CHAPTER 6

GROUNDNUT AND NON FOOD CROPS

6.1 DISTRICT AREA OF GROUNDNUT

In the general group of non-food crops, for in-depth study, groundnut is chosen, since it is a preferred oilseed and quite extensively grown. Table 6.1 displays the figures regarding average area in hectares shared by groundnut in the district total. Figures in parentheses give the percentage of area covered under the crop to total GCA of the district. It is clear from the Table that the average area in the triennium 1964-67 was 93,730 hectares and its percentage to the GCA of the district was 13.82 per cent. Over the entire time span under consideration, area under the crop had depressed sharply to an average of 45,456 hectors in the triennium 1985-88 and its percentage to 7.08 percent of the GCA of the district. Actually, there was a continuous fall in the area till the triennium ending 1984-85. It was for the first time a marginal recovery in the absolute area as well as in the percentage was recorded in

the final triennium 1985-88. It is not known whether the observed reverse tendency continued in the later years. Any way, the long-term trend of area under groundnut was fast declining as the aggregate area was little less than half in the last triennium compared with the first triennium. The change is certainly significant and hence should be noted as one of the important changes in cropping pattern of Sangli district.

6.2 TALUKA PROFILE OF GROUNDNUT

Talukawise break-up of the district total of area under groundnut is given in columns 4 to 11 Table 6.1. The total area will now be viewed from two dimensions as before: (a) taluka area as percentage to the district area of groundnut and (b) taluka area as percentage to its own GCA. Details follows

6.2.1 TALUKA AREA VIS-A-VIS DISTRICT AREA OF GROUNDNUT

In Table 6.1 columns 4 to 11 exhibit initially the absolute figures of the taluka area and then in the upper Parentheses taluka area as percentage to the district groundnut area. This information will be analysed in this section with reference to the usual three paraments: average area, trend and coefficient of variation.

TREND OF THE PERCENTAGE OF THE DISTRICT AREA UNDER TOTAL GROUNDNUT

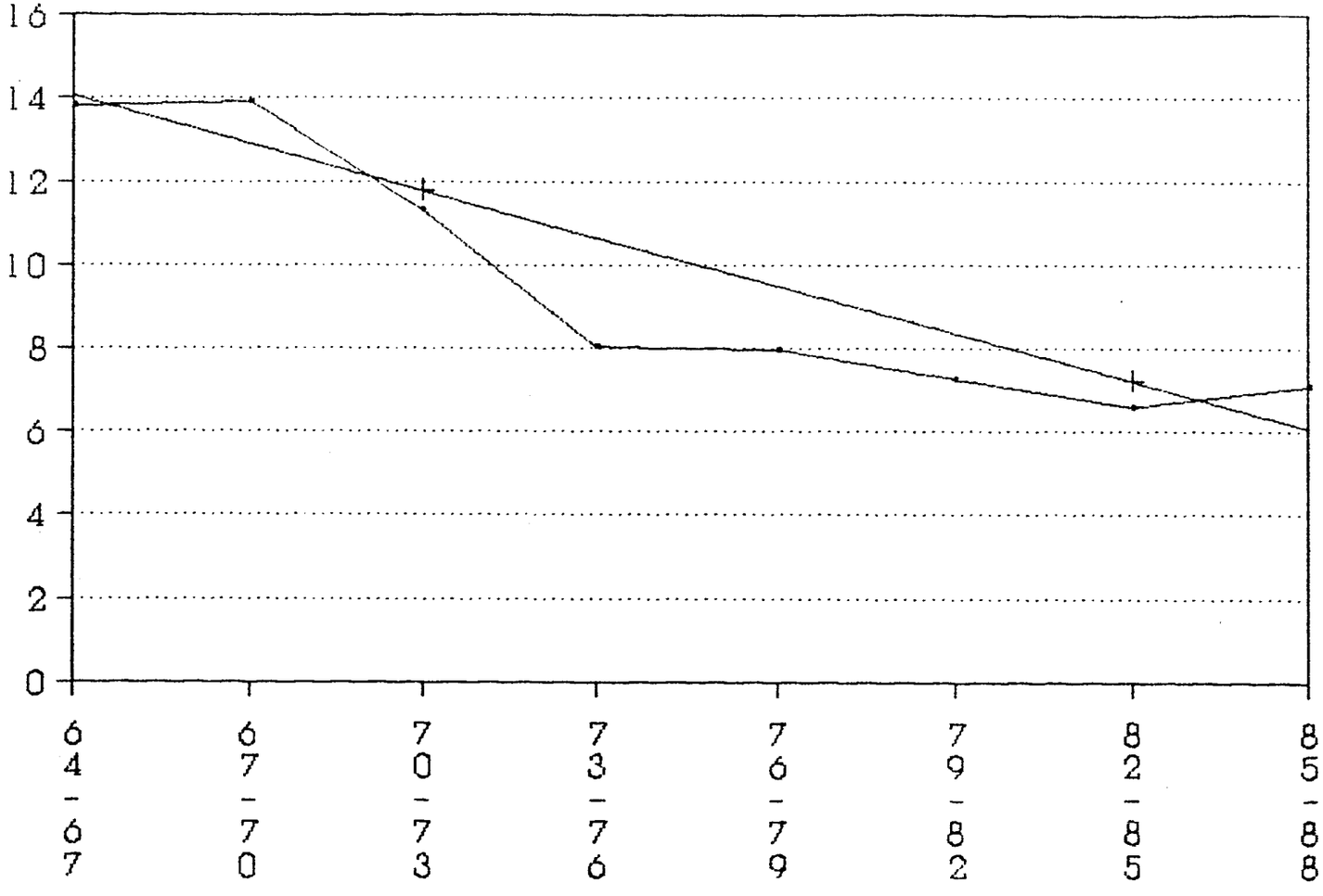


Table 6.1

Talukawise area under groundnuts in Sangli district

(Area in hectors)

Triennial Year	District gross cropped area	Area under total cereals	Miraj	Tasgaon	Khanapur	Atpadi	Jat	Kavathe Mahankal	Walva	Shirala
1	2	3	4	5	6	7	8	9	10	11
1964 - 65	6,77,929	93,730	20,616	22,363	12,981	588	10,270	6,485	16,844	3,582
to		(100.00)	(21.99)	(23.85)	(13.84)	(0.62)	(10.95)	(6.91)	(17.97)	(3.82)
1966 - 67	(100.00)	(13.82)	(25.37)	(24.93)	(11.62)	(0.84)	(6.45)	(12.53)	(25.28)	(7.54)
1967 - 68	6,54,469	91,103	19,900	22,120	12,891	297	8,340	5,658	17,836	4,062
to		(100.00)	(21.84)	(24.28)	(14.14)	(0.32)	(9.15)	(6.21)	(19.57)	(4.45)
1969 - 70	(100.00)	(13.92)	(25.35)	(25.71)	(11.66)	(0.47)	(5.38)	(11.35)	(27.63)	(8.81)
1970 - 71	6,27,792	70,938	15,466	17,787	10,345	241	3,031	3,136	16,776	4,155
to		(100.00)	(21.80)	(25.07)	(14.58)	(0.33)	(4.27)	(4.42)	(23.64)	(5.85)
1972 - 73	(100.00)	(11.30)	(20.55)	(21.25)	(9.68)	(0.42)	(2.05)	(6.81)	(25.62)	(9.05)
1973 - 74	6,34,105	51,035	10,266	9,250	8,498	285	2,513	1,542	14,221	4,457
to		(100.00)	(20.11)	(18.12)	(16.65)	(0.55)	(4.92)	(3.02)	(27.86)	(8.73)
1975 - 76	(100.00)	(8.04)	(13.83)	(11.40)	(7.76)	(0.42)	(1.75)	(3.31)	(22.05)	(9.61)
1976 - 77	6,45,928	51,347	8,084	13,305	7,319	504	2,048	1,089	14,113	4,849
to		(100.00)	(15.74)	(25.91)	(14.25)	(0.98)	(3.98)	(2.12)	(27.48)	(9.44)
1978 - 79	(100.00)	(7.95)	(10.47)	(14.41)	(6.59)	(0.72)	(1.50)	(2.34)	(21.26)	(10.44)
1979 - 80	6,47,887	47,109	8,186	10,309	5,714	236	1,290	979	12,988	4,385
to		(100.00)	(17.37)	(21.88)	(12.12)	(0.50)	(2.73)	(2.07)	(27.57)	(9.30)
1981 - 82	(100.00)	(7.27)	(10.79)	(11.39)	(4.98)	(0.37)	(0.93)	(2.01)	(19.26)	(9.25)
1982 - 83	6,33,725	41,742	8,005	10,021	6,355	298	1,201	847	10,875	4,143
to		(100.00)	(19.17)	(24.00)	(15.22)	(0.71)	(2.87)	(2.02)	(26.05)	(9.92)
1984 - 85	(100.00)	(6.59)	(9.57)	(11.80)	(6.50)	(0.48)	(0.85)	(1.73)	(16.67)	(8.85)
1985 - 86	6,41,952	45,456	8,267	10,310	6,537	341	2,919	986	11,863	4,030
to		(100.00)	(18.18)	(22.68)	(14.38)	(0.75)	(6.44)	(2.16)	(26.09)	(8.86)
1987 - 88	(100.00)	(7.08)	(9.75)	(11.85)	(7.12)	(0.55)	(1.90)	(2.00)	(17.89)	(8.81)
Average 1964-65 1987-88 (24 years)	----	(100.00) (9.49)	(18.52) (19.52)	(23.22) (16.59)	(14.39) (8.23)	(0.59) (0.53)	(5.66) (2.59)	(3.61) (5.26)	(24.52) (21.95)	(7.54) (9.18)

Note : 1. Figures in lower parentheses in column 3 are percentage to column 2
2. Figures in upper parentheses in column 4 to 11 are percentages to column 3
3. Figures in lower parentheses in columns 4 to 11 are percentages to the GCA of the respectives talukas

Source: Compiled on the basis of data collected from the relevant issues of Socio Economic Review and District statastical abstract of Sangli District for the years from 1964-65 to 1987-88. Directorate of Economics & Statistics Government of Maharashtra, Bombay.

6.2.1.1 Average area

A birds eye-view of information about talukawise overall average area as percentage of district area the range within which the area percentage fluctuated and the range magnitude are displayed in Table 6.2.

Table 6.2

Talukawise range of share of area under groundnuts (1964-88).

(percentage)

Taluka	Range of Share	Range magnitude (percentage points)	Average share for the entire period
1 Miraj	15.74 to 21.99	6.25	19.52
2 Tasgaon	18.12 to 25.91	7.79	23.22
3 Khanapur	12.12 to 16.65	4.53	14.39
4 Atpadi	0.32 to 0.98	0.66	0.59
5 Jat	2.73 to 10.95	8.22	5.66
6 Kavathe Mahankal	2.02 to 6.91	4.89	3.61
7 Walva	17.97 to 27.86	9.89	24.52
8 Shirala	3.82 to 9.92	6.10	7.54

Source: Complied from Table 6.1

The long-term average shares of the talukas reflect uneven distribution of area over the district.Concentration was principally in four talukas namely, Walva, Tasgaon, Miraj and Khanapur. Their share on

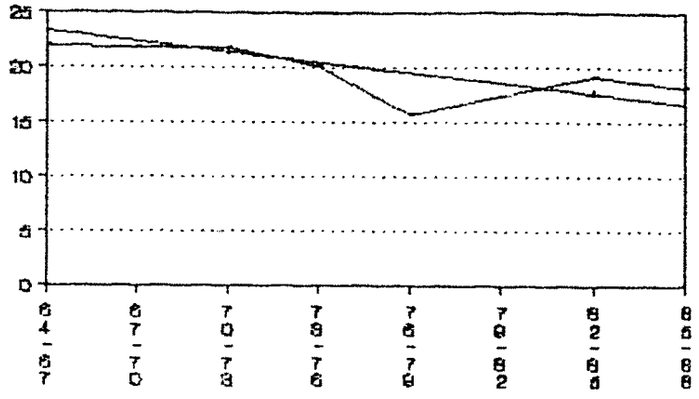
average were 24.52 per cent,23.22 per cent,19.52 per cent and 14.39 per cent respectively for the entire period which total up to 81.65 per cent of the district area under groundnut. These taluka are located adjacent to each other in the middle portion of the district. Rest of the talukas together had an aggregate of 18 per cent of the districts groundnut land. Among them, most negligible share was of Atpadi which was less than one per cent. Thus for these 4 talukas groundnut cultivation remained very much less important activity.

The range of share within which the percentage area had moved in the district was rather narrow. The talukas which commanded major shares were within the range magnitude from 4.53 per cent to 9.89 per cent Shirala, Jat and Kavathe Mahankal which shared comparatively less area also had similar behaviour. Atpadi having negligible area had less than one percentage point of the range magnitudes.

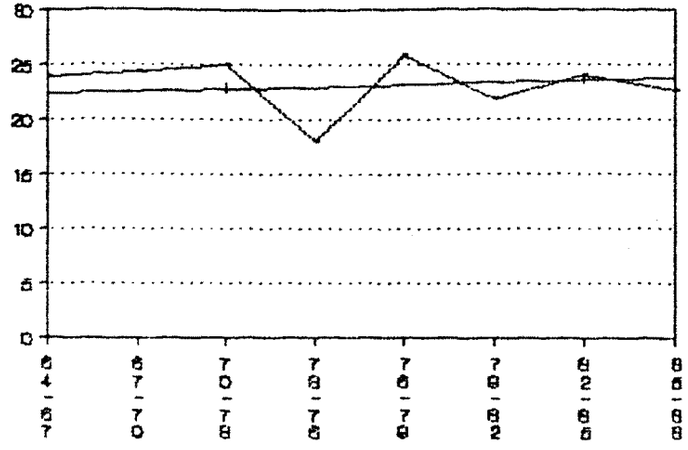
6.2.1.2 Trends

The behaviour of the percentage changes in the time-series data could be described in a simple way by fitting trend lines talukawise. The graphical presentation is given in Fig. 6.2. Upward trend was observed in case of Tasgaon in spite of sharp ups and downs periodically. Atpadi also gives the upward trend. Walva and Shirala had upward trend but without violent ups and downs.Miraj, Khanapur and

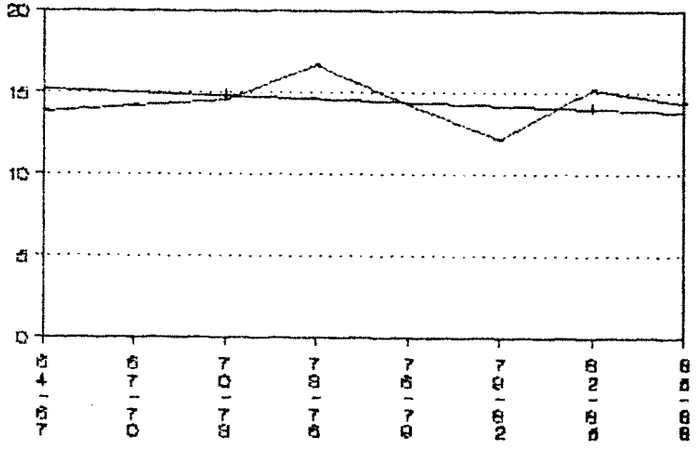
TREND OF THE PERCENTAGE OF TALUKA AREA IN THE DISTRICT TOTAL GROUNDNUTS



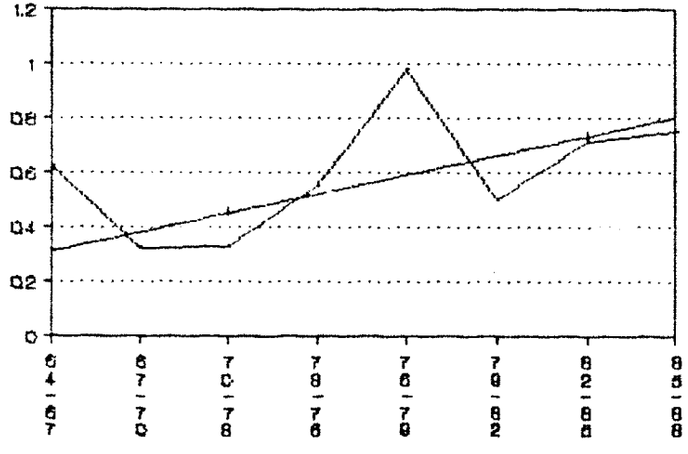
MIRAJ



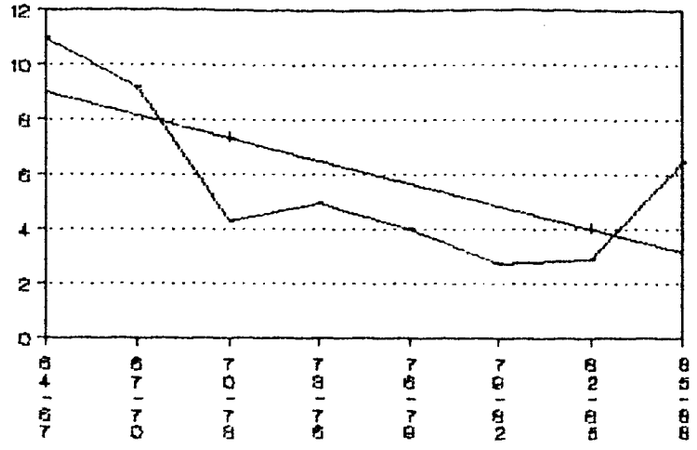
TASGAON



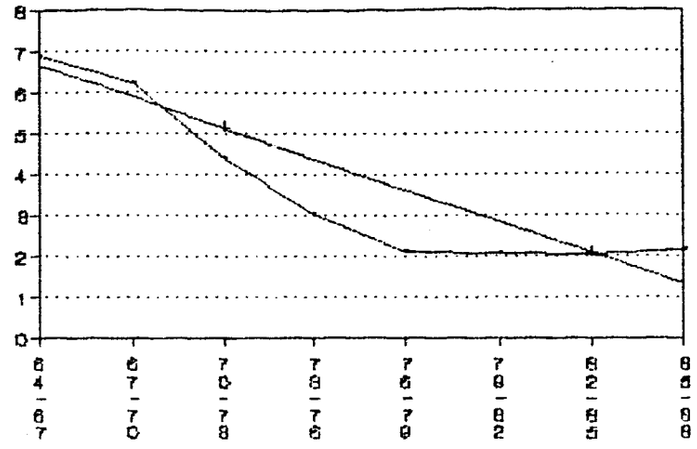
KHANAPUR



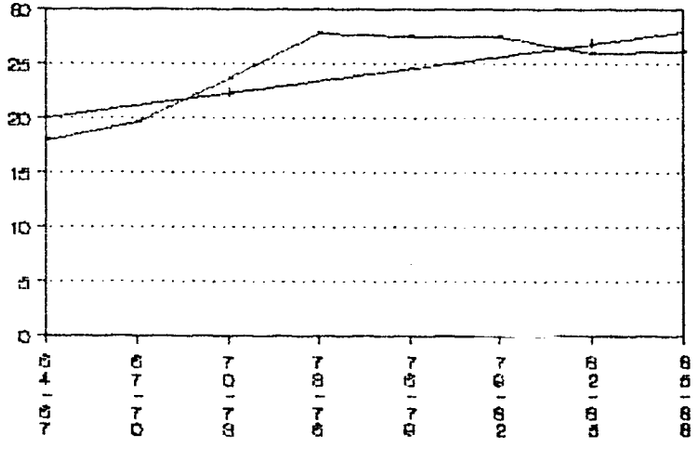
ATPADI



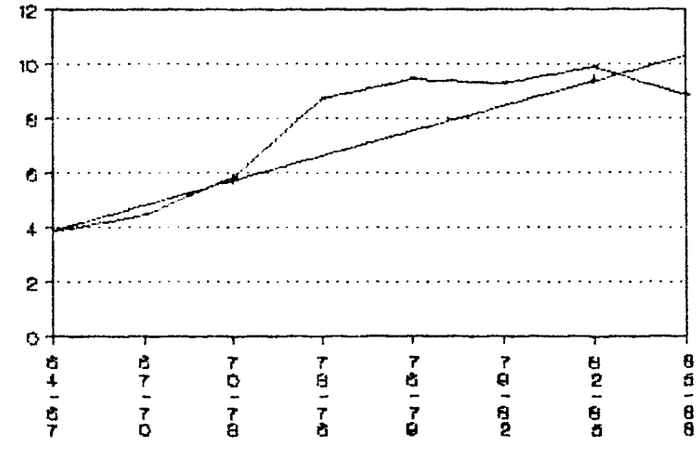
JAT



KAVATHE MAHANKAL



WALWA



SHRALA

Jat experienced decreeing trend with sharp upward and downward movements from triennium to triennium. As against them, Kavathe Mahankal had decreasing trend with minimum periodical fluctuations.The downtrend of the four talukas counter-balanced the uptrend of the other four talukas so that the overall district trend remained downward.

6.2.1.3 Coefficient Of Variation

The degree of variation in percentage area from triennium to triennium is represented through the values of coefficient of variation. Talukawise values are given in Table 6.3.

Table 6.3

C.V.' values of taluka shares in the district area under groundnut

Taluka	Coefficient of variation (percentage)
1 Khanapur	8.28
2 Tasgaon	9.73
3 Miraj	11.14
4 Walva	14.57
5 Shirala	30.30
6 Atpadi	35.10
7 Jat	49.36
8 Kavathe Mahankal	51.70

Source : Calculated on the basis of data in Table 6.1

The triennium to triennium variation of the taluka share in the district area were quite high in Kavathe Mahankal, Jat, Atpadi and shirala as hinted by their c.v. values eventhough their magnitude ranges were low as described in earlier sub-section Tasgaon,Miraj and Walva had the c.v. values beyond to per cent and as such did have noteworthy annual fluctuations. Khanapur alone was below to per cent suggesting thereby fair degree of stability in the percentage area of groundnut in the district total.

6.2.2 TALUKA AREA OF GROUNDNUT VIS-A-VIS GCA OF THE TALUKA

The absolute figures of the talukas will now be examined in the context of their GCA. They are converted into percentage figures to the GCA and presentation in lower parentheses in the columns 4 to 11 of Table 6.1. As usual these percentage figures would be analysed with reference to three parameters: average area trend coefficient of variation.

6.2.2.1 Average area

Important-details about overall average area under groundnut as percent of taluka GCA range of variation of these percentages and range magnitude are given in Table 6.4.

Table 6.4

Talukawise range of area under groundnuts as percentage of the GCA (1964-88)

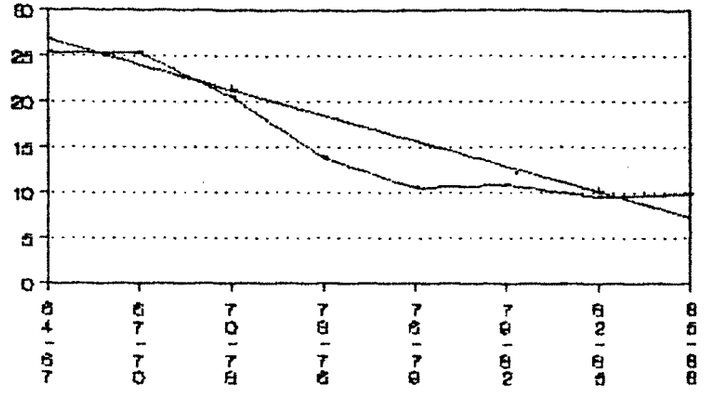
Taluka	Range of share	Range magnitude (percentage points)	Average for the entire period
1 Miraj	9.57 to 25.37	15.80	15.71
2 Tasgaon	11.39 to 25.71	14.32	16.59
3 Khanapur	4.98 to 11.66	6.68	8.23
4 Atpadi	0.37 to 0.84	0.47	0.26
5 Jat	0.85 to 6.45	5.60	2.60
6 Kavathe Mahankal	1.73 to 12.53	10.80	5.26
7 Walva	16.67 to 27.63	10.96	21.95
8 Shirala	7.54 to 10.44	2.90	9.18

Source: Complied from Table 6.1 Compiled

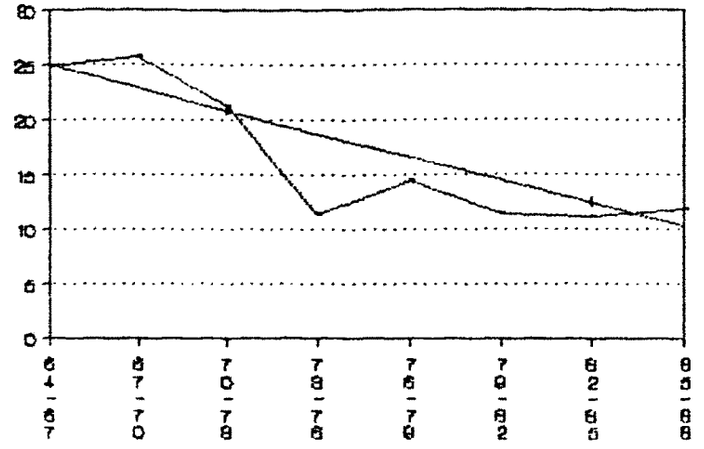
Close examination of the table reveals that Walva, Tasgaon and Miraj were the three really important talukas of Sangli district which had a sizeable area of the taluka Gca under groundnut. Shirala and Khanapur had about 9 per cent of their land devoted for this crop. Kavathe Mahankal, Jat and Atpadi were on very low step of the ladder. particularly Atpadi could not be recognised as groundnut growing taluka.

Miraj, Tasgaon and Walva which were prominent growers of groundnut had wider range magnitude in percentage points. Kavathe Mahankal too was in the same line irrespective of its lower percentage in its GCA. Atpadi had too

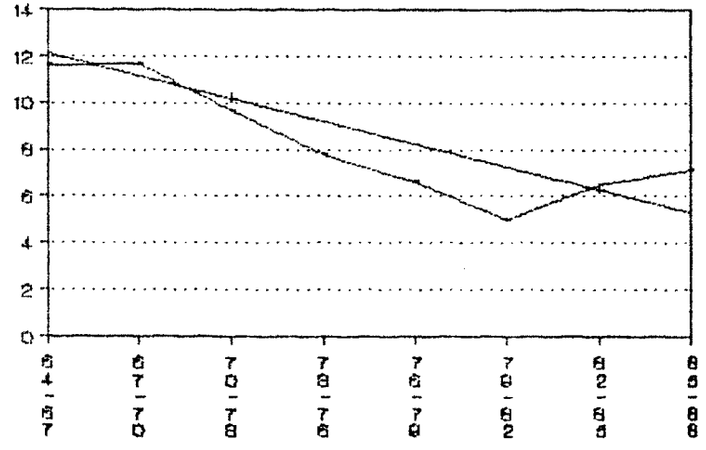
TREND OF THE PERCENTAGE OF TALUKA AREA IN ITS GCA: GROUNDNUTS



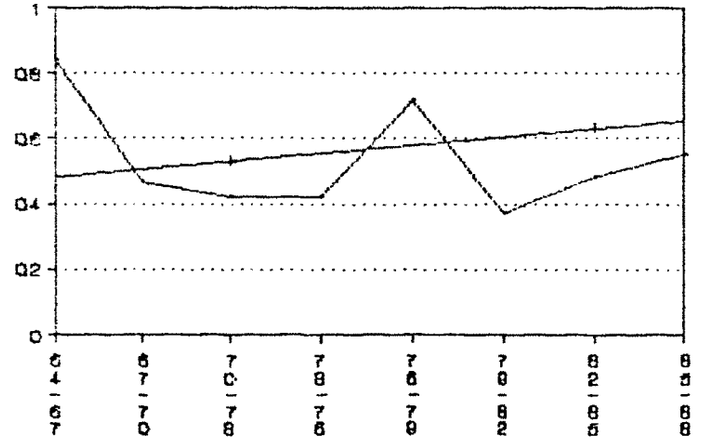
MIRAJ



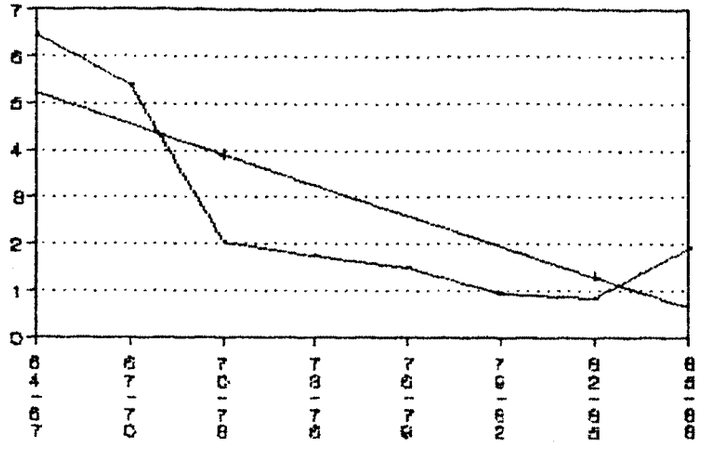
TASGAON



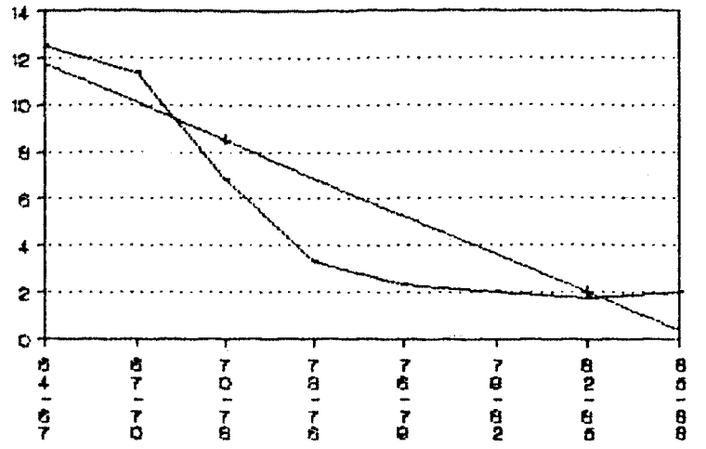
KHANAPUR



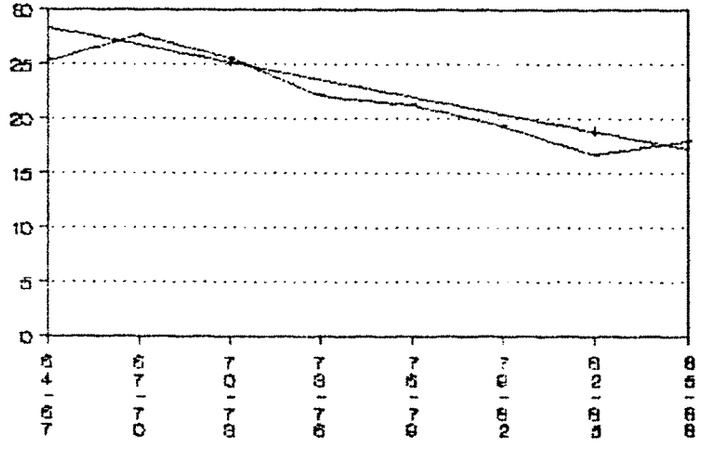
ATPADI



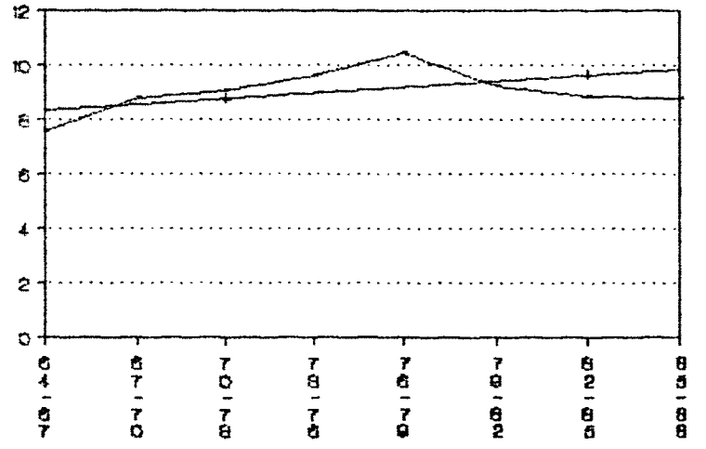
JAT



KAVATHE MAHANKAL



WALVA



SHRALA

small a range lees than one percentage point. But in relative terms that small fraction may look bigger in view of just one-quarter of one per cent of the GCA of the district used for groundnut cultivation.

6.2.2.2 Trends

Overall behaviour of percentage area to the GCA over the 24 year period is presented by way of fitting trend lines for each taluka in Fig. 6.3. At a glance, it is clear that only Atpadi and Shirala in whose case percentage area of GCA covered by groundnut was quite less revealed increasing trend. Excepting these two talukas all others had significant downward trend. But when one examines the data more carefully it could be observed that there was a rerversal of earlier downward tendency after 1982 and perhaps the cultivators were again going in for more land under groundnut in Tasgaon, Khanapur, Atpadi and Jat similar situation could be observed in case of Miraj, Kavathe Mahankal and Walva after 1985. This could be attributed to hike in the price of oilseeds. This is one of the noteworthy factors of changes in the cropping pattern. But, on an average, if the entire span and the entire district senario are considered the trend was decreasing.

6.2.2.3 Coefficient Of Variation

The extent of variation can be judged by using the

talukawise values of coefficients of variation. They are enlised in Table 6.5.Very high values of coefficients of variation were arrived at for all the talukas excepting Shirala. The values not only exceeded to per cent but were too high beyond that reaching to the maximum 79.05 per cent for Kavathe Mahankal. Shirala alone had relatively moderate fluctuations annually. High values of C.V. present larger variation of individual average values f percentage shares of area from one triennium to the other from its own mean. In other words, groundnut cultivation in Sangli district was subject to wide annual fluctuations.

Table 6.5

C V. values Of taluka shares of groundnut in their GCA (1964-88)

Taluka	Coefficient of variation (percentage)
1 Shirala	8.49
2 Walva	16.80
3 Khanapur	28.18
4 Atpadi	28.96
5 Tasgaon	35.57
6 Miraj	41.38
7 Jat	76.16
8 Kavathe Mahankal	79.05

Source : Compiled from Table 6.1

6.3 DISTRICT AREA OF NOW-FOOD CROPS

Now-food crops form an important constituent of any cropping system. Food crops dominate the cropping scene of any sub-region in this district and non-food crops are slowly sinking in the interest of making available more foodgrains, a basic need of the people. Food crops like cereals and pluses grown in the district do not need irrigation and basically they are dry crops. Hence they are getting more popular in the dry talukas Jat, Atpadi, Kavathe Mahankal, Tasgaon and Khanapur. This shift from other crops which need water on larger scale to dry crops could be attributed to decrease in average rainfall from 1964 to 1988, the period under consideration.

Now the statistical data of Sangli district will be scanned to find out the significance of this group of crops in the cropping pattern of the district, the time study behaviour of the cultivators in putting their land under non-food crops and the degree of stability in allocation of land for this purpose. Column 3 of table 6.6 gives the aggregate area of land in the district used for non-food crops. Figures in the lower parentheses pertain to the percentage of district area under these crops to the GCa of the district.

The aggregate land under non-food crops in the district was all the time shrinking in average at least upto the triennium ending with 1987-88. The land area of 29,081 hectares in the initial triennium, in its falling course, slumped to 13,380 hectares by the triennium 1982-85 thus the area fell to a little less than 50 per cent of the original one. Correspondingly, the percentage to the GCA of the district came down from 16-32 per cent to 11-58 per cent. It is only during the last triennium, 1985-88, that both the average and percentage recovered to 14,098 hectares and 13-84 per cent respectively. For want of data beyond 1988, no comment further can be passed on as to whether this was a temporary phenomenon or whether the changed tendency continued. Therefore, on the basis of data at hand, it is certain that the long-term trend of non-food crops was declining.

6.4 TALUKA PROFILE OF NON-FOOD CROPS

Now the investigation will concentrate on the micro-level analysis of area under study by exploring the trend from two dimensions: (a) taluka area vis-a-vis district area of non-food crops and (b) taluka area of non-food crops vis-a-vis GCA of the taluka. Further, both the dimensions will be presented with reference to the three parameters : (i) average area, (ii) trend and (iii) coefficient of variation. Details follow.

TREND OF THE PERCENTAGE OF DISTRICT AREA UNDER TOTAL NON-FOODCROPS

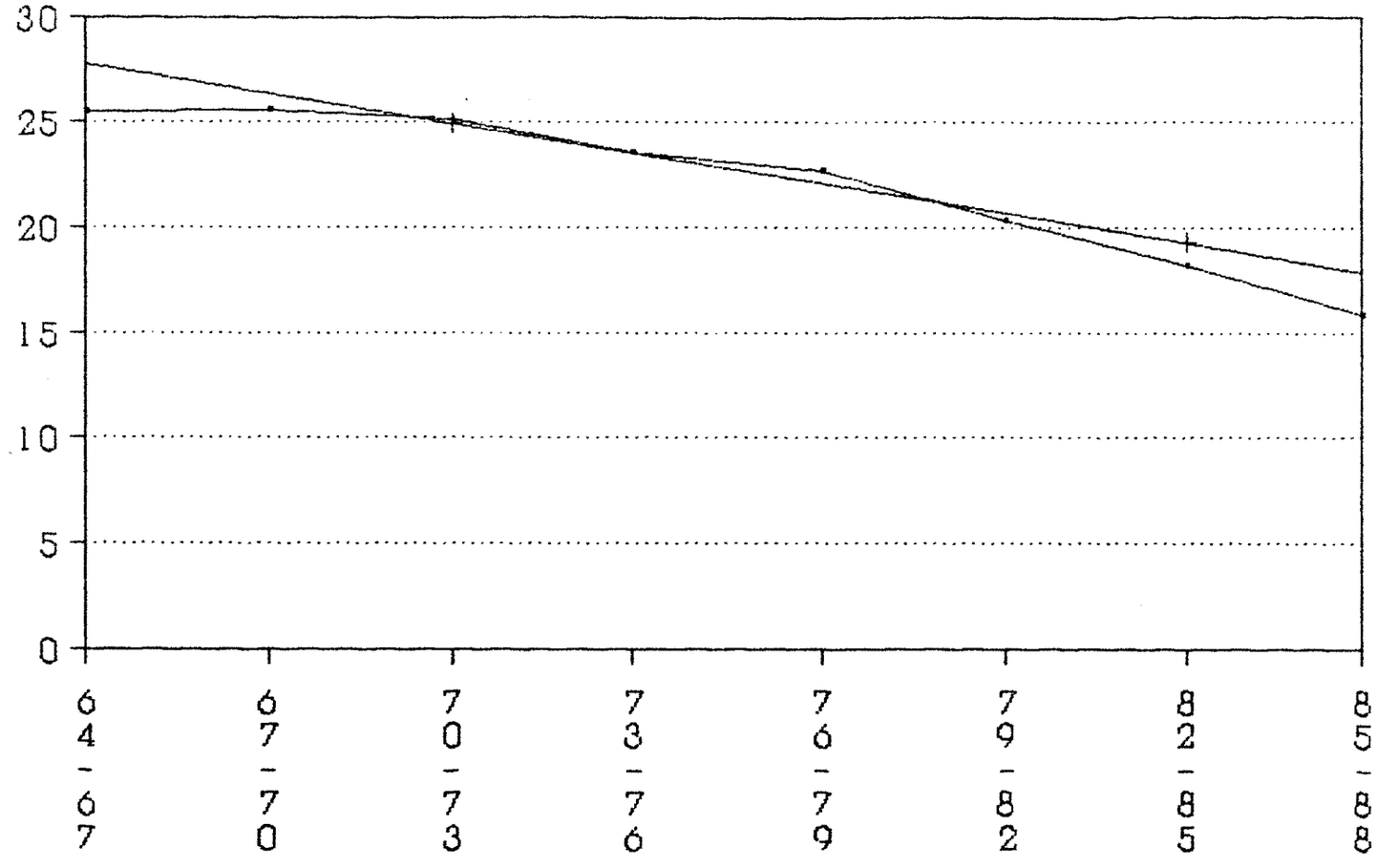


Table 6.6

Talukawisee area under non-foodcrops in Sangli district

(Area in hectors)

Triennial Year	District Total		Miraj	Tasgaon	Khanapur	Atpadi	Jat	Kavathe Mahankal	Walva	Shirala
	Gross Cropped Area	Area under jowar								
1	2	3	4	5	6	7	8	9	10	11
1964 - 65	6,77,929	1,72,800	29,081	26,047	27,913	8,603	19,430	9,801	23,847	28,083
to		(100.00)	(16.82)	(15.07)	(16.15)	(4.97)	(11.24)	(5.67)	(13.80)	(16.25)
1966 - 67	(100.00)	(25.49)	(35.78)	(29.03)	(24.99)	(12.25)	(12.21)	(18.93)	(35.79)	(59.13)
1967 - 68	6,54,469	1,67,521	27,561	26,220	32,163	1,782	18,553	8,768	23,602	28,871
to		(100.00)	(16.45)	(15.65)	(19.19)	(1.06)	(11.07)	(5.23)	(14.08)	(17.23)
1969 - 70	(100.00)	(25.59)	(35.11)	(30.47)	(28.96)	(2.81)	(11.97)	(17.58)	(36.56)	(62.60)
1970 - 71	6,27,792	1,57,842	22,067	20,320	32,625	5,473	16,214	7,430	23,865	28,845
to		(100.00)	(13.98)	(12.87)	(20.66)	(3.46)	(10.27)	(5.34)	(15.11)	(18.27)
1972 - 73	(100.00)	(25.14)	(29.32)	(24.27)	(30.53)	(9.63)	(10.98)	(18.31)	(36.45)	(62.85)
1973 - 74	6,34,105	1,49,300	16,678	12,888	34,532	15,527	15,382	4,422	19,883	29,985
to		(100.00)	(11.17)	(8.63)	(23.12)	(10.39)	(10.30)	(2.96)	(13.31)	(20.08)
1975 - 76	(100.00)	(23.56)	(22.47)	(15.87)	(31.54)	(22.97)	(10.74)	(9.50)	(30.85)	(64.65)
1976 - 77	6,45,928	1,46,684	16,069	17,103	29,515	22,586	11,069	4,153	17,616	28,572
to		(100.00)	(10.95)	(11.65)	(20.12)	(15.39)	(7.54)	(2.83)	(12.00)	(19.47)
1978 - 79	(100.00)	(22.71)	(20.82)	(18.52)	(26.58)	(32.24)	(8.14)	(8.93)	(26.54)	(61.50)
1979 - 80	6,47,887	1,31,806	14,513	13,699	32,628	15,016	9,634	3,061	15,882	27,370
to		(100.00)	(11.01)	(10.39)	(24.75)	(11.39)	(7.30)	(2.32)	(12.04)	(20.76)
1981 - 82	(100.00)	(20.34)	(19.13)	(15.13)	(28.43)	(23.49)	(6.92)	(6.28)	(23.55)	(57.73)
1982 - 83	6,33,725	1,15,505	13,380	13,395	16,215	16,923	9,514	3,317	15,204	27,584
to		(100.00)	(11.58)	(11.59)	(14.03)	(14.65)	(8.23)	(2.87)	(13.16)	(23.88)
1984 - 85	(100.00)	(18.23)	(15.96)	(15.11)	(16.59)	(27.41)	(6.76)	(6.76)	(23.30)	(58.91)
1985 - 86	6,41,952	1,01,806	14,098	10,968	7,472	15,186	11,645	2,625	13,228	26,581
to		(100.00)	(13.84)	(10.77)	(7.33)	(14.91)	(11.43)	(2.57)	(12.99)	(26.10)
1987 - 88	(100.00)	(15.86)	(16.62)	(12.60)	(8.14)	(24.41)	(7.58)	(5.20)	(19.95)	(58.12)
Average	----									
1964-65		(100.00)	(17.18)	(18.33)	(28.71)	(55.46)	(16.55)	(35.66)	(7.28)	(15.35)
1987-88		(22.11)	(30.54)	(31.96)	(30.85)	(48.40)	(22.79)	(47.77)	(21.45)	(3.93)
(24 years)										

Note : 1. Figures in lower parentheses in column 3 are percentage to column 2
2. Figures in upper parentheses in column 4 to 11 are percentages to column 3
3. Figures in lower parentheses in columns 4 to 11 are percentages to the GCA of the respective talukas

Source: Compiled on the basis of data collected from the relevant issues of Socio Economic Review and District statastical abstract of Sangli District for the years from 1964-65 to 1987-88. Directorate of Economics & Statistics Government of Maharashtra, Bombay.

6.4.1 TALUKA AREA VIS-A-VIS DISTRICT AREA OF TOTAL NON-FOOD CROPS

Behaviour of the taluka area in the district setting will be studied with reference to data in Table 6.6. In columns 4 to 11, it initially gives absolute figures of the taluka area under the class of total non-food crops and then come in upper parentheses percentages of the taluka area to the district total. Analyses of this section pertains to these two entries.

6.4.1.1 Average area

A summary account of the average area of each taluka alongwith the range of variation of the percentage area is given in Table 6.7.

The table brings out that distribution of area under non-food crops is well spread out over the district except for Kavathe Mahankal. Among the talukas, shirala was in the fore front with one-fifth of the district land of non-food crops. Khanapur was next to it and was closer too. Miraj, Tasgaon and Walva, as a trio, stood in order with around 13 per cent each of the district land used for non-food crops. Jat and Atpadi were nearabout 10 per cent. Kavathe Mahankal had the unique position of devoting too small a proportion of the district agricultural land for this crop group.

Table 6.7

Talukawise range of share of area under non-foodcrops (1964-88).

(percentage)

Taluka	Range of share	Range magnitude (percentage points)	Average for the entire period
1 Miraj	10.95 to 16.82	5.87	13.22
2 Tasgaon	8.63 to 15.65	7.02	12.07
3 Khanapur	7.33 to 24.75	17.42	18.16
4 Atpadi	1.06 to 15.39	14.33	9.52
5 Jat	7.30 to 11.43	4.13	9.67
6 Kavathe Mahankal	2.32 to 5.67	3.35	3.72
7 Walva	12.00 to 15.11	3.11	13.31
8 Shirala	16.25 to 26.10	9.85	20.25

Source: Complied from Table 6.6

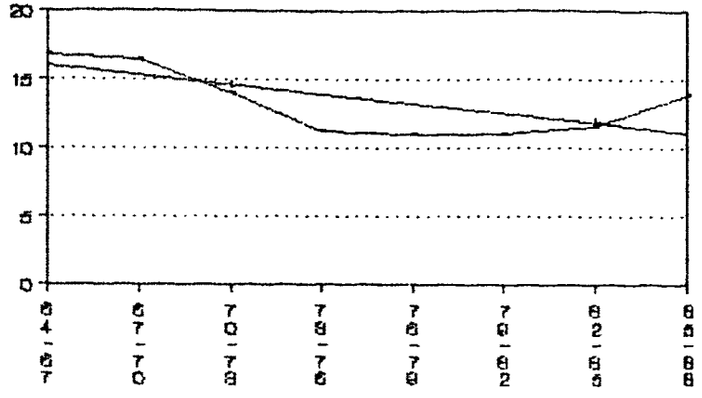
The range within which the average percentage share had moved was quite low excepting Khanapur and Atpadi. Hence is could be concluded thus there was a fair degree of stability as regards employment of land for cultivation of total non-food crops. This was perhaps due to, and as a residual part of, decision to cultivate food crops.

not clear

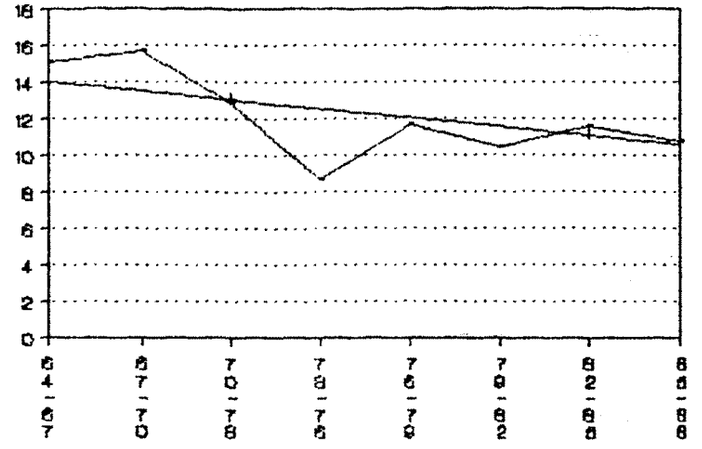
6.4.1.2 Trends

Time-series data of the triennium are plotted to

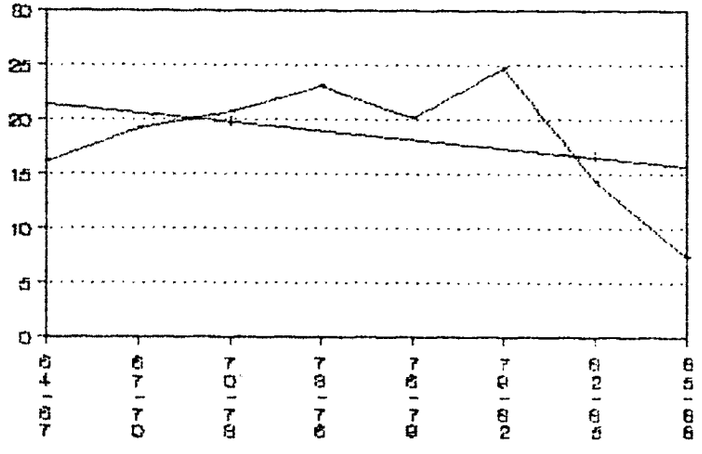
TREND OF THE PERCENTAGE OF TALUKA AREA IN THE DISTRICT TOTAL NON-FOODCROPS



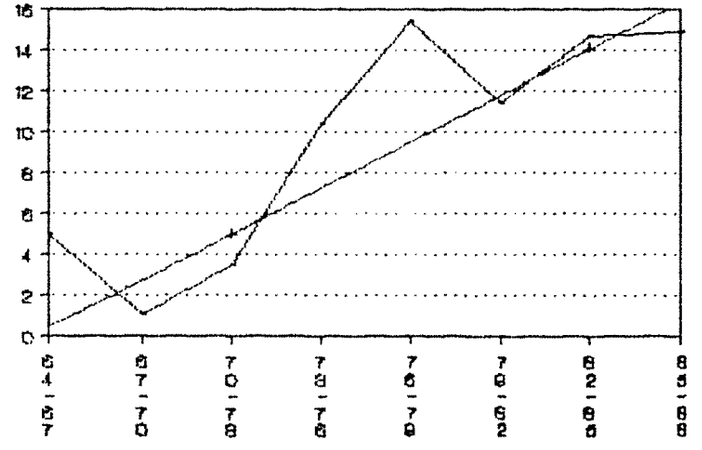
MIRAJ



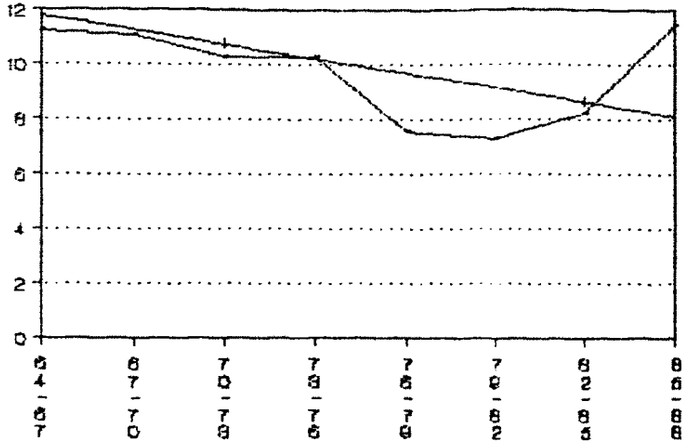
TASGAON

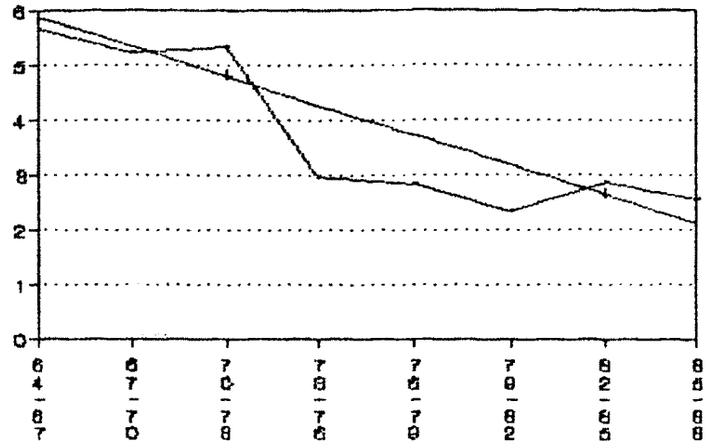


KHANAPUR

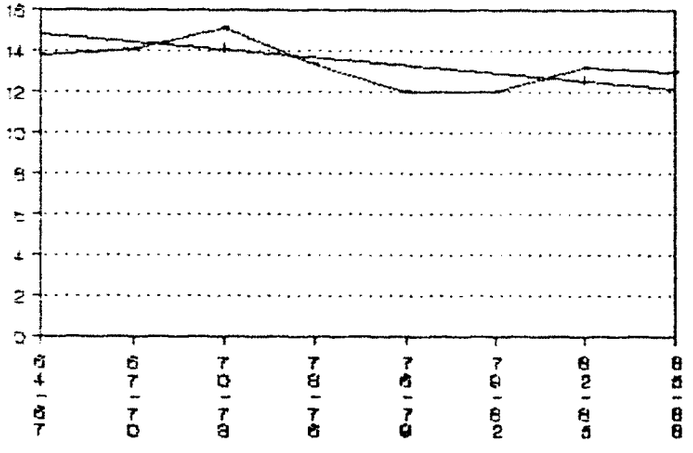


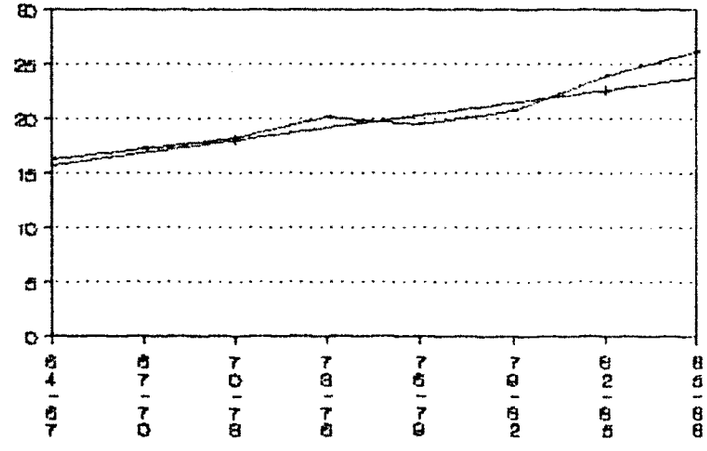
ATPADI





KALIATHE MAHANKAL





SHRALA

find out the long-term tendency of various talukas in devoting their land for non-food crops in general. Trend lines are fitted and shown in Fig. 6.5. The diagrams therein point out that rising trend prevailed in case of Atpadi and shirala and Shirala was more consistent in showing upward tendency than Atpadi. They together covered around 30 per cent of the area in the district occupied by this class of crops. On the other side, the downtrend was revealed by Miraj, Tasgaon, Khanapur, Jat, Kavathe Mahankal and Walva. It could be observed from the Fig. that an upward tendency was seen after 1982 in case of all the talukas except Khanapur. This is an indication of a different situation that had started developing within the long-term downtrend. Anyway, the downtrend of these 6 talukas led to a total downtrend for the district.

6.4.1.3 Coefficient of variation

Coefficient of variation describes deviation of average area shared from its own mean for the entire period. Large the variation, higher the value of c.v. and vice versa. Table 6.8 gives these values.

It can be noticed from the table that except Walva the c.v. values of all other talukas were beyond 10 per cent. They were in the range of 15 to 19 per cent for Tasgaon, Shirala, Jat and Miraj, Khanapur, Kavathe Mahankal and Atpadi had the values too high and beyond 28 per cent.

All these values reveal clearly high degree of variation in the district as a whole in employing the cultivated land for growing non-food crops.

Table 6.8

C.V. value of taluka shares in the district area of under total non-foodcrops.

Taluka	Coefficient of variation (percentage)
1 Walva	7.28
2 Shirala	15.35
3 Jat	16.55
4 Miraj	17.18
5 Tasgaon	18.33
6 Khanapur	28.71
7 Kavate Mahankal	35.66
8 Atpadi	55.46

Source : Compiled from Table 6.6

6.4.2 TALUKA AREA OF NON-FOOD CROPS VIS-A-VIS GCA OF THE TALUKA

Taluka area may now be viewed against the GCA of the taluka itself. This will reflect the significance of the non-food crops in the aggregate cultivation activity of the taluka. Figures in lower parentheses in columns 4 to 11 of Table 6.6 pertain to the percentage of areas to the GCA of

the taluka. They will be examined with respect to the three parameters : (a) average area, (b) trend and ,(c)coefficient of variation. Analysis follows.

6.4.2.1 Average area

Summary statement of the time series average area of the talukas as also the range of area showing minima and maxima and the magnitude of range are given in Table 6.9.

Table 6.9

Talukawise range of area under non-foodcrops as percentage of the GCA of the taluka (1964-88)

(percentage)

Taluka	Range of share	Range magnitude (percentage points)	Average for the entire period
1 Miraj	15.96 to 35.78	19.82	24.40
2 Tasgaon	12.60 to 30.47	17.87	20.13
3 Khanapur	8.14 to 31.54	23.40	24.47
4 Atpadi	2.81 to 32.24	29.43	19.40
5 Jat	6.76 to 12.21	5.45	9.41
6 Kavathe Mahankal	5.21 to 18.93	13.73	11.43
7 Walva	19.95 to 36.56	16.61	29.12
8 Shirala	57.73 to 64.65	6.92	60.68

Source: Complied from Table 6.6 Compiled

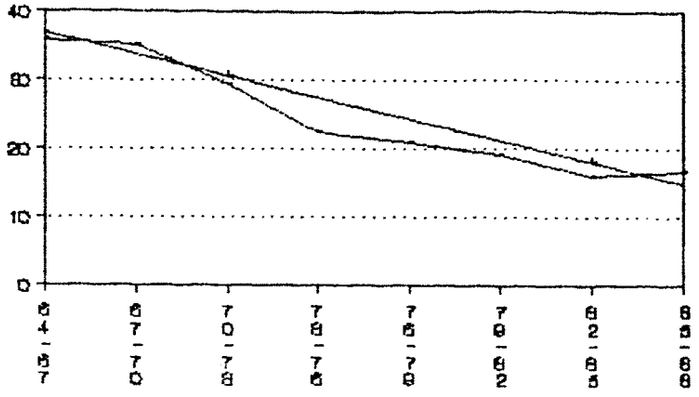
It is seen from the table that Shirala had shared 60.68 per cent of its GCA for the crops under this class.

This was a unique feature among all the talukas. Other talukas except Jat and Kavathe Mahankal shared sizeable area for cultivation of non-food crops, the percentage varying between 9.41 per cent (Jat) and 29.12 per cent (Walva). Eventhough Shirala had shared maximum area its range magnitude was quite low and of the order of 6.92 percentage points. The lowest value for range magnitude was 5.45 percentage points for by Jat. The range magnitude of other talukas was in the range of 13.73 percentage points and 29.43 percentage points. Higher the range magnitude, obviously greater the variability and vice versa.

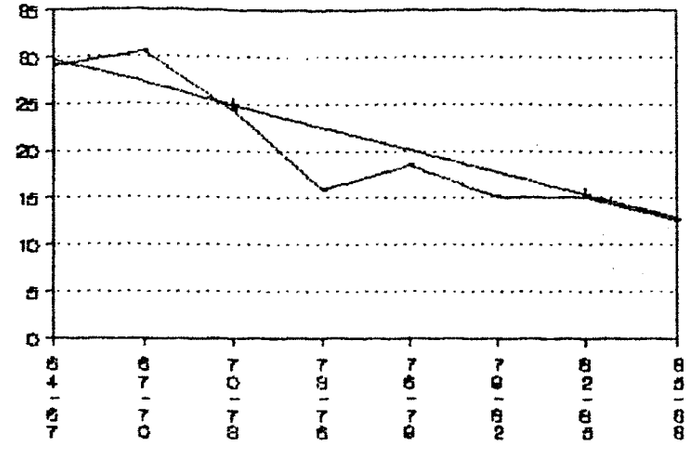
6.4.2.2 Trends

The overall movement of the percentage area during the 24 year span is presentated and trend line is fitted for each taluka in the graphical presentation of Fig. 6.6. It is noticed that except Atpadi all the other talukas had speedily falling downward trend for this class group. It therefore, appears that the growers of Sangli district were very rapidly shifting over to the cultivation of food crops by withdrawing their lands from non-food crops. One of the possible crop increased in this process of substitution was sugarcane which is included in the group of food crops. Establishment of cooperative sugar factories in some of the talukas must have prompted this change.

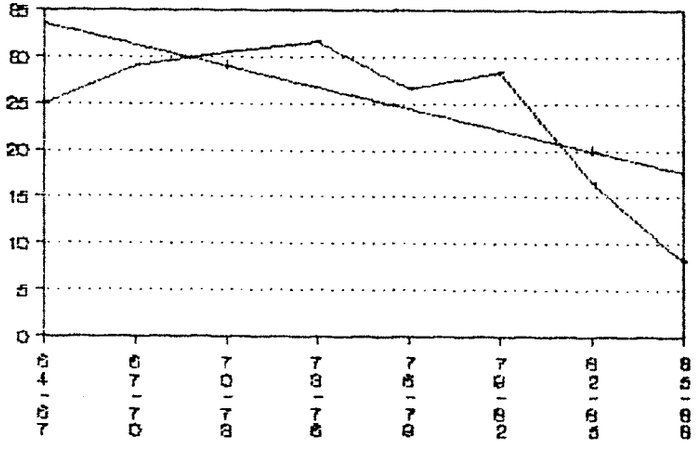
TREND OF THE PERCENTAGE OF TALUKA AREA IN ITS GCA: NON-FOODCROPS



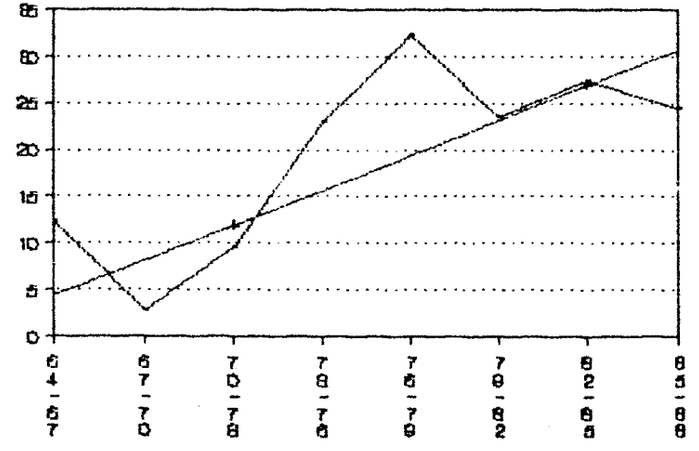
MIRAJ



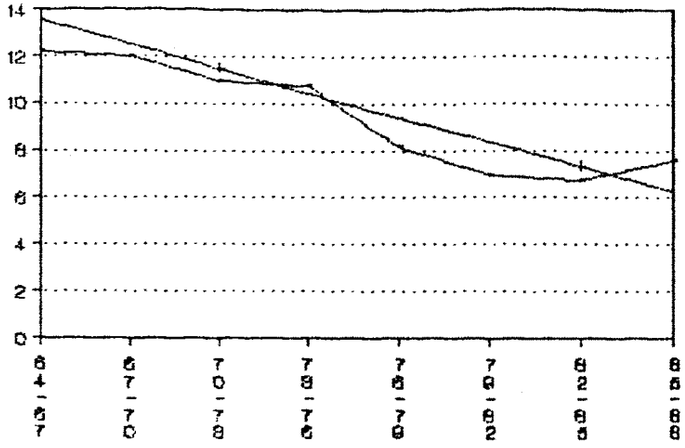
TASGAON



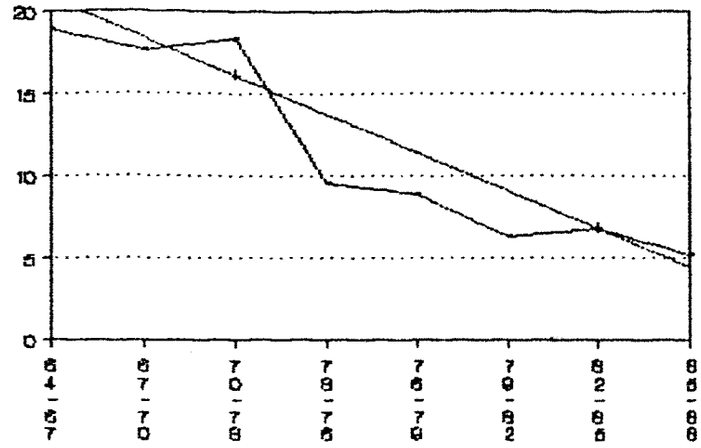
KHANAPUR



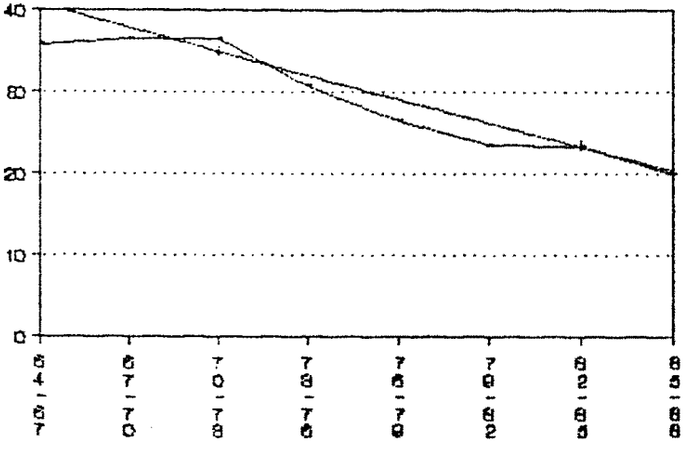
ATPADI



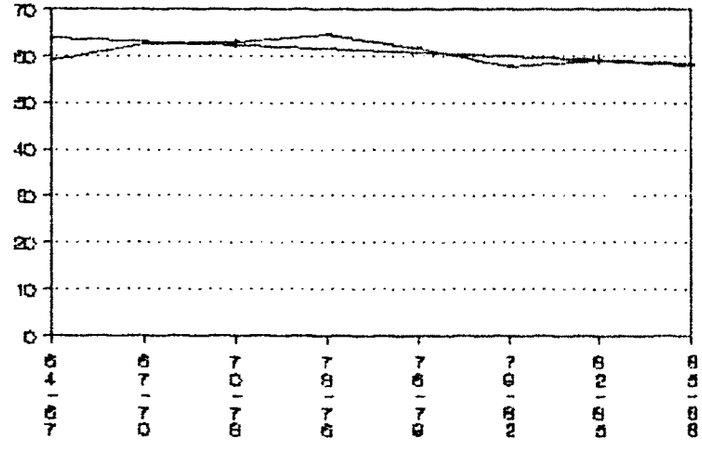
JAT



KAVATHE MAHANKAL



WALVA



SHRALA

6.4.2.3 Coefficient of variation

The intensity of fluctuations in the area percentage would throw further light on the changing cropping pattern in the talukas of the district. The values of coefficient of variation are given in Table 6.10.

Table 6.10

C.V. values of taluka shares of total non-foodcrops in their GCA (1964-88)

Taluka	Coefficient of variation (percentage)
1 Shirala	3.93
2 Walva	21.45
3 Jat	22.79
4 Miraj	30.54
5 Khanapur	30.85
6 Tasgaon	31.96
7 Kavate Mahankal	47.77
8 Atpadi	48.40

Source : Compiled from Table 6.6.

The values of C.V. were quite high except for Shirala which remained at the lowest point with 3.93 per cent. For all other the C.V. values were higher than 21 per cent, the highest being 48.40 per cent in case of Atpadi. Previously it was observed that Shirala had shared maximum area of its GCA under this class of crops and now it is

observed that its c.v. value was only 3.93 per cent. Hence it could be concluded that crops under this class were grown quite consistently in Shirala taluka. These values again confirm high degree of variability in cultivation of non-food crops all over the district.

6.5 CONCLUSION

The group of non-food crops included groundnuts and other oilseeds, narcotics and drugs, fibers and misc non-food crops. The area under production of non-food crops had varied from nearly 25 per cent to 15 per cent of the GCA in Sangli district. Groundnut was the most important crop of this class since area under this crop was nearly so per cent of the total non-food crops. Hence only groundnut was considered for the per cent study.

Interpretations of the data processed for groundnut and total non-food crops are given at a glance in Table 6.11. Talukawise trends for groundnut and total non-food crops with reference to total area in the district under the particular class of crops and GCA area of the taluka are given in the Table 6.11

Perusal of data over 1964-88 reveals that the share of Non-food crops in the GCA of the district had downward trend. When it comes to the sub-group groundnut,

the same trend prevailed.

Table 6.11

Summary of trends in area

	Total Non-food crops		Ground nuts	
Taluka	(A) District	(B) GCA	(A) District	(B) GCA
1 Miraj	down	down	down	down
2 Tasgaon	down	down	up	down
3 Khanapur	down	down	down	down
4 Atpadi	up	up	up	up
5 Jat	down	down	down	down
6 Kavathe Mahankal	down	down	down	down
7 Walva	down	down	up	down
8 Shirala	up	down	up	up
District resultant	downtrend		downtrend	

Note: (1) 'A' : Trend with respect to taluka ~~to~~ area as percentage of the district area.

(2) 'B' : Trend with respect to taluka area as percentage of its GCA

With reference to individual talukas the change in cropping pattern presented mixed situation. It was noticed that Atpadi had upward trend for groundnut as well as total non-food crops in the district taluka setting. Miraj, Khanapur, Jat and Kavathe Mahankal revealed downward trend for total non-food crops and groundnut in both the setting. Tasgaon presented downward trend for total non-food crops in

the district as well as taluka settings but resulted into upward trend case of groundnut in the district setting and downward trend in taluka setting. Walvas case was parallel to the latter findings of Tasgaon. Shirala presented upward trend is district setting for total non-food crops as well as groundnut and downward trend for total non-food crops and upward trend for groundnut in taluka setting.