajra. The proportion of area under jowar is highest in Tasgaon followed by Walwa and Jat talukas. Land proportion of bajra is the highest in Khanapur followed by Jat taluka.

Of late, horticultural activity has been quite rampant in Sangli district. Grape growing has been conspicuous by its presence due to favourable agro-climatic conditions. Other fruit crops are banana, mango, pomegranate, ber and coconut. Table 2.5 shows area under fruit crops in Sangli district.

Table 2.5

Area under major fruit crops in Sangli district

(Hectares)

Fruit Crop	1992-93	1993-94	1994-95	1995-96	1996-97
Grape	3156	3500	3850	4025	4425
Banana	644	690	725	735	805
Mango	2135	2450	2530	2740	2915
Lemon lime	82	90	102	105	115
Orange	20	22	23	24	25
Guava	402	452	475	490	540
Pomegranate	1768	1950	2225	2550	2750
Chikku	512	525	530	550	575
Coconut	577	590	615	625	640
Ber	2755	3060	3175	3425	3725
CustardApple	311	350	365	380	415
Tamarind	163	175	180	184	190
Amla	49	55	60	62	70
Anjir	11	15	17	19	21
Others	717	750	780	795	825
Total	13302	14674	15652	16709	18036

Source: District Horticulture Department, Sangli

If one follows the figures relating to the annual area under each fruit crop as given in Table 2.5, the hierarchy in diminishing order is grape, ber, mango and pomegranate; these are the prominent fruits grown with substantial increase in their area over a short period of time.

2.3 AGRO - PROCESSING ACTIVITY

Industrial activity is slowly picking up in the district. There are six industrial estates in Sangli district. According to Economic Survey of 1991, about 70 per cent of the industries in the district are located in rural area and the remaining 30 per cent in urban area. The district has five large scale industrial units, viz. Kirloskar Brothers Ltd., Madhavnagar Cotton Mills, Marathe Mills, Gajanan Mills and Chakan Oil Mill. There are nine sugar factories which run on cooperative basis. There are 19 cooperative spinning mills. All the same, the industrial activity in Sangli district is more concentrated in small scale sector and comprises agro based, forest based, mineral based, fruit processing, rubber, plastic, chemical, metal based, electrical, electronic enterprises. Details in this respect are given in Table 2.6.

Table 2.6

Small scale industrial enterprises in Sangli district

Category of enterprises	Number	Percentage in the total
1. Agro-based	736	7.23
2. Forest-based	442	4.34
3. Mineral-based	245	2.40
4. Food beverages	1479	14.53
5. Textiles	1504	14.77
6. Leather	176	1.72
7. Rubber	134	1.31
8. Plastic	289	2.84
9. Chemical and chemical-based	431	4.23
10. Metal-based engineering	1667	16.38
11. Electric	200	1.96
12. Electronic	442	4.34
13. Non metal	158	1.55
14. Others	2273	22.33
Total	10176	100.00

Source: District Industries Centre, Sangli

It is noticed from the Table 2.6 that sheerly by numbers, chemical and chemical based industrial units are in the vanguard followed by textiles and food beverages. Agro based enterprises rank fourth. Agro industries include prominently enterprises pertaining to turmeric powder-making, dal flour, manufacture of spices, cilly powder-making, raisin-making from table grapes, and so on. Raisin-making activity has spread far and wide in the district especially in Sangli, Miraj and Tasgaon regions. This activity now predominates the industrial scene of the rural area of the district.

2.4 CONCLUSION

Sangli district has heterogeneous topographical foundations and wide variations in climatic conditions as one approaches from west to east. Eastern territory of the district is identified drought prone area. Irrigation facilities are limited and most of them are used for sugarcane crop. Rainfed cereal crops predominate the cropping pattern, though, over time, they are slowly receding in their importance. Industrial activity in large scale sector is limited, excluding the cooperative sugar factories. However, more of the activity is concentrated in small-scale sector and in rural area. Agro-based enterprises have a conspicuous position among them. In sum, Sangli district has dominating agricultural activity and thereby varied agro based industrial activity.