

CEYLON'S PRODUCTION AND TRADE IN COCONUT CROPS—1

GENERAL

THE Coconut palm provides many essential items in the domestic economy of the peoples of the tropical belt. Particularly, throughout the South East Asian lands, Ceylon and the Philippines, the Coconut industry occupies a pre-eminent position both from the point of view of local self-sufficiency and as a major source of export income. The varying fortunes of the coconut industry have been a dominant factor in their economic progress and development. From time immemorial it has furnished them food and drink, shelter and clothing, weapons and utensils. Every part of the tree is utilised. To-day, copra and oil, which are the chief commercial products of the coconut palm figure prominently in international trade in fats, oils and oil seeds. Essential raw materials for innumerable industries are supplied by these and other varied products of the palm. Both the dried and fresh kernel of the nuts are used for food; the oil extracted from it for food, as well as in the manufacture of soap and in other industrial applications; the residue or cake for cattle food; the fibre of the husk for matting, ropes, and upholstery purposes; the leaf in weaving and the wood in building construction.

From the point of view of export earnings the coconut industry in Ceylon ranks third in importance. The first two places are assigned to the Tea and Rubber industries. This is correct when judged in terms of the export value of the products concerned. But in another sense, this method of evaluation presents a distorted picture and fails to bring out the real significance of the coconut industry in the island's economy. If the industry is considered with reference to—

- (a) the place it occupies in the rural economy,
- (b) in the numbers engaged in its various industries,
- (c) as the source of the largest group of export product, and
- (d) as providing an indispensable item,

it should be given precedence over all other agricultural industries in the island.

Nature and Scope of the Industry

In Ceylon the numerous uses of the coconut palm have given rise to over a dozen industries which produce articles of food and other manufactured goods for domestic and export markets. It is significant that the majority of these products are semi-finished and are not exported in a form ready for the final consumer, but form raw materials for other industries. The Coconut industry in Ceylon includes the three major industries of copra, oil production and desiccated coconut manufacture. To this may be added the poonac or coconut cake industry, which is a by-product of the oil mills. The remaining industries, which are not dependent on the kernel of the nut, form a large and varied group. They comprise the relatively smaller industries of coir bristle and mattress fibre, coir yarn, ropes, mats, and matting and coconut shell charcoal. There are also

several cottage industries which utilise the shell, yarn, fibre and leaf as raw materials. Finally there are the industries engaged in manufacture of vinegar and the alcoholic liquors, toddy and arrack, which are entirely for local consumption. These industries are distributed widely over the maritime areas of the island, particularly in the N.W. Province and the South-West region. Different areas specialise in one or more of these industries.

TABLE I
ESTIMATED TOTAL PRODUCTION OF NUTS IN CEYLON (1927-1951).
ANNUAL PRODUCTION IN AVERAGES FOR FOUR-YEAR PERIODS

Year	Average Population (Approx.)	Annual Local Consumption (1,000's)	% of Total production	Annual Exports as nuts (1,000's)	% of Total production	Annual Total production (1,000 nuts)
1927-1930	5,045,000	655,850	37.7	1,085,739	62.3	1,741,589
1931-1934	5,472,000	711,360	39.4	1,095,980	60.6	1,807,340
1935-1938	5,700,000	741,000	42.4	1,007,233	57.6	1,748,233
1939-1942	6,100,000	793,000	48.4	846,417	51.6	1,639,417
1943-1946	6,390,000	830,700	47.8	906,501	52.2	1,737,201
1947-1950	7,200,000	936,000	51.3	887,660	48.7	1,823,660
1951	7,743,000	1,006,590	44.6	1,249,864	43.4	2,256,454
	—	900,000*	42.3	—	47.7	2,149,864

*Estimate of local consumption based on family budget studies for 1950 plus 40 million nuts for local soap industries, etc.

Extent Under Cultivation and Nut Production

Ceylon is one of the world's leading producers of coconuts.

The extent under coconut cultivation in Ceylon is 1,075,000 acres and is the largest among the plantation crops. It forms 32 per cent. of the cultivated area, exceeding even that under paddy cultivation. Although the export earnings from Tea or Rubber exceed that of coconut products, the extent under their cultivation is considerably less. The average annual yield generally taken for coconut land in Ceylon is 1,800 nuts per acre and on an extent of 1,075,000 acres, the estimated yield for a year would be about 1,900 million nuts.

Table I below shows estimates of average annual production of coconuts between 1927 and 1951. The figures are grouped in four-yearly periods to average out in the effects of abnormal trade conditions and variations in climate. In order to convert the export figures of copra, oil and desiccated coconut to a common unit in terms of nuts, the following conversion factors are used:—

1 ton of oil...	...	...	...	...	8,125 nuts
1 ton of copra	...	...	...	...	5,000 nuts
1 ton of D.C.	...	...	...	...	6,900 nuts

Local consumption is estimated at 130 nuts for each person per annum.

According to the table, the total average annual production of nuts amounting to 1,823 million for 1947-50 is the highest recorded and exceeds the previous peak for the period 1931-34. It should be noted, however, that the increase in total production is due to the large estimates given under the group "local consumption," which has also for the first time exceeded the nut equivalent of all exports of coconut products. On the other hand the nut equivalent of exports in 1947-50 of coconut products is considerably lower than the nut exports for the peak period 1931-34. If we consider the last year 1951 only, which was a very favourable year, the nut equivalent of exports is the highest recorded, showing an increase of nearly 154 million nuts on the 1931/34 exports.

Domestic Consumption

The local consumption of fresh nuts and oil for food is estimated to account for nearly half the annual production. At a consumption rate of 130 nuts each person a year, over a 1,000 million nuts were consumed locally in 1951. The number continues to increase yearly at about 10 million nuts with the growth in population. In 1951 at the prevailing producers' price of fresh nuts, the volume consumed locally in the form of nuts and oil was worth about Rs. 166 million. The industrial utilisation of coconut oil in Ceylon is confined almost entirely to the soap manufacturing industries. In 1948 the equivalent of about 27 million nuts were required for soap manufacture and this number has tended to increase. The island's entire requirements of laundry and toilet soap are now produced locally and it is worth exploring the possibilities for Ceylon soap in the neighbouring lands of India, Pakistan and Burma.

The figures of local consumption given in Table I are merely estimates and show wide variation according to the methods used. Although a consumption rate of 130 nuts per person has been used throughout the calculations, the actual domestic consumption has been appreciably less, during the last five years on account of the high retail price of fresh nuts. Exports have to some extent increased at the expense of domestic consumption. It has been reasonably estimated that local consumption increases annually at the rate of 10 million nuts or nut equivalent. It will also be seen from Table I that the increase for the groups of four-year periods between 1927 and 1950 under "local consumption" averages 58 million nuts. Hence, local consumption for 1947/50 may be calculated as follows :—

Estimated local consumption for 1943-1946...	...	...	...	830,700,000
Estimated increase for four-year interval	...	...	...	50,000,000
				880,000,000
Estimated local consumption for 1947-1950	...	...	...	880,000,000

This estimate does not take into account the increasing industrial utilisation locally of coconut oil in soap manufacture, etc.

It is also possible to arrive at a closer estimate on the basis of the 1946 census of population. The figures for "local consumption" for 1947 to 1950 in the table have been worked out on these population statistics. The very sharp increase between the 1943/46 and 1947/50 figures in the table is thus accounted for by the large population increase in the latter group. The population figures for the years prior to the 1947/50 group were merely estimates, whereas, after 1947 accurate figures were available from the census of population. According to the population figures returned for 1947/50 there appears an increase of over 800,000 persons on the previous group, although the increase between the previous four-year groups rarely exceed four lakhs.

A more reliable estimate of domestic consumption of coconut has been obtained through family budget studies in 1950 by the Department of Census and Statistics. According to this survey the 1951 consumption of fresh nuts is estimated at 632,500,000 nuts and the volume of coconut oil utilised for household consumption put at 29,136 tons.

Together they give a total consumption figure in terms of nuts of 859 million. If we include a further 40 million nuts for local soap production we get a final consumption figure of 900 million nuts for 1951 which may be considered a reasonable estimate. On the other hand the estimate of 1,006 million nuts arrived at on the basis of population figures only, may be regarded as erring slightly on the high side.

Export of Coconut Products from Ceylon During 1951 and 1952

Values.—The year 1951 was a very successful year for coconut exports. In spite of falling prices towards end of the year, the value of all coconut products exported from Ceylon reached an all time record of Rs. 372.5 million. Coconut products accounted for over 20 per cent. of the value of all exports as against 13 per cent. in 1938. The past year may be regarded as the peak period in post-war boom that has swept over the industry. The prices of coconut products have shown a sharp drop during 1952. The value of all coconut exports for the first six months of 1952 (January/June) amounted to Rs. 137.6 million as compared with Rs. 180.2 million for a similar period in 1951.

Table II below shows the value of the island's chief exports of coconut products compared with that of all exports.

TABLE II

VALUE OF CEYLON EXPORTS OF COCONUT PRODUCTS COMPARED WITH TOTAL EXPORTS IN THOUSANDS RUPEES

Year	Total Value of all Exports (Domestic) Rs.	Value of Copra Rs.	Value of Oil Rs.	Value of D.C. Rs.	Value of Fresh Nuts Rs.	Value of 4 main Coconut Products Rs.	Total of Coconut Product Rs.
1938	263,535	8,783	14,057	4,399	635	27,874	34,549
Average 1934 to 1938	257,876	9,687	13,635	5,933	778	30,033	36,341
1949	1,004,830	21,567	121,327	25,000	4,584	172,978	190,390
1950	1,494,337	25,435	127,374	95,238	4,051	252,098	281,007
1951	1,822,947	27,059	221,061	65,687	3,020	322,827	372,527
1952 (January-June)	775,513	19,295	72,742	31,248	1,460	124,745	137,553

Coconut Oil

The value of coconut oil, copra and D.C. exported accounted for 85 per cent. of the value of all coconut products during 1951. Coconut oil was by far the most outstanding product. Exports of coconut oil increased by 45 per cent. over the 1950 figures to 109,800 tons. This is the largest

on record. The U.K. took 30,000 tons, or nearly 27 per cent. of the total exports as against only 200 tons in 1950. For the half year period, January/June, 1952, exports amounted to 54,160 tons. Among the coconut growing lands Ceylon is now the world's largest exporter of coconut oil.

Desiccated Coconut

Total exports of desiccated coconut declined by about 12 per cent. to 39,770 tons in 1951 as compared with the previous year. The value realised however dropped by as much as 31 per cent. to Rs. 66 million. Desiccated coconuts is a luxury product and the rapid expansion of this industry during past two years, both in the Philippines and Ceylon, has led to over-production and a fall in prices.

Exports for January/June, 1952, amounted to 25,427 tons as compared with 17,211 tons for the same period in 1951.

Copra

Copra exports have decreased to less than a third of the pre-war shipments, and during 1951 amounted to 19,346 tons which is only 27 per cent. of the annual average exports for 1934 to 1938. The increase in crushing capacity continues to reduce the volume of copra available for export. Moreover the Government of Ceylon has adopted a deliberate policy of encouraging the export of oil rather than copra by a system of variable rates of duties on coconut products which discriminates in favour of oil. Exports for the period January/June, 1952, however, have already exceeded the entire exports for 1951 and amounted to 22,488 tons.

Fresh Nuts

As compared with the previous year, the export of fresh nuts in 1951 also dropped by 23 per cent. to only 6.6 million nuts. The U.K. took 74 per cent. of the total shipments. The export of fresh nuts is subject to control, so as to conserve sufficient supplies of fresh nuts for local consumption at a reasonable price.

The Tables III (a and b) below show Ceylon's exports of copra, oil and desiccated coconut in tons and in terms of nuts.

TABLE III (a)

CEYLON'S EXPORT OF COCONUT OIL, COPRA AND D.C. IN TONS AND IN TERMS OF NUTS

Period	Coconut Oil Tons	Copra Tons	Desiccated Coconut Tons	Fresh Nuts Numbers (000)
Average 1935-38	58,045	61,642	30,609	16,205
„ 1939-42	36,423	88,272	14,700	7,694
„ 1943-46	42,781	100,281	5,320	20,792
„ 1947-50	70,862	31,722	20,959	8,679
1950	75,717	21,117	44,909	8,632
1951	109,782	19,346	39,770	6,621
1952 (January-June only)	54,160	22,488	25,427	3,181

TABLE III (b)
IN TERMS OF NUTS (1,000/s)

Period	Coconut Oil	Copra	Desiccated Coconut	Fresh nuts Numbers	Total
Average 1935-38	47,618	308,210	211,200	16,205	1,007,233
" 1939-42	295,937	441,360	101,430	7,694	846,420
" 1943-46	347,596	501,405	36,708	20,792	906,500
" 1947-50	575,753	158,610	144,617	8,679	887,660
1950	615,200	105,585	309,872	8,632	1,039,290
1951	891,979	96,730	234,534	6,621	1,249,865
1952 (January-June only)	440,050	112,440	175,446	3,181	731,118

A study of Table III (b) shows significant changes in the number of nuts diverted to the three main branches of the coconut industry. In 1951 the nut equivalent of our coconut oil exports showed an increase of 88 per cent. as compared with the annual average for pre-war period 1935 to 1938. In desiccated coconut exports the increase is 20 per cent whereas copra exports in terms of nuts have dwindled to only 31 per cent. of the 1935/38 exports. The large increase in oil exports rather than the copra is the result of the establishment of a number of new coconut oil mills and an increase in the productive capacity of others and also the increased facilities now available for bulk shipments of oil. Similarly the sharp rise in desiccated coconut exports has fostered an increase in the number of new D.C. Mills and the milling capacity of others. These mills operated very profitably when prices were favourable but are now facing a period of low prices and over-production.

Exports of Copra and Oil in Terms of Oil Content

Although during the post-war years there has been an increase in the nut equivalent of oil, copra and D.C. exports there were no remarkable increase until 1951 in the oil equivalent of copra and oil exports from Ceylon. During 1951 the exports of copra and oil in terms of oil reached the record total of 121,970 tons and although only slightly less than the peak exports for 1938 showed an increase of 27% on the annual average for 1935/38. Desiccated coconut is not the source of any coconut oil but is entirely a finished product for the grocery and confectionery industries. It is therefore excluded from this analysis. Copra has an average commercial extraction rate of 63 per cent. of oil.

The Table IV below indicates this significant trend. Briefly it shows that until 1951 the drop in copra exports has merely been counter-balanced by an almost proportionate increase in oil exports.

TABLE IV

**EXPORTS OF COPRA AND COCONUT OIL FROM CEYLON IN TERMS OF OIL
CONTENT (TONS)**

Period						Copra in terms of Oil	Coconut Oil Tons	Total as Oil
1938	...	...	...	...	...	47,366	75,396	122,550
Average 1935-38	...	...	...	...	...	38,834	58,045	96,879
" 1939-42	...	...	...	...	...	55,611	36,423	92,034
" 1943-46	...	...	...	...	...	63,177	42,781	105,958
" 1947-50	...	...	...	...	...	19,985	70,862	90,847
1950	...	...	...	...	...	13,304	75,717	89,021
1951	...	...	...	...	...	12,188	109,782	121,970
1952 (January-June only)	...	...	...	...	...	14,167	54,160	68,327

It is paradoxical that despite a post-war world shortage of fats and oils Ceylon's exports of coconut products in terms of oil content showed only a slight increase until 1951. A study of the yearly export figures in terms of their oil equivalent indicates that it was only in 1951 that the 1938 volume of exports was almost reached. The increase in exports of coconut products during the recent post-war years was instead confined to desiccated coconut, which is essentially a luxury product and does not ease the fats and oils problem.

The total supply of coconuts, unlike seasonal crops, is relatively inelastic showing only a gradual variation from year to year. There cannot take place a sudden increase in output merely on account of high prices. The palm takes from seven to ten years to come into bearing and the annual output of nuts varies with weather conditions. It has even been found that weather conditions affecting the coconut industry are in the nature of a cycle. Favourable periods being followed by lean years, when nut yields are low. Moreover, as new plantations come into bearing, the output of nuts from other old ones dwindles and allow for only a limited increase or decrease yearly. Hence, a sharp rise in the number of nuts diverted to export purposes is only possible at the expense of home consumption nuts, which quantity is also relatively inelastic. Coconuts are an essential item in the food of the local population and local demand cannot show wide variations. A reasonable amount of nuts, at present nearly 50 per cent. of the total supply, will always be consumed locally, whatever the price. There are no substitutes.

On the other hand the proportion in exports of copra, oil and D.C. show variation from year to year, and may be considered to be relatively elastic. The nut equivalent diverted for export to each of these groups varies according to prices realised. For instance during 1951, the high prices fetched for D.C. led to a sharp rise in exports whereas copra export dwindled on account of low prices and adverse export duties.

Recent Price Trends of the Chief Coconut Products

Very favourable trade conditions and high prices for all out coconut products were significant features during the last two years. The prices fetched were the highest recorded and the peak period in Ceylon was between February and April, 1951. The increase in prices was caused by

the stock-piling of oils and fats as war reserves consequent on the Korean war. Other factors were the large-scale buying by manufacturers, wholesalers and retailers who were not able to procure sufficient quantities of products such as desiccated coconut, coir fibre and yarn during the immediate post-war period. With the relaxation in controls the accumulated demand for these products spent itself in large scale buying which forced up prices. The general increase all in raw material prices on account of stock-piling and feverish demand by several competing buyers has also affected all coconut products. These forces have now partly spent themselves. Sellers' markets have fast been satisfied and during 1952 there has been a severe recession in the prices of all raw materials. In general the coconut industry is now passing through a lean period. Although export prices have fallen, the increased costs of production have not shown a decrease. On the contrary and the tendency has been for cost of production of such items as wages, machinery and other equipment required for the industry to continue increasing or remain static, rather than drop. The prevailing world market prices of oil and copra are less than half the peak prices obtained during March, 1951.

A comparison of recent prices with those ruling during the pre-war years shows the tremendous inflation that has taken place in the values of coconut products during the last fifteen years. This may be measured by the fact that the value of exports per 1,000 nuts (nut equivalent of copra, oil, D.C. and fresh nuts only) has increased from Rs. 31.20 during the period 1934-38 to Rs. 258.29 in 1951.

Table V below shows the f.o.b. values and market prices for the chief coconut products for the pre-war period and some recent years.

TABLE V
F.O.B. AND MARKET PRICES OF COCONUT PRODUCTS

Year	F.O.B. Values				Colombo Market Prices			
	Copra Cwt. Rs. C.	Oil Cwt. Rs. C.	D.C. Cwt. Rs. C.	Fresh nuts each Rs. C.	Copra Cwt. Rs. C.	Oil Cwt. Rs. C.	D.C. Cwt. Rs. C.	Fresh nuts each R. C.
Average 1934-38	7.36	11.29	9.58	0.04	7.32	11.71	10.08	0.04
1938 ...	5.84	9.32	7.41	0.04	5.55	9.21	6.72	0.03
1948 ...	38.73	53.50	106.75	0.20	26.98	51.12	73.92	0.14
1949 ...	49.98	68.02	81.72	0.36	30.00	51.09	57.12	0.15
1950 ...	60.23	84.11	106.03	0.47	40.99	70.60	92.96	0.19
1951 ...	69.93	103.41	82.58	0.46	48.95	81.18	68.32	0.21
1952 ...	42.90	67.15	61.45	0.46	29.37	46.38	47.04	0.16
January to June :								
June ...	37.92	56.10	50.14	0.43	28.19	43.44	40.32	0.15