

POSTER PRESENTATIONS

TRENDS IN COCONUT AREA AND PRODUCTION IN INDIA

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ABSTRACT

Between 1950-51 and 1980-81 though the area planted under coconut has been quite noticeable, the production growth rate has always lagged behind the planting rate, suggesting that productivity is declining. During the 1970s, the compound growth rate of coconut yield for Kerala was (-) 2.0 per cent/annum, while the corresponding rates for the other major producing states, namely Tamil Nadu and Karnataka were 1.0 per cent and 0.17 per cent respectively. Largely influenced by Kerala, the trend in all-India productivity for the period under reference was (-) 0.9 per cent/annum. We should plan for a growth rate of 7.0 per cent to bridge the supply gap.

INTRODUCTION

In India, Coconut is mainly grown in homestead gardens as a small holder's crop. Its cultivation is largely localized in the west coast region and to a small extent in the east coast. The crop is grown under a very wide range of soil conditions from littoral sand to clayey soils, strongly acidic peaty to alkaline calcareous soils, and ill-drained, low-lying marshes to well-drained hill slopes. The cultivation of coconut and related activities offer employment to about 10 million people in India. In the last two decades coconut situation in the country is far from satisfactory mainly because of socio-economic constraints. This paper aims to study the trends in coconut area, production and yield in the country in general and major coconut growing states in particular, during the sixties and seventies. The data on the area, production and yield used in this paper are the estimates of the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India.

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Trend in Coconut Area

As regards India, the area under coconut has been increasing during last three decades, from 622,000 ha in 1950-51 to 717,000 ha in 1960-61, 1,046,000 ha in 1970-71 and 1,082,000 ha in 1980-81. In other words, the coconut area expansion was at the rate of 1.15 per cent per annum during the fifties, 1.46 per cent during the sixties and 1.03 per cent during the seventies. The coefficient of variation (CV) in coconut area in India between 1960-61 and 1979-80 comes to 13.78 per cent and for the major coconut growing states notably Kerala, Karnataka and Tamil Nadu the same was 12.72 per cent, 17.32 per cent and 19.91 per cent respectively. At present, Kerala alone accounts for two-thirds of the total area under the crop. Karnataka and Tamil Nadu are other major states, the former accounting for nearly one-seventh and the latter around one-tenth of the country's coconut area (Table 1).

Table 1. State-wise distribution of Area and Production of Coconut during the Sixties and Seventies (per cent of India)

State	1960-61 to 1969-70		1970-71 to 1979-80	
	Area	Production	Area	Production
Andhra Pradesh	3.98	4.56	3.66	2.86
Assam	0.39	0.22	0.42	0.33
Karnataka	12.37	8.45	13.65	12.88
Kerala	68.30	67.64	65.54	60.72
Maharashtra	0.99	0.67	0.84	0.85
Orissa	0.92	0.75	1.20	0.88
Tamil Nadu	9.00	14.66	10.01	17.86
West Bengal	0.79	0.43	0.62	0.38
Andaman & Nicobar Islands	0.95	0.71	0.170	1.03
Lakshadweep	0.30	0.35	0.26	0.36
Other States	2.01	1.56	2.10	1.87

All-India Index Numbers of coconut area with triennium ending 1959-60 touched 157 points in 1980-81. The maximum expansion was noticed in the case of Assam (675 points), followed by Orissa (500 points), Andaman and Nicobar Islands (345 points), Tamil Nadu (219 points) and Karnataka (184 points). In the case of Kerala however, the Index Number rose to 157 points in the year 1974-75, then declined to 138 points in 1978-79 and further moved to 140 points in 1980-81.

District-wise estimated compound growth rates in area reveal that in the case of Kerala, barring Kozhikode district, in all other districts the growth was negative leading to (-) 1.33 per cent growth rate per annum for the state during 1970-71 to 1979-80. In the case of Tamil Nadu, four out of twelve major coconut growing districts, namely Thanjavoor, Tiruchirapalli, Ramanathapuram and Coimbatore, showed negative growth, while the remaining districts recorded positive growth in area. The growth rate for the state as a whole was 0.86 per cent per annum. Similarly, Karnataka registered a growth rate of 2.84 per cent with all the nine coconut growing districts having positive growth rates. The compound growth rate for India as a whole is found to be (-) 0.14 per cent per annum for the period under reference (Table 2).

Table 2. Estimated Compound Growth Rates of Area, Production and Yield of Coconut in different Districts of Coconut-growing States during 1970-71 to 1979-80 (% per annum)

	Area	Produc-	Yield		Area	Produc-	Yield
		tion				tion	
KERALA:	-1.3	- 3.4	- 2.0	Mandya	3.2	0.7	- 1.9
Trivandrum	-0.4	- 3.7	- 3.4	Mysore	4.7	-5.7	-10.0
Quilon	-2.4	- 6.9	- 4.6	Tumkur	2.4	12.8	10.1
Alleppey	-3.9	- 6.8	- 3.0	North Kanara	0.6	-3.0	- 3.6
Kottayam	-4.5	- 8.1	- 3.7	South Kanara	2.9	3.0	0.1
Idukki	-6.8	-17.2	-11.1	TAMIL NADU	1.0	2.5	1.4
Ernakulam	-0.7	- 2.3	- 1.5	Chengalpet	4.1	29.3	24.1
Trichur	-1.1	- 0.8	0.17	South Arcot	2.2	13.7	1.13
Palghat	-2.3	- 3.6	- 1.2	North Arcot	0.3	3.6	3.2
Malappuram	-1.0	- 1.1	- 0.03	Salem	4.7	8.2	3.3
Kozhikode	1.1	- 1.0	- 2.2	Dharmapuri	6.7	12.6	5.4
Cannanore	-1.0	- 0.2	0.7	Coimbatore	-0.1	-4.8	- 4.6
				Tiruchirapalli	-2.2	0.5	2.8
KARNATAKA	2.8	3.2	0.1	Thanjavoor	-5.1	0.07	5.5
Bangalore	4.8	2.2	- 2.4	Madurai	1.6	-2.4	- 4.0
Chickmagalur	1.9	-11.9	11.0	Ramanathapuram	-0.5	-0.2	- 6.2
Chitradurga	3.2	4.6	1.3	Tirunelveli	1.3	7.3	6.0
Hassan	2.1	2.2	0.09	Kanyakumari	2.7	6.2	3.4
				INDIA	-0.1	- 1.0	- 0.9

Trend in Coconut Production

The production of coconut in India increased from 3582 million nuts in 1950-51 to 4639 million nuts in 1960-61, and to 6075 million nuts in 1970-71. The record harvest of 6124 million nuts was observed in the year 1971-72; thereafter it declined to 5851 million nuts in 1973-74, and in the following year it increased to 6030 million nuts, but again continuously declined and reached the level of 5413 million nuts in 1977-78. The production picked up modestly to 5471 million nuts in 1978-79 and 5830 million nuts in 1979-80, and fell to 5677 million nuts in 1980-81. The coefficient of variation in coconut production in India between 1960-61 and 1979-80 comes to 9.42 per cent.

The average production of nuts in India for the fifties, sixties and seventies were of the order of 4157 million nuts, 5087 million nuts and 5840 million nuts, respectively. In other words, coconut production in the sixties was 22.4 per cent higher than that of the fifties and in the seventies, it was 14.8 per cent higher than that of the sixties. This shows that the production is increasing at decreasing rate even though the trend is not very stable.

All-India Index Numbers of coconut production with triennium ending 1959-60 rose to 133 points in 1971-72 and then moved downwards to 118 points in 1977-78, again increased to 127 points in 1979-80 but slid down to 124 points in the following year. While the index numbers in respect of Kerala and Andhra Pradesh were reduced to 93 and 55 points, respectively in 1980-81, the same were raised to significant levels in Karnataka (189), Tamil Nadu (265), Orissa (274), Assam (279), and Maharashtra (181).

The compound growth rates of coconut production during 1970-71 to 1979-80 were found to be negative in all the districts of Kerala leading to (-) 3.41 per cent growth per annum for the state as a whole. In the case of Tamil Nadu, only in three districts namely, Coimbatore, Madurai and Ramanathapuram, the growth rates were found to be negative and in the remaining districts these were positive resulting in a growth rate of 1.83 per cent per annum for the State. Similarly, in Karnataka in three out of nine coconut growing districts, namely Chikmagalur, Mysore and North Kanara the production growth rates were negative, while the state's growth

rate was 3.24 per cent per annum. The compound growth rate for coconut production in India for the period 1970-71 to 1979-80 comes to (-) 1.06 per cent per annum (Table 2).

Kerala accounts for nearly 53.3 per cent of the total production of coconut in the country, while Tamil Nadu and Karnataka account for nearly 20 per cent and 15.5 per cent respectively. These three southern States together constitute 89 per cent of total coconut production while accounting for the same 89 per cent of total coconut area in India.

Trend in Productivity

The average yield of nuts per ha in India was 5779 in 1950-51. The productivity averaged to 6366 nuts for the fifties, 5911 nuts for the sixties and 5411 nuts for the seventies. It reveals that the yield of coconut in India per unit area is of the decreasing order over these years and the decline comes to 7.1 per cent between fifties and sixties and 8.5 per cent between sixties and seventies. Between 1950-61 and 1980-81, the maximum yield of 7012 nuts/ha was observed in the year 1953-54, and the minimum yield of 5121 nuts/ha in the year 1977-78. So far as the major coconut producing states are concerned, the per hectare productivity for the 50s, 60s and 70s in the case of Kerala averaged to 6462, 5854, and 5013 nuts, respectively, whereas in the case of Karnataka it was 4410, 4039, and 5106 nuts, and for Tamil Nadu it was 7832, 9635, and 9657 nuts. Taking into consideration the 1980-81 figures, the average yields of Kerala and Karnataka are 13 per cent and 1.3 per cent lower, and of Tamil Nadu 86 per cent higher than the all-India average of 5246 nuts/ha.

The estimated compound growth rates for different districts in Kerala suggest that in all the districts excepting Cannanore and Trichur, the growth was negative and the State's growth rate during 1970-71 to 1979-80 was found to be (-)2.11 per cent per annum. In the case of Karnataka, in four districts namely, Mysore, Bangalore, North Kanara and Mandya the growth was negative and in the remaining districts under review it was positive, the State's growth being 0.17 per cent per annum. Similarly, in the case of Tamil Nadu, the productivity was found to be negative only in respect of Ramnathapuram, Coimbatore and Madurai districts and the State's

growth rate was 1.40 per cent per annum during the 70s. However, the compound growth rate in coconut productivity for the country as a whole was (-) 0.92 per cent per annum during the period under reference (Table 2).

Index Numbers for coconut productivity in India with base at triennium ending 1959-60 slid downwards and touched below 80 points during 1977-78 and 1978-79, and rose marginally to 84 points in 1979-80 but again fell to 81 points in 1980-81. In the case of Kerala it has come down to 66 points while Karnataka and Tamil Nadu recorded 103 points and 121 points in 1980-81.

The coefficient of variation in the productivity of coconut between 1960-61 and 1979-80 was 9.96 per cent for Kerala, 15.08 per cent for Karnataka and 11.17 per cent for Tamil Nadu, while the same was 5.98 per cent for India as a whole.

SUMMING UP

The demand for coconut in India has been estimated for 2000 A.D. by the National Commission on Agriculture as 13,585 million nuts. In order to achieve self-sufficiency in coconut, the country's production has to be raised by nearly 140 per cent from its present level within a period of twenty years. This suggests that India should plan for a growth rate of 7.0 per cent per annum to bridge the supply gap. Considering the technological potential available within the country, India can achieve the target by removing the socio-economic constraints and institutional bottlenecks.

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