

Trends in Coconut Cultivation in Karnataka State – A Study of Chikmagalur District

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ABSTRACT: Among various plantation crops, coconut also known as Kalpavriksha is the most useful palm for human being. It is used for both food and non-food products. Tender coconut is widely used in tropical regions. Coconut oil contains abundant vitamins and minerals. Major value added products of coconut are soaps, hair oil, cosmetics, etc. It is also major sources of livelihood to major sources of rural folk. In Karnataka state coconut cultivation is mainly concentrated in 10 districts. On the other hand, in recent years, improvements in cultivation practices and breeding have produced high yield coconut trees. With this respect, though coconut has got wide a spread use, its production is subjected to drastic fluctuations in Karnataka state which might be due to various reasons. Hence, an attempt is made to analyse the production of coconut in Karnataka state on one hand and on the other hand to predict the production of coconut in Karnataka in general and in Chikmagalur district in particular.

INTRODUCTION

Agriculture plays a very significant role in economic development of any country especially in developing countries like India. Among various plantation crops, coconut cultivation also known as KALPAVIRIKSHA in India has got its own importance due to its several uses. Tender coconut is used widely from the point of good health. Coconut oil extracted from the kernel contains copious vitamins, mineral, anti-oxidants and so on. On the other hand various value added non-food products from coconut are like soaps, hair oil, cosmetics, fiber and many more industrial products. Coconut based cropping system not only might result in increasing productivity but also in increasing the productivity of farm resources. Apart from these coconut palm and its products are major sources of livelihood to major section of rural folk.

Coconut is grown in more than 93 countries of the world where Indonesia, Philippines and India occupy the top first three places. The annual production of coconut in India during 2012-13 was estimated to be around 11930000 nuts with an average productivity of 6 nuts per hectare cultivated on 2159000 hectare area. Karnataka state being ninth largest state by population is a state in South India covering an area about 191976 square kilometers

which is about 5.83 percent of the total geographical area of India. During 2013-14, in Karnataka state 9.45% geographical area is under horticulture crop and in Chikmagalur district 16.13 % geographical area is under horticulture crop. In other words, total geographical area in Karnataka state is around 19049836 hectares out of which around 12406519 hectare (65.13 per cent), 10442531 hectare (54.82 percent) and 2028172 hectares (10.65 percentage) is under cultivable area, net sown area and horticulture crops respectively.

OBJECTIVES

The following are the major objectives of the study:

- 1) To study Area, Production and Productivity under major horticulture crops in Karnataka state and in Chikmagalur district
- 2) To study Area, Production and Productivity under plantation crops in Karnataka state and in Chikmagalur district
- 3) To study Area, Production and Productivity under coconut crop in Karnataka state and in Chikmagalur district
- 4) To forecast Area, production and Productivity under major horticulture crops

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in Karnataka state and in Chikmagalur district

- 5) To forecast Area, production and Productivity under plantation crops in Karnataka state and in Chikmagalur district
- 6) To forecast Area, production and Productivity under coconut crops in Karnataka state and in Chikmagalur district

STUDY AREA PROFILE

Chikmagalur district in Karnataka state belongs to Malnad region having geographical area of about 722075 hectares. During 2013-14, the area under horticulture crops is 128869 hectares (6.30 percent of total area under horticulture crops in Karnataka state) under which 76993 hectare (59.75 percent) is under plantation crops and in turn coconut cultivation is cultivated in 38611 hectares of land which is around 50.15 percent of total area under plantation crops in the district.

COLLECTION OF DATA

This study is mainly based on secondary data collected from Coconut Board, Department of Agriculture and Horticulture, National Horticulture Board and from concerned organization.

STUDY PERIOD

The period considered for the purpose of study is from 2003-04 to 2013-14 where the trends regarding area, production and productivity of major horticulture crops, plantation crops and coconut crop is studied with respect to Karnataka state in general and Chikmagalur district in particular. Like that based upon the behavior of data from 2003-04 to 2013-14 forecasting/ prediction of area, production and productivity is been done for Karnataka state as well as Chikmagalur district.

ANALYSIS AND INTERPRETATION OF DATA

From 2003-04 to 2013-14 in Karnataka state, the average cultivable area is around 1256366 hectares (Table 1) which is about 70 percent of the total geographical area with standard deviation of 275201 hectares. Like that the average net sown area is round 10312613 hectares which is about 54.13 and 82.06 percent to total geographical area and cultivable area respectively with standard deviation of 201156 hectares.

The average area under horticulture crops is around 1799855 hectares accounting about 9.45, 14.32 and 17.45 percent to total geographical area, cultivable

area and net sown area respectively with standard deviation of 1799855 hectares. It is noticed that variation is minimum regarding to net area sown and maximum with area under horticulture crops which indicates that net area sown is more consistent when compared to cultivable area and area under horticulture crops.

Table 1
Geographical, cultivable and Horticultural Cropped Area (in hectares) in Karnataka state (in hectares)

Sl. No.	Years	Geographical Area	Cultivable Area	Net Area Sown	Area under Horticulture Crops
1	2003-04	19049836	12606982	9846606	1541113
2	2004-05	19049836	12608940	10177991	1630979
3	2005-06	19049836	13026714	10509375	1649580
4	2006-07	19049836	13026714	10509375	1724710
5	2007-08	19049836	12186287	10418792	1763534
6	2008-09	19049836	12189317	10173589	1799682
7	2009-10	19049836	12602226	10388453	1899210
8	2010-11	19049836	12583623	10164926	1892709
9	2011-12	19049836	12565020	10390564	1886208
10	2012-13	19049836	12438688	10416547	1982509
11	2013-14	19049836	12406519	10442531	2028172
Average			12567366	10312613	1799855
Standard Deviation			275201	201156	153771
Coefficient of Variation			2.19	1.95	8.54
Increase over the period			-200463.31	595924.87	487058.87
Percentage increase			-1.59	6.05	31.60
Growth Rate			-0.16	0.59	2.78

Source: Department of Horticulture, Chikmagalur, Annual Reports

However, though there is decrease in cultivable area, the area under horticulture crops is seen increasing as the growth rate is maximum for area under horticulture crops followed by net sown area and minimum for total cultivable area.

The data in table 2 reveals that in Chikmagalur district the average cultivable area is around 333737 hectares out of which 333737 hectares (46.22 %) is cultivable area under which 293927 hectares (40.71%) is net sown area. Like that about 39.62 percent of total net area sown is under horticulture crops. As coefficient of variation is less with regard to net sown area, it can be considered as more consistent when compared to fluctuation in total cultivable area and area under horticulture crops. It is also noticed that maximum increase (about 13.10 percent) is recorded in area under horticulture crops as against to 6.07 % and 1.22 percent increase in net sown area and total cultivable area revealing that the maximum growth

Table 2
Geographical, cultivable and Horticultural Cropped Area
(in hectares) in Chikmagalur district of Karnataka state
(in hectares)

Sl. No.	Years	Geographical Area	Cultivable Area	Net Area Sown	Area under Horticulture Crops
1	2003-04	722075	331401	278799	111713
2	2004-05	722075	332395	288847	110124
3	2005-06	722075	343124	298895	109501
4	2006-07	722075	343124	298895	117034
5	2007-08	722075	319790	296749	115228
6	2008-09	722075	309790	295920	112930
7	2009-10	722075	340404	297014	118099
8	2010-11	722075	340320	295001	118477
9	2011-12	722075	340236	292988	118856
10	2012-13	722075	335093	294358	122601
11	2013-14	722075	335432	295729	126347
Average			333737	293927	116446
Standard Deviation			10422	5753	5228
Coefficient of Variation			3.12	1.96	4.49
Increase over the period			4031.32	16930.00	14634.00
Percentage increase			1.22	6.07	13.10
Growth Rate			0.12	0.59	1.24

Source: Department of Horticulture, Chikmagalur, Annual Reports

is about 1.24 percent per annum for area under horticulture crops as against to 0.59 and 0.12 percent per annum with regard to net area sown and cultivable area.

Production of Major Horticulture Crops in Karnataka

The Table 3 indicates that from 2003-04 to 2013-14, in Karnataka state, on an average, the area under major horticulture crops is 1806426 hectares with standard deviation of 160858 hectares producing 13921815 tons with yield at 7.69 tons/ hectare, while in Chikmagalur district the area under major horticulture crops is 116181 hectares producing 565338 tons at yield of 4.86 tons/ hectare. Chikmagalur district covered about 6.46 percent of area under horticulture crops in Karnataka state and produced about 4.17 percent of state's horticulture production. However, the productivity of Chikmagalur district is 58.23percent less when compared to Karnataka state.

Table 3
Area, Production and Productivity under major horticulture crops in Karnataka

Sl. No.	Years	Area (in hectares)			Production (in tons)			Productivity (tons/ hectare)		
		Chikmagalur	Karnataka	%*	Chikmagalur	Karnataka	%*	Chikmagalur	Karnataka	%*
1	2003-04	111713	1541113	7.25	388676	8928172	4.35	3.48	5.79	60.06
2	2004-05	110124	1630979	6.75	584662	9729859	6.01	5.31	5.97	88.99
3	2005-06	109501	1649580	6.64	566152	12247969	4.62	5.17	7.42	69.63
4	2006-07	117034	1724710	6.79	630973	13025814	4.84	5.39	7.55	71.39
5	2007-08	115228	1763534	6.53	585339	13663827	4.28	5.08	7.75	65.56
6	2008-09	112930	1799682	6.27	529804	13637964	3.88	4.69	7.58	61.91
7	2009-10	118099	1899210	6.22	524896	14779576	3.55	4.44	7.78	57.11
8	2010-11	113258	1933494	5.86	521873	16114209	3.24	4.61	8.48	54.34
9	2011-12	118856	1886208	6.30	544027	15500994	3.51	4.58	8.22	55.70
10	2012-13	122382	1997236	6.13	719027	17329796	4.15	5.88	8.89	66.07
11	2013-14	128869	2044939	6.30	623292	18181791	3.43	4.84	9.19	52.62
Average		116181	1806426	6.46	565338	13921815	4.17	4.86	7.69	
Standard Deviation		5764	160858		82772	2899285		0.63	1.06	
C V		4.96	8.90		14.64	20.83		12.87	13.81	
CGR		1.44	2.87		4.84	7.37		3.35	4.72	

Source: Department of Horticulture, Chikmagalur, Annual Reports

Note: * percentage of Chikmagalur to Karnataka state

However, Chikmagalur district was more consistent in area, production and productivity when compared to Karnataka state. Whereas, the growth rate of Karnataka state is more than Chikmagalur district with regard to area, production and productivity.

Like that in Karnataka, the average area under plantation crops (Table 4) is around 787260 hectares

producing 466402 tons where yield is at 0.59 tons/ hectare. In Chikmagalur district the area, production and productivity under plantation crops is around 74915 hectares, 66832 tons and 0.89 tons/ hectare respectively where the productivity of plantation crops in Karnataka state was 33.70 percent less when compared to Chikmagalur district.

Table 4
Area, Production and Productivity under Plantation crops in Karnataka

Sl. No.	Years	Area (in hectares)			Production (in tons)			Productivity (tons/ hectare)		
		Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *
1	2003-04	75798	728912	10.40	56501	378746	14.92	0.75	0.52	143.46
2	2004-05	74219	730793	10.16	154524	495730	31.17	2.08	0.68	306.92
3	2005-06	70652	733608	9.63	56010	407406	13.75	0.79	0.56	142.75
4	2006-07	76360	764601	9.99	61022	469119	13.01	0.80	0.61	130.25
5	2007-08	76702	762682	10.06	60250	467085	12.90	0.79	0.61	128.26
6	2008-09	76281	787315	9.69	59999	476885	12.58	0.79	0.61	129.86
7	2009-10	74270	805490	9.22	56244	441917	12.73	0.76	0.55	138.03
8	2010-11	73829	812179	9.09	58292	478341	12.19	0.79	0.59	134.06
9	2011-12	74525	834693	8.93	56655	503714	11.25	0.76	0.60	125.97
10	2012-13	74435	842844	8.83	55920	501368	11.15	0.75	0.59	126.29
11	2013-14	76993	856740	8.99	59734	510110	11.71	0.78	0.60	130.30
Average	74915	787260	9.54	66832	466402	14.30	0.89	0.59		
Standard Deviation	1813	46593		29147	41724	5.70		0.04		
C V	2.42	5.92		43.61	8.95	39.84		6.99		
CGR	0.16	1.63		0.56	3.02	-2.39		1.37		

Source: Department of Horticulture, Chikmagalur, Annual Reports

Note: * percentage of Chikmagalur to Karnataka state

The Table 5 reveals that from 2003-04 to 2013-14 on an average, the area, production and productivity of coconut in Karnataka state was 474851 hectares, 68758 lakh nuts and 0.15 lakh nuts/ hectare respectively. Like that in Chikmagalur district around 33448 hectares of area is under coconut cultivation producing about 4181 lakh nuts with an yield at 0.13 lakh nuts (13000 nuts/ hectare) per

hectare. Karnataka state was more consistent when compared to Chikmagalur district with respect to area, production and productivity in coconut cultivation where, the growth rate in Chikmagalur district when compared to Karnataka state was 116.28 percent more in area, 33.89 and 73.45 percent less in production and productivity respectively.

Table 5
Area, Production and Productivity under Coconut crop in Karnataka

Sl. No.	Years	Area (hectares)			Production (lakh nuts)			Productivity (lakh nuts/ hectare)		
		Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *
1	2003-04	32106	458410	7.00	1320	47293	2.79	0.04	0.10	39.85
2	2004-05	32665	453839	7.20	14727	53660	27.45	0.45	0.12	381.31
3	2005-06	32774	454922	7.20	4265	70942	6.01	0.13	0.16	83.45
4	2006-07	32495	467656	6.95	4180	103188	4.05	0.13	0.22	58.30
5	2007-08	32200	460201	7.00	3451	94602	3.65	0.11	0.21	52.14
6	2008-09	31989	471278	6.79	3525	58309	6.05	0.11	0.12	89.06
7	2009-10	34244	487075	7.03	3521	52667	6.69	0.10	0.11	95.09
8	2010-11	34184	482790	7.08	3521	75677	4.65	0.10	0.16	65.71
9	2011-12	32563	493323	6.60	3318	58230	5.70	0.10	0.12	86.32
10	2012-13	34100	494480	6.90	2435	70650	3.45	0.07	0.14	49.98
11	2013-14	38611	499387	7.73	1731	71122	2.43	0.04	0.14	31.48
Average		33448	474851	7.04	4181	68758	6.63	0.13	0.15	
Standard Deviation		1911	17115		3620	17558		0.11	0.04	
C V		5.71	3.60		86.58	25.54		88.20	26.40	
CGR		1.86	0.86		2.75	4.16		0.87	3.28	

Source: Department of Horticulture, Chikmagalur, Annual Reports

Note: * percentage of Chikmagalur to Karnataka state

Table 6 indicates that out of total area under horticulture crops, kadur taluk occupies about 44.18 percent of the total area followed by Tharikere and Chikmagalur taluks with 19.60 and 12.05 percent of the total area. Though Kadur taluk is seen more consistent when compared to other taluks but has recorded decrease in the percentage of area under

horticulture crops during 2013-14 by 8.64 percent when compared to 2003-04 indicating 0.09 percent growth per annum. At the same time highest growth rate is seen Tharikere taluk at 4.77 percent per annum followed by Chikmagalur, N R Pura and Sringeri taluks at 3.15 and 3 percent per annum respectively.

Table 6
Taluk wise Area under major horticulture crops (hectare) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	12579	55266	7204	7504	4806	4535	19819	111713
2	2004-05	12240	54355	8520	8425	5050	4914	22620	116124
3	2005-06	12240	47107	8837	9097	5527	5049	21644	109501
4	2006-07	12757	51489	9071	8917	5733	5061	24006	117034
5	2007-08	12965	51629	9189	8744	5713	5159	21829	115228
6	2008-09	13373	51504	9145	8135	5887	4847	20039	112930
7	2009-10	13863	51045	8885	7681	5758	5806	19928	112966
8	2010-11	13793	50523	8874	7680	5848	5841	20699	113258
9	2011-12	15755	51602	8777	7621	6310	5639	23151	118855
10	2012-13	17047	49950	8783	7863	7465	5980	25294	122382
11	2013-14	17522	50490	8252	8367	6552	6094	31587	128864
Average		14012	51360	8685	8185	5877	5357	22783	116260
Standard Deviation		1899	2145	560	563	720	529	3413	5496
Coefficient of Variation		13.55	4.18	6.45	6.88	12.25	9.88	14.98	4.73
Increase over the period		4943	-4776	1048	863	1746	1559	11768	17151
Percentage increase		39.30	-8.64	14.55	11.50	36.33	34.38	59.38	15.35
Growth Rate		3.37	-0.90	1.37	1.09	3.15	3.00	4.77	1.44

Source: Department of Horticulture, Chikmagalur, Annual Reports

With regard to production of major horticulture crops, it is observed from Table 7 that Tharikere taluk produces around 26.86 percent of total horticulture production of the district closely followed by Chikmagalur and Kadur taluks producing 25.14 and 19.89 percent of total horticulture production in Chikmagalur district where Chikmagalur taluk is

found to be more consistent in production when compared to other taluks. However, Tharikere taluk followed by N R Pura, Kadur and Chikmagalur taluks had maximum positive growth rates while other taluks namely Koppa, Mudigere and Sringeri taluks had negative growth rate which indicates that horticulture production in these three taluks have decreased.

Table 7
Taluk wise Production of major horticulture crops (tons) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	114087	73806	30733	54571	33631	20099	61747	388674
2	2004-05	98456	84444	31012	61857	40501	24512	130631	471413
3	2005-06	132989	121356	35281	66293	48087	28514	133633	566153
4	2006-07	150095	106465	38033	73277	47135	30569	185399	630973
5	2007-08	146447	110431	36433	65782	46024	30896	149325	585338
6	2008-09	138361	111082	36117	54982	44432	25101	119729	529804
7	2009-10	149436	124323	34251	45213	45708	15446	110200	524577
8	2010-11	145065	123454	34742	45212	46608	15741	110750	521572
9	2011-12	155221	114389	22893	37338	57379	15597	141210	544027
10	2012-13	160706	135163	22141	38700	65779	16836	279703	719028
11	2013-14	143904	109532	28830	45865	61634	16167	217361	623293
Average		139524	110404	31861	53554	48811	21771	149063	554987
Standard Deviation		18386	17728	5375	12061	9327	6307	59291	87083
Coefficient of Variation		13.18	16.06	16.87	22.52	19.11	28.97	39.78	15.69
Increase over the period		29817	35726	-1903	-8706	28003	-3932	155614	234619
Percentage increase		26.14	48.41	-6.19	-15.95	83.27	-19.56	252.02	60.36
Growth Rate		2.35	4.03	-0.64	-1.72	6.24	-2.15	13.41	4.84

Source: Department of Horticulture, Chikmagalur, Annual Reports

The productivity of horticulture crops in Chikmagalur district (Table 8) is seen increased by 3.35 percent per annum from 2003-04 to 2013-14. In Chikmagalur taluk the productivity was high at 10.02 tons per hectare followed by N R Pura and Mudigere taluks when compared to other taluks of the district.

Again in Koppa, Mudigere and Sringeri taluks the growth rates are negative while in other taluks it is positive. Among various taluks in the district Tharikere taluk has highest growth rate at 8.25 percent per annum in production followed by Kadur and N R Pura taluks.

Table 8
Taluk wise Productivity of major horticulture crops (tons/ hectare) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	9.07	1.34	4.27	7.27	7.00	4.43	3.12	3.48
2	2004-05	8.04	1.55	3.64	7.34	8.02	4.99	5.78	4.06
3	2005-06	10.87	2.58	3.99	7.29	8.70	5.65	6.17	5.17
4	2006-07	11.77	2.07	4.19	8.22	8.22	6.04	7.72	5.39
5	2007-08	11.30	2.14	3.96	7.52	8.06	5.99	6.84	5.08
6	2008-09	10.35	2.16	3.95	6.76	7.55	5.18	5.97	4.69
7	2009-10	10.78	2.44	3.85	5.89	7.94	2.66	5.53	4.64
8	2010-11	10.52	2.44	3.92	5.89	7.97	2.69	5.35	4.61
9	2011-12	9.85	2.22	2.61	4.90	9.09	2.77	6.10	4.58
10	2012-13	9.43	2.71	2.52	4.92	8.81	2.82	11.06	5.88
11	2013-14	8.21	2.17	3.49	5.48	9.41	2.65	6.88	4.84
Average		10.02	2.16	3.67	6.50	8.25	4.17	6.41	4.76
Standard Deviation		1.22	0.41	0.59	1.13	0.70	1.46	1.93	0.64
Coefficient of Variation		12.14	18.99	16.04	17.43	8.48	35.01	30.10	13.48
Increase over the period		-0.86	0.83	-0.77	-1.79	2.41	-1.78	3.77	1.36
Percentage increase		-9.45	62.44	-18.11	-24.62	34.43	-40.14	120.87	39.02
Growth Rate		-0.99	4.97	-1.98	-2.79	3.00	-5.00	8.25	3.35

Source: Department of Horticulture, Chikmagalur, Annual Reports

Table 9
Taluk-wise Area, Production and Productivity of major horticulture crops in Chikmagalur from 2003-04 to 2013-14

Sl. No.	Years	Area (hectares)	% share	Production (Tons)	% share	Productivity (Tons/ hectare)
1	Chikmagalur	154134	12.05	1534767	25.14	10.0159
2	Kadur	564960	44.18	1214445	19.89	2.1636
3	Koppa	95537	7.47	350466	5.74	3.6726
4	Mudigere	90034	7.04	589090	9.65	6.4979
5	N R Pura	64649	5.06	536918	8.79	8.2512
6	Sringeri	58925	4.61	239478	3.92	4.1695
7	Tharikere	250616	19.60	1639688	26.86	6.4111
8	Total	1278855	100.00	6104852	100.00	4.7645

Source: Department of Horticulture, Chikmagalur, Annual Reports

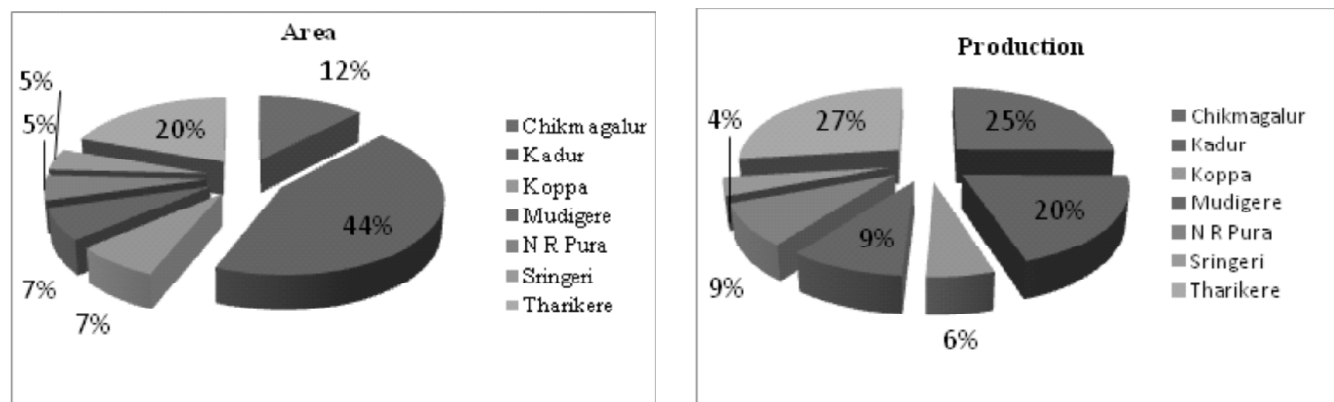


Figure 1: Taluk wise Area and Production under major horticulture crops in Chikmagalur district

Source: Table 9

Figure 1 denotes that Chikmagalur taluk cover about 20 percent of total area under horticulture crops and produce about 25 percent of total production of the district. While Kadur taluk occupies around 44 percent of total area under horticulture crops of the district and produce only about 20 percent of the district's production. On the other hand, Tharikere taluk occupies about one fifth of the total area and produces around one fourth of the total production in the district. This implies that Chikmagalur, Kadur and Tharikere taluks are the three major taluks occupying majority of the area and producing majority of the district's horticulture production.

Production of Plantation Crops in Karnataka:

Table 10 indicates that Kadur taluk occupies about 60.47 percent of total area under plantation crops in

Chikmagalur district followed by Tharikere taluk occupying 16.83 percent of total area. However, except Kadur taluk in rest all taluks of the district there is positive growth rate where the growth rate in Tharikere taluk (5.03 percent per annum) is at top followed by N R Pura (4.77 % per annum) and Chikmagalur taluk at 2.85 percent per annum. Like the percentage of increase in 2013-14 was highest in Tharikere taluk (63.40 percent) followed by N R Pura (59.35 percent) and Koppa (28.63 percent) taluks. On the other hand Kadur taluk followed by Mudigere and Koppa taluks were more consistent compared to other taluks of the district.

The data in Table 11 states that about 51.60 percent of total production in plantation crops is produced by Kadur taluk followed by Tharikere and Koppa taluks producing 18.58 and 11.11 percent of total

Table 10
Taluk wise Area under plantation crops (hectare) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	2567	50368	4505	2490	1941	2550	11377	75798
2	2004-05	2464	50385	5590	2569	2000	2597	11174	76779
3	2005-06	2464	42466	5751	2958	2180	2754	12079	70652
4	2006-07	2445	47014	5892	2858	2555	2767	12829	76360
5	2007-08	2545	46723	6044	3213	2550	2930	12697	76702
6	2008-09	2652	46500	6025	3176	2788	2997	12143	76281
7	2009-10	2764	44058	5979	2809	2652	3080	12295	73637
8	2010-11	2786	44062	5965	2809	2742	3115	12350	73829
9	2011-12	3070	44737	6089	2824	3251	2853	11700	74524
10	2012-13	3382	43133	6039	2917	3997	3185	11782	74435
11	2013-14	3399	40038	5795	2836	3093	3242	18590	76993
Average		2776	45408	5789	2860	2704	2915	12638	75090
Standard Deviation		355	3188	452	216	594	232	2039	1917
Coefficient of Variation		12.78	7.02	7.80	7.55	21.97	7.97	16.13	2.55
Increase over the period		832	-10330	1290	346	1152	692	7213	1195
Percentage increase		32.41	-20.51	28.63	13.90	59.35	27.14	63.40	1.58
Growth Rate		2.85	-2.27	2.55	1.31	4.77	2.43	5.03	0.16

Source: Department of Horticulture, Chikmagalur, Annual Reports

Table 11
Taluk wise Production of plantation crops (tons) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	1338	29796	8610	3378	2009	1805	9565	56501
2	2004-05	1178	41276	9367	3442	4773	1988	9250	71274
3	2005-06	1178	29401	6867	3270	3197	3000	9097	56010
4	2006-07	1214	32072	6827	3251	3555	3425	10679	61023
5	2007-08	1281	31270	6771	3656	3530	3093	10649	60250
6	2008-09	1465	31270	6731	3630	4114	3206	9583	59999
7	2009-10	1444	30109	6303	3877	2515	2662	8924	55834
8	2010-11	1665	30157	6744	3876	3415	2959	9476	58292
9	2011-12	1723	30939	4715	2819	4028	2264	10166	56654
10	2012-13	2315	28554	4870	2890	2682	3551	11058	55920
11	2013-14	1860	21313	4607	4315	2208	2802	22630	59735
Average		1515	30560	6583	3491	3275	2796	11007	59227
Standard Deviation		352	4584	1500	442	858	568	3919	4449
Coefficient of Variation		23.21	15.00	22.78	12.67	26.19	20.32	35.60	7.51
Increase over the period		522	-8483	-4003	937	199	997	13065	3234
Percentage increase		39.01	-28.47	-46.49	27.74	9.91	55.24	136.59	5.72
Growth Rate		3.35	-3.30	-6.06	2.48	0.95	4.50	8.99	0.56

Source: Department of Horticulture, Chikmagalur, Annual Reports

plantation crops' production of the district respectively where Tharikere taluk had highest growth rate at 8.99 percent per annum followed by Sringeri (4.50 percent per annum) and Chikmagalur (3.35 percent per annum) taluks. Similarly, highest percentage of increase in production in 2013-14 is noticed among Thariker (136.59 percent) taluk followed by Sringeri (55.24 percent) and Chikmagalur (39.01 percent) taluks when compared to 2003-04.

With regard to productivity of plantation crops in the district, it is observed from Table 12 that the average productivity in N R Pura taluk was highest at 1.27 tons per hectare followed by Mudigere and

Koppa taluks at 1.23 and 1.16 tons/ hectare respectively. However, the growth rate in Tharikere taluk is highest followed by Sringeri and Mudigere taluks where the growth rate of these three taluks is about 3.77, 2.02 and 1.15 percent per annum. At the same time, Koppa, N R Pura and Kadur taluks had negative compound growth rate which is at -8.40, -3.65 and -1.05 percent per annum.

The data in Table 13 and Figure 2 indicates that in Chikmagalur district, under plantation crops, Kadur taluk occupied about 60.47 percent of total area and produced around 51.60 percent of plantation crops' production of the district. This taluk is followed

Table 12
Taluk wise Productivity of plantation crops (tons/ hectare) in Chikmagalur District

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	0.52	0.59	1.91	1.36	1.04	0.71	0.84	0.75
2	2004-05	0.48	0.82	1.68	1.34	2.39	0.77	0.83	0.93
3	2005-06	0.48	0.69	1.19	1.11	1.47	1.09	0.75	0.79
4	2006-07	0.50	0.68	1.16	1.14	1.39	1.24	0.83	0.80
5	2007-08	0.50	0.67	1.12	1.14	1.38	1.06	0.84	0.79
6	2008-09	0.55	0.67	1.12	1.14	1.48	1.07	0.79	0.79
7	2009-10	0.52	0.68	1.05	1.38	0.95	0.86	0.73	0.76
8	2010-11	0.60	0.68	1.13	1.38	1.25	0.95	0.77	0.79
9	2011-12	0.56	0.69	0.77	1.00	1.24	0.79	0.87	0.76
10	2012-13	0.68	0.66	0.81	0.99	0.67	1.11	0.94	0.75
11	2013-14	0.55	0.53	0.79	1.52	0.71	0.86	1.22	0.78
Average		0.54	0.67	1.16	1.23	1.27	0.96	0.85	0.79
Standard Deviation		0.06	0.07	0.35	0.18	0.47	0.17	0.13	0.05
Coefficient of Variation		10.65	10.43	30.58	14.33	36.83	17.71	15.67	6.32
Increase over the period		0.03	-0.06	-1.12	0.16	-0.32	0.16	0.38	0.03
Percentage increase		4.99	-10.02	-58.40	12.15	-31.03	22.10	44.79	4.08
Growth Rate		0.49	-1.05	-8.40	1.15	-3.65	2.02	3.77	0.40

Source: Department of Horticulture, Chikmagalur, Annual Reports

Table 13
Taluk-wise Area, Production and Productivity of Plantation crops in Chikmagalur from 2003-04 to 2013-14

Sl. No.	Years	Area (hectares)	% share	Production (Tons)	% share	Productivity (Tons/ hectare)
1	Chikmagalur	30538	3.70	16661	2.56	0.5402
2	Kadur	499484	60.47	336157	51.60	0.6710
3	Koppa	63674	7.71	72412	11.11	1.1580
4	Mudigere	31459	3.81	38404	5.89	1.2264
5	N R Pura	29749	3.60	36026	5.53	1.2688
6	Sringeri	32070	3.88	30755	4.72	0.9557
7	Tharikere	139016	16.83	121077	18.58	0.8545
8	Total	825990	100.00	651492	100.00	0.7884

Source: Department of Horticulture, Chikmagalur, Annual Reports

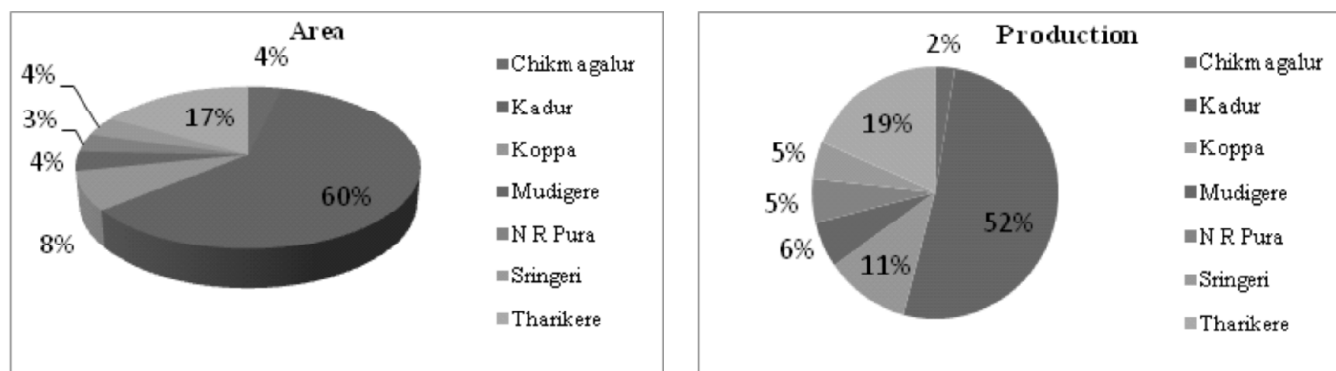


Figure 2: Taluk wise Area and Production under plantation crops in Chikmagalur district

Source: Table 13

by Tharikere where the percentage of area and production is around 16.83 and 18.58 percent of the district respectively. This reveals that Kadur and Tharikere taluks are major plantation crop producing taluks in the district.

Production of Coconut in Karnataka

In Chikmagalur district, Kadur taluk is major coconut growing taluk as it covers about 71.73 percent of total area under coconut cultivation of the district which is closely followed by Tharikere taluk as it is next largest taluk in the district covering about 17.14 percent of total area under coconut cultivation in the district. However, Tharikere taluk has highest growth rate at 6.45 percent per annum followed by Chikmagalur (5.14 percent per annum) and Kadur (2.51 percent per annum) while other taluks had negative growth rate. Similarly, the percentage of

increase in 2013-14 was highest in Tharikere and Chikmagalur taluks at 86.87 and 65.03 percent when compared to 2003-04. On the other hand, it was seen that N R Pura and Sringeri taluks were more consistent in area under coconut cultivation than other taluks of the district.

Likewise, with regard to production of coconut in Chikmagalur district, it is observed that, Kadru taluk (Table 15) produced about 71.41 percent of total coconut production of the district followed by Tharikere which produced 17.17 percent of total production of the district. However, all the taluks in the district had negative growth rate which indicated that production of coconut in the district decreased where the percentage of decrease was in 2013-14 maximum at -75.57 percent in Kadur taluk followed by Koppa and Chikmagalur taluks at -63.54 and -48.26 percent when compared to 2003-04. At the same time,

Table 14
Taluk wise Area under coconut cultivation (hectare) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	1214	20263	1030	181	472	613	4768	28541
2	2004-05	1295	20863	986	177	468	603	4926	29319
3	2005-06	1376	21463	942	174	463	593	5085	30096
4	2006-07	1457	22063	898	170	459	583	5243	30874
5	2007-08	1574	22650	836	190	440	627	5883	32200
6	2008-09	1634	22550	810	175	460	520	5840	31989
7	2009-10	1692	24700	800	132	460	520	5940	34244
8	2010-11	1692	24700	740	132	460	520	5940	34184
9	2011-12	1812	24700	662	144	392	580	4273	32563
10	2012-13	2067	25970	596	158	434	525	4350	34100
11	2013-14	2003	25970	615	165	438	510	8910	38611
Average		1620	23263	811	164	450	563	5560	32429
Standard Deviation		274	2029	147	20	23	44	1272	2834
Coefficient of Variation		16.94	8.72	18.14	12.05	5.07	7.88	22.87	8.74
Increase over the period		789	5707	-415	-16	-34	-103	4142	10070
Percentage increase		65.03	28.17	-40.29	-8.75	-7.22	-16.86	86.87	35.28
Growth Rate		5.14	2.51	-5.03	-0.91	-0.75	-1.83	6.45	3.07

Source: Department of Horticulture, Chikmagalur, Annual Reports

Table 15
Taluk wise Production of Coconut (lakh nuts) in Chikmagalur district

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	232	3721	135	17	63	61	728	4957
2	2004-05	223	3492	126	17	62	61	706	4688
3	2005-06	215	3264	118	16	60	61	685	4419
4	2006-07	206	3035	109	16	58	61	663	4149
5	2007-08	170	2500	94	18	48	61	560	3451
6	2008-09	190	2450	90	17	58	60	660	3525
7	2009-10	192	2450	88	13	58	60	660	3521
8	2010-11	192	2450	88	13	58	60	660	3521
9	2011-12	199	2448	66	14	51	69	470	3317
10	2012-13	142	1636	48	16	44	60	490	2435
11	2013-14	120	909	49	17	44	58	535	1731
Average		189	2578	92	16	55	61	620	3610
Standard Deviation		34	810	29	2	7	3	90	947
Coefficient of Variation		17.90	31.44	31.71	10.39	12.65	4.53	14.46	26.23
Increase over the period		-112	-2812	-86	0	-19	-3	-193	-3226
Percentage increase		-48.26	-75.57	-63.54	-1.97	-30.51	-5.14	-26.58	-65.08
Growth Rate		-6.38	-13.15	-9.60	-0.20	-3.57	-0.53	-3.04	-9.99

Source: Department of Horticulture, Chikmagalur, Annual Reports

Table 16
Taluk wise Productivity of coconut (in lakh nuts per hectare) in Chikmagalur

Sl. No.	Years	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2003-04	0.19	0.18	0.13	0.09	0.13	0.10	0.15	0.17
2	2004-05	0.17	0.17	0.13	0.09	0.13	0.10	0.14	0.16
3	2005-06	0.16	0.15	0.12	0.09	0.13	0.10	0.13	0.15
4	2006-07	0.14	0.14	0.12	0.10	0.13	0.10	0.13	0.13
5	2007-08	0.11	0.11	0.11	0.09	0.11	0.10	0.10	0.11
6	2008-09	0.12	0.11	0.11	0.10	0.13	0.12	0.11	0.11
7	2009-10	0.11	0.10	0.11	0.10	0.13	0.12	0.11	0.10
8	2010-11	0.11	0.10	0.12	0.10	0.13	0.12	0.11	0.10
9	2011-12	0.11	0.10	0.10	0.10	0.13	0.12	0.11	0.10
10	2012-13	0.07	0.06	0.08	0.10	0.10	0.11	0.11	0.07
11	2013-14	0.06	0.04	0.08	0.10	0.10	0.11	0.06	0.04
Average		0.12	0.11	0.11	0.10	0.12	0.11	0.12	0.11
Standard Deviation		0.04	0.04	0.02	0.00	0.01	0.01	0.02	0.04
Coefficient of Variation		32.68	38.45	15.94	2.74	10.03	7.15	21.60	33.02
Increase over the period		-0.13	-0.15	-0.05	0.01	-0.03	0.01	-0.09	-0.13
Percentage increase		-68.65	-80.94	-38.95	7.43	-25.11	14.09	-60.71	-74.19
Growth Rate		-10.95	-15.28	-4.81	0.72	-2.85	1.33	-8.92	-12.67

Source: Department of Horticulture, Chikmagalur, Annual Reports

the production in Kadur taluk decreased drastically at -3.15 percent per annum followed by Koppa and Chikmagalur taluks at -9.60 and -6.38 per annum respectively.

According to Table 16, productivity was highest in Chikmagalur, N R Pura and Tharikere taluks at 0.12 lakh nuts/ hectare while in rest of the taluks it was 0.11 lakh nuts per hectare except in Mudigere taluk which had 0.10 lakh nuts per hectare. Like that,

the growth rate was highest in Sringeri taluk at 1.35 percent per annum followed by Mudigere taluk at 0.72 percent per annum. While in rest taluks growth rate was negative indicating that productivity in these taluks had decrease where the percentage of decrease in 2013-14 was maximum in Kadur (-80.94 percent), Chikmagalur (-68.65 percent) and Tharikere (-60.71 percent) taluks when compared to 2003-04. However, productivity was more consistent in Mudigere taluk followed by Sringeri taluk.

Table 17
Taluk-wise Area, Production and Productivity of coconut crop in Chikmagalur from 2003-04 to 2013-14:

Sl. No.	Years	Area (hectares)	% share	Production (Tons)	% share	Productivity (Tons/ hectare)
1	Chikmagalur	17816	4.99	2081	5.24	0.1228
2	Kadur	255891	71.73	28356	71.40	0.1141
3	Koppa	8916	2.50	1011	2.55	0.1107
4	Mudigere	1799	0.50	174	0.44	0.0967
5	N R Pura	4945	1.39	604	1.52	0.1220
6	Sringeri	6195	1.74	673	1.69	0.1090
7	Tharikere	61158	17.14	6816	17.16	0.1155
8	Total	356721	100.00	39715	100.00	0.1142

Source: Department of Horticulture, Chikmagalur, Annual Reports

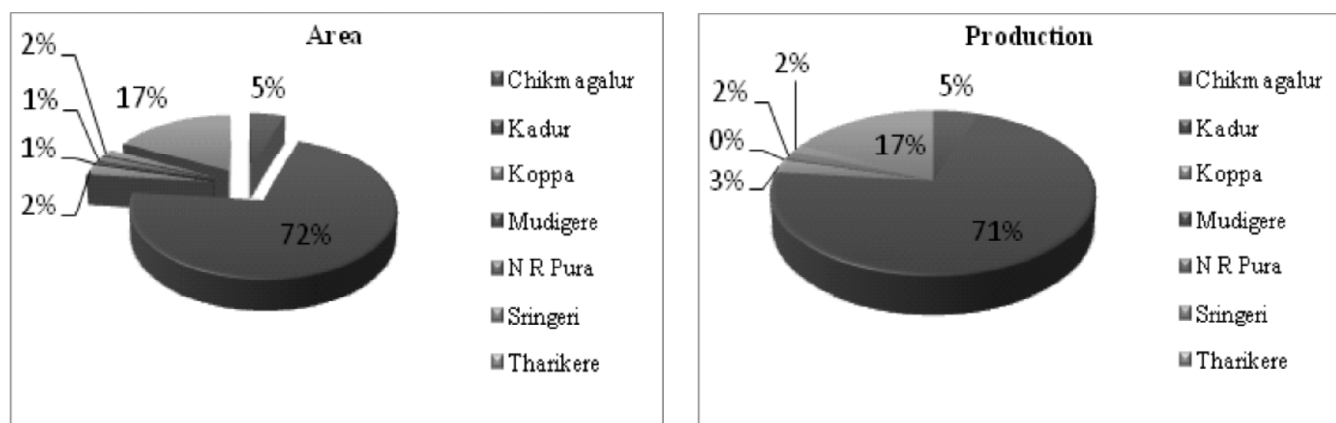


Figure 3: Taluk wise Area and Production under coconut crop in Chikmagalur district

Source: Table 17

Data in Table 17 and Figure 3 depicts that in Chikmagalur district under coconut cultivation, Kadur taluk occupied about 71.73 percent of land under coconut cultivation in the district and produced about 71.40 percent of total coconut production of the district. In other words, in Kadur taluk area under coconut cultivation is around 255891 hectares producing 283586 lakh nuts with yield at 0.11 lakh nuts per hectare. This taluk is followed by Tharikere taluk where 61158 hectares of area is under coconut cultivation and 6816 lakh nuts are produced. However, the area and production of coconut in Mudigere, N R Pura and Sringeri taluks is less than one percent which reveals that Kadur is the major coconut producing taluk in Chikmagalur district followed by Tharikere taluk.

Table 18 reveals that from 2014-15 up to 2019-20, in Karnataka, the average area, production and productivity of horticulture crops might be 2211898 hectares, 21163773 lakh tons and 10.20 tons lakh tons per hectare while in Chikmagalur district it might be 128406 hectares, 670856 lakh tons and 5.25 tons per hectares respectively. Like that the average area,

production and productivity of plantation crops might be 905376 hectares, 540705 lakh tons and 0.60 tons/ hectare in Karnataka and in Chikmagalur it might be 75762 hectares, 37021 lakh tons with 0.48 tons/ hectare respectively. Similarly, the average area, production and productivity under coconut cultivation might be around 516563 hectares, 72777 lakh tons and 0.14 lakh tons/ hectare while in Chikmagalur it might be 36775 hectares 225 lakh tons with very low productivity.

Table 19 reveals that from 2014-15 on an average in Chikmagalur district the area, production and productivity under major horticulture crops might be around 126230 hectares, 695439 tons and 5.56 tons per hectare respectively. In the district, Kadur taluk might cover vast area (38.82%) while Chikmagalur taluk might produce highest nuts (25.15%) having highest yield which might be around 73.54 percent more than the yield of the state. On the other hand, Yields in Chikmagalur taluk along with Tharikere and N R Pura taluks might be above the average yield of the state.

Table 18
Prediction regarding area, production and productivity of major horticulture, Plantation and coconut crops in Chikmagalur and Karnataka

Sl. No.	Years	Crop	Area (in hectares)		Production (in tons)			Productivity (tons/ hectare)			
			Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *	Chikmagalur	Karnataka	% *
1	2014-15	Horticulture	124810	2092642	5.89	639821	19033786	3.12	5.14	9.49	52.31
		Plantation	75513	870636	8.61	45789	518851	8.55	0.60	0.60	103.95
		Coconut	35797	504294	7.09	1388	71595	1.47	0.04	0.14	22.93
2	2015-16	Horticulture	126248	2140344	5.80	652235	19885781	2.94	5.18	9.79	50.38
		Plantation	75613	884532	8.46	42282	527593	7.60	0.55	0.60	96.48
		Coconut	36188	509202	7.10	923	72068	0.62	0.02	0.14	11.10
3	2016-17	Horticulture	127686	2188047	5.70	664649	20737776	2.76	5.23	10.09	48.44
		Plantation	75712	898428	8.30	38775	536335	6.64	0.51	0.60	89.02
		Coconut	36579	514109	7.11	457	72541	-0.24	0.01	0.14	-0.72
4	2017-18	Horticulture	129125	2235750	5.61	677063	21589771	2.59	5.28	10.39	46.50
		Plantation	75812	912324	8.14	35268	545076	5.68	0.46	0.60	81.55
		Coconut	36971	519016	7.12	-8	73014	-1.10	-0.01	0.14	-12.55
5	2018-19	Horticulture	130563	2283452	5.51	689477	22441766	2.41	5.32	10.69	44.56
		Plantation	75912	926220	7.99	31761	553818	4.72	0.41	0.60	74.08
		Coconut	37362	523923	7.13	-473	73487	-1.96	-0.02	0.14	-24.37
6	2019-20	Horticulture	132001	2331155	5.42	701890	23293761	2.06	5.37	10.99	40.68
		Plantation	76011	940116	7.83	28254	562559	3.76	0.36	0.60	66.62
		Coconut	37754	528831	7.14	-939	73960	-2.82	-0.04	0.14	-36.20
Average		Horticulture	128406	2211898	5.65	670856	21163773	2.65	5.25	10.24	47.15
		Plantation	75762	905376	8.22	37021	540705	6.16	0.48	0.60	85.28
		Coconut	36775	516563	7.11	225	72777	-0.67	0.00	0.14	-6.63

Source: Table 3, 4 & 5

Table 19
Predicted Taluk wise area, production and productivity under major horticulture crops (hectare) in Chikmagalur district

Sl. No.	Years	Particulars	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2014-15	Area	17146	49695	8980	7863	7023	6232	26358	123298
		Production	164490	132685	26901	37205	63409	14450	214990	654129
		Productivity	9.75	2.64	2.95	4.75	9.11	2.19	8.25	5.32
2	2015-16	Area	17669	49417	9030	7810	7214	6377	26954	124471
		Production	168651	136398	26074	34480	65842	13229	225978	670653
		Productivity	9.71	2.72	2.84	4.46	9.25	1.86	8.55	5.42
3	2016-17	Area	18191	49140	9079	7756	7405	6523	27550	125644
		Production	172812	140111	25248	31756	68275	12009	236966	687177
		Productivity	9.67	2.80	2.72	4.16	9.40	1.53	8.86	5.51
4	2017-18	Area	18713	48862	9128	7702	7597	6669	28146	126817
		Production	176973	143825	24421	29031	70708	10789	247953	703700
		Productivity	9.62	2.88	2.60	3.87	9.54	1.20	9.17	5.60
5	2018-19	Area	19236	48584	9177	7649	7788	6815	28742	127990
		Production	181134	147538	23594	26306	73141	9569	258941	720224
		Productivity	9.58	2.96	2.48	3.58	9.68	0.87	9.47	5.70
6	2019-20	Area	19758	48307	9227	7595	7979	6960	29337	129163
		Production	185295	151252	22768	23581	75574	8349	269929	736748
		Productivity	9.54	3.04	2.36	3.29	9.83	0.54	9.78	5.79
Average		Area	18452	49001	9104	7729	7501	6596	27848	126230
		Production	174893	141968	24834	30393	69491	11399	242459	695439
		Productivity	9.64	2.84	2.66	4.02	9.47	1.37	9.01	5.56

Source: Table 6, 7 & 8

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Table 20
Predicted Taluk wise area, production and productivity under Plantation crops (hectare) in Chikmagalur district

Sl. No.	Years	Particulars	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2014-15	Area	3352	40912	6298	2981	3656	3295	14601	75095
		Production	2052	25450	4123	3633	2938	3214	14914	56325
		Productivity	0.62	0.62	0.59	1.22	0.73	0.98	0.99	0.75
2	2015-16	Area	3448	40163	6383	3001	3814	3358	14929	75096
		Production	2142	24598	3713	3656	2882	3284	15565	55842
		Productivity	0.63	0.61	0.49	1.22	0.64	0.99	1.01	0.74
3	2016-17	Area	3544	39414	6468	3021	3973	3421	15256	75096
		Production	2232	23747	3303	3680	2826	3353	16217	55358
		Productivity	0.64	0.60	0.40	1.21	0.55	0.99	1.03	0.74
4	2017-18	Area	3639	38665	6553	3041	4131	3485	15583	75097
		Production	2321	22895	2893	3704	2770	3423	16868	54874
		Productivity	0.66	0.60	0.30	1.21	0.46	1.00	1.05	0.73
5	2018-19	Area	3735	37915	6638	3062	4290	3548	15911	75098
		Production	2411	22043	2484	3727	2714	3493	17519	54391
		Productivity	0.67	0.59	0.21	1.21	0.37	1.00	1.08	0.72
6	2019-20	Area	3831	37166	6723	3082	4448	3611	16238	75099
		Production	2500	21192	2074	3751	2658	3563	18170	53907
		Productivity	0.68	0.58	0.11	1.21	0.28	1.01	1.10	0.72
Average		Area	3591	39039	6510	3031	4052	3453	15420	75097
		Production	2276	23321	3098	3692	2798	3388	16542	55116
		Productivity	0.65	0.60	0.35	1.21	0.51	1.00	1.04	0.73

Source: Table 10, 11 & 12

The data in table 20 predicts that in Chikmagalur district the average area under plantation crops might be around 75097 producing about 55116 tons with productivity at 0.73 tons per hectare. In the district, Kadur taluk might top in area and production under plantation crops accounting at 51.99 and 42.31 percent

of the total area and production under plantation crops of the district respectively.

Predictions presented in Table 21 indicates that in Chikmagalur district, the average area under coconut cultivation might be around 39039 hectare producing about 1321 lakh nuts with productivity at

Table 21
Predicted Taluk wise area, production and productivity under coconut cultivation (hectare) in Chikmagalur district

Sl. No.	Years	Particulars	Chikmagalur	Kadur	Koppa	Mudigere	N R Pura	Sringeri	Tharikere	Total
1	2014-15	Area	2107	26863	547	143	423	503	6510	37095
		Production	138	1206	40	15	45	61	490	1994
		Productivity	0.05	0.04	0.08	0.10	0.11	0.12	0.08	0.05
2	2015-16	Area	2188	27463	503	139	418	493	6668	37873
		Production	129	977	32	14	43	61	468	1725
		Productivity	0.04	0.02	0.08	0.10	0.10	0.12	0.07	0.04
3	2016-17	Area	2269	28063	459	136	414	483	6827	38650
		Production	121	748	23	14	42	61	446	1455
		Productivity	0.03	0.01	0.07	0.10	0.10	0.12	0.07	0.03
4	2017-18	Area	2350	28663	415	132	409	473	6985	39428
		Production	112	520	14	14	40	61	425	1186
		Productivity	0.02	0.00	0.07	0.10	0.10	0.13	0.06	0.02
5	2018-19	Area	2431	29263	372	129	405	463	7143	40206
		Production	104	291	6	14	38	61	403	917
		Productivity	0.01	-0.01	0.06	0.10	0.10	0.13	0.05	0.01
6	2019-20	Area	2513	29863	328	125	400	453	7302	40983
		Production	95	62	-3	13	36	61	381	647
		Productivity	0.00	-0.03	0.06	0.10	0.09	0.13	0.05	-0.01
Average		Area	2310	28363	437	134	411	478	6906	39039
		Production	117	634	19	14	41	61	436	1321
		Productivity	0.03	0.01	0.07	0.10	0.10	0.13	0.06	0.02

Source: Table 14, 15 & 16

0.02 lakh nuts per hectare. Though Kadur taluk might occupy major area (72.65 %) under cultivation but, Tharikere taluk might produce highest coconut nuts (32.97) in the district.

CONCLUSION

With all the above findings it can be concluded that coconut cultivation which is one among the major horticulture crops is subjected to remarkable fluctuations not only in Karnataka state but also in Chikmagalur district of Karnataka state. Though the area under coconut cultivation is seen increasing year to years but the production of coconut is subjected to decreasing trend which reveals that the productivity of coconut is decreasing in Karnataka and also in Chikmagalur district which might be due to attack of diseases in Chikmagalur district or to over populated coconut plants per hectare, lack of irrigational facility, lack of technical knowledge about plant protection, deficiency in use of pesticides or insecticides, ect. With this respect if proper and effective trainings, information and facilities are provided from government bodies and other non government bodies there is no doubt the production of coconut can be increased not only by bringing more area under coconut cultivation but also by improving productivity of coconut.

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