

# An Analysis of World coconut Situation

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## Summary

Present production of coconuts in the world is around 51,000 million nuts or 9.8 million tons in terms of copra. Coconut production has increased by over 50 per cent during the past two decades. Indonesia is now the largest producer of coconuts in the world, followed by India relegating Philippines to the third position. Over 50 per cent of the coconuts produced in the world is converted to copra and about 25 to 30 per cent of the total quantity of copra so produced enter the export market, either in the form of copra or coconut oil. Share of copra in the total export of copra and coconut oil has been showing a declining trend over the years. Philippines and Indonesia are the major exporters of coconut oil and oil cake. Though India is the third largest producer of coconuts in the world, the entire quantity produced is consumed locally and its role in external trade is limited to exports of coir and coir products only. Prices of coconut products in the early 90s remained more or less at the same level as in early 70s, though in early 80s prices have shot up considerably. Coconut oil prices move in sympathy with that of other major vegetable oils, but year to year fluctuations have been more violent in the case of the former. Domestic prices of coconut oil in India are found to be almost four times higher than at the major producing countries like Indonesia and Philippines. In view of

the abundant supply of palm oil, at a comparatively lower price, it is feared that coconut oil prices may not show steady increase in the years to come.

## Introduction

The coconut is a lavish gift of nature to mankind. It provides not only food, but also shelter, medicine, fuel and cash to millions of people in the tropics. In most of the producing countries, it is a small holders' crop. The importance of coconuts to the rural economy of these countries is both as the provider of basic subsistence foods as well as the output of a number of non-edible products. The nuts are either consumed fresh in a wide variety of ways, or processed to yield desiccated coconut, or dried to produce copra which, after crushing yields coconut oil and oil cake. Coconut husks and shells, have a significant value, as they yield coir and other by-products, such as charcoal. In this paper; an attempt has been made to analyse the trends in production, trade and prices of coconuts and coconut products in the major coconut producing countries in the world. Data for this study were obtained from the publications of Asian & Pacific Coconut Community, Jakarta and Food and Agricultural Organisation, Rome.

## I. Production and Productivity

The coconuts are currently grown in about 90 countries, spread over Asia, Pacific, Africa and America. Ninety per cent of

the world coconut production comes from the tropical belt. During 1994, world production of coconut was estimated to be 51,281 million nuts from 10.9 million ha. Philippines, Indonesia and India are the major producers of coconuts in the world and together they account for over 70 per cent of the total world production. Other important coconut growing countries are Sri Lanka, Mexico, Vietnam, Thailand, Brazil and Ivory Coast. For the past many decades, Philippines was the largest producer of coconuts in the world. But, since 1991, Indonesia has attained the first position relegating Philippines to the second position. According to figures available from 1993, production of coconuts in India is marginally ahead of that of Philippines thus pushing the latter to the third position. Latest official statistics show that production of coconuts in Indonesia was 13157 million nuts (year: 1994) compared to 12355 million nuts produced by India and 11207 million nuts produced by Philippines. World production of coconuts has increased by 130 per cent during the past four decades and by 50 per cent during the past two decades.

The coconut industry is one of the pillars in the economy of Philippines and the area devoted to coconuts is second only to that used for rice. Roughly one third of the country's population is dependent directly or indirectly on the coconut industry. The crop is now cultivated in over 3.1 mil-

lion ha and production is estimated to be 11,207 million nuts. Coconut production in the Philippines is very often affected by adverse weather conditions, such as droughts and typhoons, which result in supply constraint. The country's coconut production has been showing a rising trend till 1981 when the production figures touched an alltime high of over 16,000 million nuts, which was more than double that of 1971 production figures. Since then (1981) it has been showing a declining trend, except for some marginal increase in production observed during 1986 and 1987.

The spread of cadang cadang disease, increased number of senile palms, inadequate fertilization, etc. are some of the reasons for the declining trend in production. Since area under the crop has not gone up in the recent past, it is doubtful whether the country can regain the lost glory in the near future.

In Indonesia also coconut cultivation plays an important role in the economic and social life of the country, with the status next only to rice. In 1994, total production was 13,157 million nuts from 3.7 million ha. The area under the crop has been showing a steady rising trend in the past accompanied by a steady increase in production. During the last two decades (1974 to 1994), area under the crop has increased by 80 per cent, and production has almost doubled. The steady increase in area and production is the result of several coconut development programmes initiated by the Government during this period.

In India coconut possesses a documented history of nearly 3000 years. The crop is extensively grown in the western and eastern coasts and has a profound influence on the economy of many southern states. During 1994, the crop was being culti-

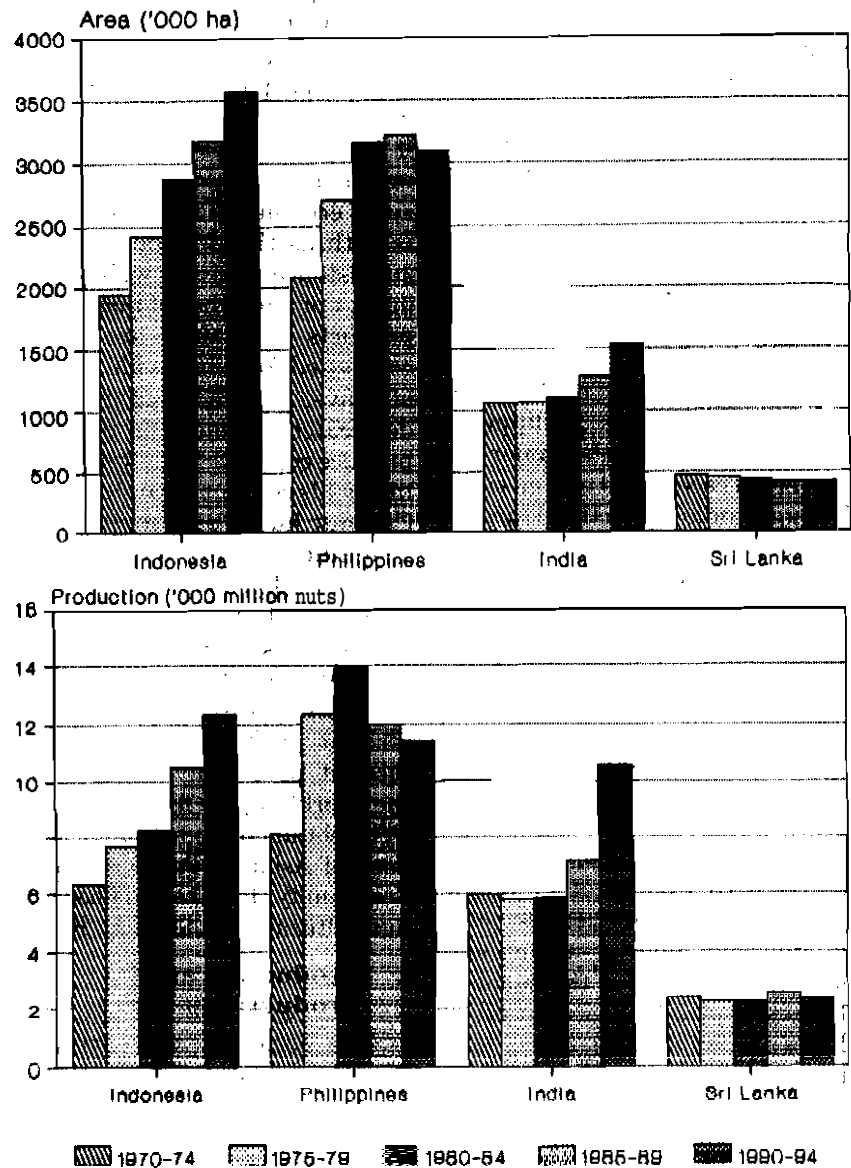
ated in over 1.6 million ha, and has produced nearly 10.5 million nuts. Production has more than doubled during the last two decades, though area has gone up by less than 50 per cent only. Most of the area expansion has taken place during the past few years only, and the increase in production has also been spectacular during this period. If this tempo can be maintained, probably the country can expect to occupy a prime position in the world, by the turn of the century.

in Sri Lanka too, coconut industry occupies a pre-eminent

position in the economy of the country, and ranks second after rice, in land utilization. At present the crop is grown in over four lakh ha and produces over 2600 million nuts. The area under the crop has remained generally static during the past many decades, due to limitation of land available for expansion of cultivation. The fluctuation in coconut production is mainly determined by weather conditions and adoption of cultural practices.

Trends in area and production of coconuts during 1970 to 1994

Fig.1. Trends in Area and Production of Coconuts (1970-94)



in the above major producing countries can be seen in Fig. I.

The nuts produced in different countries vary in size; so a comparison of production figures based on "number of nuts" may not always be appropriate or realistic. Therefore international agencies try to compare the production in different countries on the basis of "copra equivalent". In Indonesia and Philippines, over **5000** nuts are required to produce one ton of copra. Compared to this in Thailand only **3333** nuts are required to produce one ton of copra whereas in India it is **6700** nuts. In other words, about **300** gms of copra is obtained from one nut in Thailand, around **200** gms in Indonesia, Philippines and Sri Lanka and **150** gms in India. During **1994**, production of coconuts in terms of "copra equivalent" was **26** lakh tons in Indonesia, **23** lakh tons in Philippines and **18** lakh tons in India, when the world total was **98** lakh tons (*Table 1*). When production figures are compared on this basis, **Indonesia** can be said to have overtaken Philippines in 1988 itself and India is still in the third position.

However, when we look at the per hectare yield, India is ahead of Indonesia and Philippines. When India produces about **7570** nuts per hectare of land under coconut, it is around **3500** to **3700** nuts only in both Indonesia and Philippines and in countries like **Malaysia**, Thailand and Papua New Guinea it is below **3000** nuts only. In Sri Lanka, over **6000** nuts were being obtained from one ha. of coconut garden. When the productivity in different countries is compared on the basis of "copra equivalent", then also India has a prime position with **1130** kg./ha, though the productivity in Sri Lanka was **1270**kg/ha.

**Table 1. Area, Production and Productivity of Coconuts in Major Producing Countries (1994)**

Country	Area under coconuts (000 ha)	Total production		Yield per ha		No. of nuts/ton of copra
		in million nuts	in copra equivalent (000 tons)	nuts/ha	copra kg/ha.	
Indonesia	3693	13157	2631	3563	712	5000
Philippines	3099	11207	2286	3616	738	4900
India	1632	12355	1844	7570	1130	6700
Sri Lanka	419	2628	532	6272	1270	4940
Thailand	397	1849	555	4657	1398	3333
Mexico	152	1238	248	8145	1632	5000
Vietnam	186	978	195	5258	1048	5000
Brazil	NA	1098	220	NA	NA	5000
Ivory Coast	48	266	53	5542	1104	5018
Others	1475	6505	1276	4410	865	5100
World total	11101	51281	9840	4619	886	5210

Source for basic data: "APCC Coconut Statistical Yearbook 1994".

In both Philippines and **Indonesia**, it is around **700** kg. In contrast to this, Mexico, in North Central America, which produced **1238** million nuts (**2.48** lakh tons in copra equivalent) from **1.52** lakh ha, recorded the highest productivity of **8,145** nuts/ha or **1632** kg/ha in terms of copra.

Mean world production of copra during **1990** to **94** was nearly **49** lakh tons. This means that about **50** per cent of total coconut production is converted to copra. Depending upon the consumption pattern, this ratio varies from country to country. Unlike in other coconut producing countries, the consumption of coconuts in Philippines is relatively low. Nearly **93** per cent of the total produce is converted to copra. In Indonesia, it is around **50** per cent, while in India it is as low as **32** per cent. In countries like Vietnam and Papua New Guinea, **70** to **80** per cent of the crop is converted to copra. Share of Philippines in world production of copra is about **42** per cent (**20** lakh tons) while Indonesia

contributed **25** per cent and India's share is around **10** per cent only (*Table II*). World production of copra has shown an increase of over **30** per cent during the past two decades.

Total vegetable oil production in the world is around **623** lakh tons and in this soybean oil has a share of **29** per cent and palm oil **22** per cent. Other vegetable oils of importance in the world scenario are sunflower oil and rapeseed oil. Annual coconut oil production in the world is around **3.0** million tons (*Table III*). This is about **5** per cent of the total production of vegetable oils in the world. About **40** per cent of this comes from Philippines and **22** per cent is from Indonesia, while India's share is about **10** per cent. The remaining comes from other countries, important among them being Vietnam, Sri Lanka, Thailand and Malaysia. Coconut oil production in the world has shown a growth of about **10** per cent only during the past one decade.

World production of oil cake,

**Table II. World Production, Consumption and Trade in Coconut Products (mean of 1990 to 1994)**

Commodity	Total production and major producers	Total consumption and major consumers	Total exports and major exporters	Total imports and major importers
Copra	4872 Philippines (41.7) Indonesia (25.3)  India (10.3)	Not generally consumed in the raw form	255 Philippines (20.6) Papua New Guinea (19.9) Malaysia (12.0)	250 Germany (23.8) Kor. Repub. (16.3) Japan (13.9)
Coconut Oil	3028 Philippines (40.9) Indonesia (22.4) India (10.4)	3034 Indonesia (16.1) U.S.A. (14.6) India (9.3)	1494 Philippines (63.2) Indonesia (18.7) Malaysia (3.9)	1467 U.S.A. (30.6) W.Germany (11.1) Netherlands (9.7)
Oil cake	1766 Philippines (37.2) Indonesia (24.5) India (9.3)	1812 Germany (14.6) Netherlands (13.5) India (8.8)	1122.8 Philippines (51.3) Indonesia (34.9) Netherlands (2.9)	1080 Netherlands (26.7) Germany (24.9) Belgium (13.0)
Desiccated Coconut	152 Philippines (57.2) Sri Lanka (32.6) Malaysia (15.6)	152 U.S.A. (24.1) U.K. (12.0) Netherlands (7.8)	213 Philippines (89.3) Sri Lanka (22.2) Malaysia (11.8)	185 U.S.A. (19.3) U.K. (10.2) Netherlands (8.6)

Note: Compiled from "APCC Coconut Statistical Yearbook 1994"

Production/consumption/exports/imports total figures are in '000 m.tons.

Figures in parenthesis denote the percentage share of each country in total production/consumption/exports/imports

the solids remaining after oil has been extracted from copra, is estimated to be 18 lakh tons. As in the case of coconut oil, sizeable portion of it (37 per cent) comes from Philippines, 25 per cent from Indonesia and 9 per cent from India. Reliable estimates regarding the production of desiccated coconut, (dried coconut meat, prepared for food uses), coir fibre (extracted from the husk of the coconut) etc. are not available. However, it has been roughly estimated that production of desiccated coconut in the world is around 1.5 lakh tons,

and more than half of this is coming from Philippines, and nearly one third comes from Sri Lanka. Other producer countries are Malaysia and Indonesia. India is yet to make its presence felt among the countries producing desiccated coconuts. Among the industrial hard fibres, coir has a prominent position. Production from India is over 2 lakh tons and about one lakh ton comes from Sri Lanka. Countries like Thailand, Indonesia and Philippines are also producing coir fibres in modest quantities.

## II. Trade and Consumption

After meeting the domestic requirements, a number of coconut products enter the international market. Important among them are copra, coconut oil, oil cake, desiccated coconut, coir fibre products and shell products. Besides these, fresh coconuts, coconut cream and powder and coconut sugar also appear in the export market. It may be interesting to note here that in some of the smaller producing countries in the world, like Western Samoa and Vanuatu, export of coconut products account for a sizeable portion of the total export earnings of these countries.

In Western Samoa, the major item of export was coconut cream. More than half the total export earnings of the country came from coconut products during 1989 and 1990, but in the subsequent years this has been showing a declining trend. In Vanuatu, all these export earn-

**Table III. Price fluctuations of major vegetable oil in world market (US \$/MT)**

Vegetable oils	Average price during the quinquennium				
	1970-74	1975-79	1980-84	1985-89	1990-94
Coconut oil	499	611	719	482	481
Soybean oil	420	569	561	475	485
Palm oil	359	524	566	378	386
Sunflower oil	498	677	625	457	518

ings came from copra. In Philippines and Solomon Islands, over 5 per cent of the total export earnings came from coconut product, while for Sri Lanka it was 3 per cent. For Indonesia and India, the share of coconut products was less than one per cent only in the total export earnings.

The total quantity of copra exported from different countries during the period 1990 to 94 was 2.6 lakh tons compared to 14.9 lakh tons of coconut oil for the same period. In terms of copra, the total export amounts to 26.0 lakh tons and copra exports forming only 11 per cent of the total exports. Compared to this, three decades ago, the total exports of copra and coconut oil, in terms of copra equivalent, was only 21 lakh tonnes, with about 75 per cent share for copra (Fig. 2). The total quantity of copra and coconut oil exported has shown an increase of about 25 per cent during the past three decades, but this increase has mostly taken place during the recent past. In normal years of production, about 50 per cent of the total quantity of copra produced in the world enter the export market, either in the form of copra or coconut oil. But in years of

low production, this comes down to about 26 per cent. Share of copra in the total exports, has been steadily coming down over the years, because in many of the producing countries, processing facilities has been established for copra crushing and for making desiccated coconuts and the stress was therefore shifted to exports of processed materials.

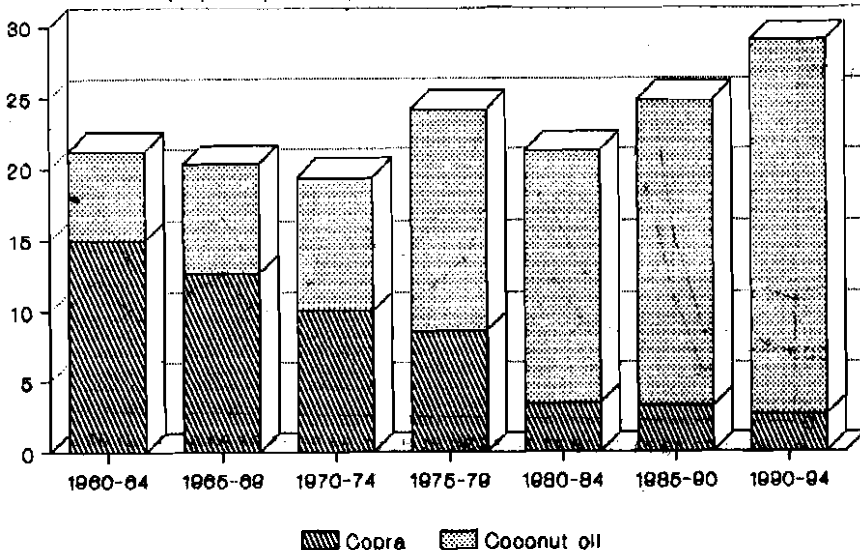
Present average annual consumption of coconut oil in the world is around 30 lakh tons. Though Philippines has got 41 per cent share in total production of oil, its share in consumption is only 9.0 per cent. Nearly 22 per cent of the total oil produced is coming from Indonesia, and its share in consumption is 16.0 per cent. India's share in total production and consumption is around 10 per cent only. Over 50 per cent of the coconut oil produced is consumed in the producing countries itself and balance only appear in the export market. Total quantity exported is 14.9 lakh tons. Since consumption of oil in Philippines is low, it accounts for the lion share (63 per cent) in the total exports. Other major exporters are Indonesia and Malaysia with 18.7 and 3.9 per cent share, re-

spectively. Major importers of coconut oil are U.S.A., Germany and Netherlands and together they account for nearly 54 per cent of the total imports. The coconut oil lends itself for a number of applications. In the producer countries it is widely used for culinary purposes and to some extent for toiletry preparations. In the importing countries it finds use in the industrial sector, for the manufacture of soap, detergents and dairy fat substitutes. Though India is the third largest producer of coconut oil, the entire quantity is consumed within the country itself, and exports are negligible.

Oil cake contains proteins, carbohydrates, fibre, fats etc. and is often used as an ingredient in animal feeds. As in the case of coconut oil, exports of oil cake (copra meal) has been showing a rising trend in the past. The total exports which were only 3.5 lakh tons during the early sixties have now gone upto 11 lakh tons. About two-third of the world production enter the export market. Though Philippines and Indonesia are the major producers of the oil cake, a substantial portion of this is exported, and they top the list of exporters, together accounting for 86 per cent of the total exports. Though India is the third largest producer of oil cake in the world with about 9.3 per cent share, it is also the third largest consumer in the world, the entire quantity produced being consumed locally. Germany and Netherlands are the major importers and consumers of oil cake in the world.

Desiccated coconut comes in the form of flakes, threads and granules. It is mainly used in confectionery and bakery industries. Trade in desiccated coconut has also been showing a rising trend in the past. Total exports now amount to 2.1 lakh

**Fig.2. Trends in the Export's of Copra and Coconut oil**  
lakh tons (copra equivalent)



tons (Table II). There has been only marginal increase in exports during the 60s and 70s and after 1986, exports have shown a sharp increase. As in the case of other coconut products, Philippines has been the major exporter of desiccated coconut, accounting for nearly 39 per cent of the total share, followed by Sri Lanka (22 per cent) and Malaysia (12 per cent). Bulk of the imports was to USA (19 per cent) and UK (10 per cent), followed by Netherlands and Germany.

India and Sri Lanka are the main producers and exporters of coir products. India sends out these commodities in the form of processed products such as coir yarn, coir mats, coir mattings and rubberised coir fibre, while Sri Lanka mainly exports raw coir such as mattress and bristle fibre. World trade of coir products has been stagnant now, mainly due to low international demand, and availability of cheaper synthetic substitutes. On the other hand, domestic consumption of these products are on the increase. Of late, use of coir in the field of soil engineering to solve erosion problems is increasing. With the changing attitude of construction and landscaping, mainly to save environment, natural fibres are finding increased use as geo-textiles. Total exports of coir and coir products are to the tune of 1.04 lakh tons and nearly 60 per cent of this came from Sri Lanka and 30 per cent from India. United Kingdom and Germany and Yugoslavia are the main importers of coir fibre and coir mats and mattings, while France, Netherlands and Germany are the main importers of coir yarn.

Trade in fresh coconuts has been minimum only. Some of the countries exporting coconuts are Sri Lanka, Malaysia and Thailand. The list of coconut prod-

ucts exported by Indonesia include coconut cream and powder and coconut sugar also. Philippines and Sri Lanka are the major suppliers of coconut shell charcoal as well as activated carbon. Indonesia also exports shell charcoal in smaller quantities. Exports of activated charcoal has been showing a rising trend in the recent past.

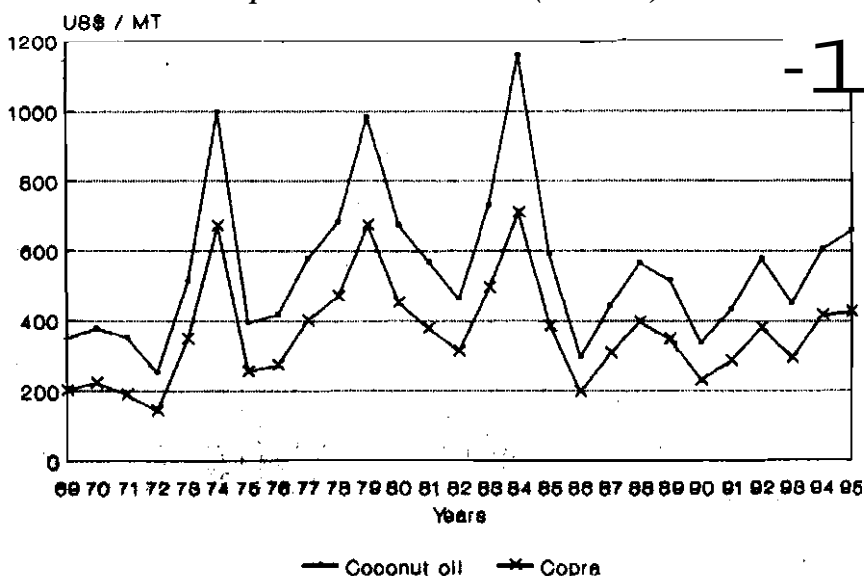
### III. Price Fluctuations

In the international markets, prices of both coconut oil and copra are found to move in a closely related manner (Fig. 3). Coconut oil, being the end product, its price generally move independently and copra prices are dependent on this. Copra prices are now found to be about 67 per cent of the coconut oil prices. In the early 70s, this used to be less than 60 per cent only. Comparatively higher prices fetched by copra in the recent times appear to be due to better oil extraction procedures now available. The price of coconut oil during the early 90s (US\$ 400 to 600) are not very much higher than the prices which prevailed two decades back, though the prices had reached a peak of nearly

US\$ 1000 in 1974 and 1979, and an all time high of US\$ 1155 in 1984. In 1986, the prices crashed to a record low figure of US\$ 297. Thereafter, the recovery had been rather slow. During 1995 and 1996 the coconut oil prices have shown a tendency to go up. Such a tendency has been observed in 1978-79 period also. The sudden jump in prices observed during 1974, 1979 and 1984 and the marginal increase observed in 1988 (Fig. 3) are attributed to the fall in production in all the major producing countries, due to the adverse weather factors.

In the case of other major vegetable oils like soybean oil, palm oil and sunflower, the movement of prices in the international markets have been more or less in tune with that of coconut oil. Jump in prices have been noticed in 1974, 1979 and 1984 in the case of all vegetable oils, due to fall in production. However, the amplitude of the increase observed in the case of coconut oil during 1979 and 1984, were of a higher magnitude than in the case of other vegetable oils. This is due to the special position coconut oil occupies, and

Fig. 3. Trends in the International Prices - Copra and Coconut oil (1969-95)



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its limited scope of substitution with other vegetable oils.

Comparison of the prices obtained in the international markets for major vegetable oils during the periods 1970 to 1994 shows that maximum prices of coconut oil was reached during the quinquennium 1980-84 (Table III). This price was about 44 per cent higher than the prices of 1970-74. But the prices during 1990-94 were about 4 per cent and 33 per cent less than the prices of 1970-74 and 1980-84 respectively. More or less same trend was observed in the case of palm oil prices also; higher prices were obtained during 1980-84, and this price was about 58 per cent more than the 1970-74 prices. During 1990-94, these prices were marginally higher than the 1970-74 prices. Sunflower oil prices also followed more or less the same trend, except that the highest prices were recorded during the quinquennium 1975-79. Except in the case of coconut oil, in the case of all other vegetable oils, the 1990-94 prices were marginally higher than those of 1970-74 prices. Price statistics now available for the last two years show that only in the case of coconut oil, 1996 prices are higher than that of 1995.

Coconut oil, being a lauric oil, has a special position among the other vegetable oils, because there are only a very few other oils in the market, coming under this group. Because of this it used to fetch a premium price also in the past. Coconut oil has lost this position now because of the competition from other vegetable oils in general and palm oil in particular. During the first half of 70's, coconut oil prices and sunflower oil prices were on par, now sunflower oil is 8 per cent more costly than coconut oil. Though coconut oil and soybean oil are now sold at the same

price, two decades back, soybean oil prices were 15 per cent less than that of coconut oil (Table III). Coconut oil prices are not increasing in tune with other vegetable oils, because of the easy availability of palm oil at a reduced rate.

Variation in domestic prices of coconut oil for the period 1977 to 1994 have also been looked into for the major producing countries, viz. Indonesia, Philippines, India and Sri Lanka. Since the prices are expressed in local currencies, for the purpose of comparison, they have been converted to index numbers taking the average prices for 1977 and 1978 as 100 (Table IV). The movement of prices over the years was almost similar, in all these four countries, with upward trend in prices during 1984, 1989 and 1992. In recent years coconut oil prices have shown the maximum increase in the case of

Sri Lanka, because production has not gone up. Next to Sri Lanka, the increase was highest in India, followed by Philippines and Indonesia. During the period 1977 to 1982, the increase in prices in all these three countries has been marginal only. Major increases in prices has been noticed in subsequent years, though this was accompanied by violent year to year fluctuations.

An attempt was also made to compare the domestic prices of coconut oil, during the period 1981 to 95, in the major producing countries, by converting them to a common currency, namely the US dollar, at the exchange rate prevailing in the respective years. A comparison of the average price prevailing during the quinquenniums 1981-85 to 1991-95 can be had from Fig. 4. In both Indonesia and Philippines, the prices were almost on par. and in these periods it was in the

Table IV. Index numbers for domestic prices of coconut oil in major producing countries (Av. prices of 1977,78=100)

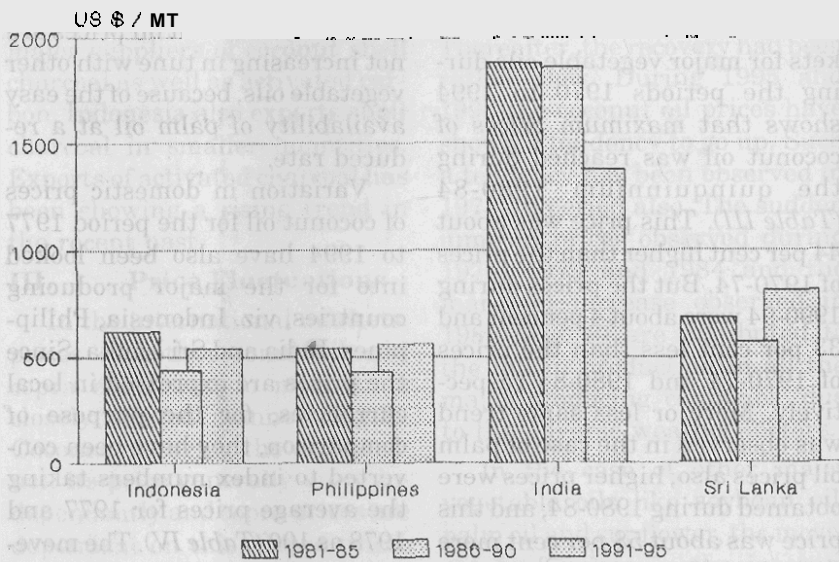
Year	Indonesia	Philippines	India	Sri Lanka
1977	98.0	90.4	95.7	104.0
1978	102.0	109.6	104.3	96.0
1979	95.7	147.6	102.9	130.9
1980	93.3	95.3	135.2	172.3
1981	113.4	89.7	124.3	198.9
1982	94.6	81.4	137.2	179.1
1983	131.4	146.3	185.2	292.6
1984	209.4	355.5	296.3	533.7
1985	143.3	197.9	184.6	273.5
1986	137.6	122.3	193.2	151.7
1987	178.0	208.3	269.4	306.6
1988	232.7	285.8	282.1	564.4
1989	223.3	271.2	215.6	355.8
1990	155.9	185.5	243.4	344.2
1991	205.0	286.5	355.1	569.3
1992	270.8	351.2	405.6	754.2
1993	227.5	300.6	349.6	807.2
1994	314.4	395.4	288.8	686.6

range of US\$400 per metric ton of coconut oil. In Sri Lanka the prices were slightly higher. Contrary to this, in India, the domestic prices were always three to four times higher than in the other major producing countries accompanied by conspicuous year to year fluctuations. Indian prices are higher than in the other countries, because the cost of production is high and it is a commodity in short supply, and the country's requirements of vegetable oils are mostly met by imports from other countries. With these high prices, the country may find it difficult to compete in international markets, when its production increases.

### Conclusion

Expansion of area under coconut and increase in production have been substantial in the recent past. Trade in coconut products has also showed increase. Though earlier coconut oil used to fetch premium price over other vegetable oils, it is slowly losing that position. After the drastic fall in prices in 1986, as a consequence of the bumper yield re-

**Fig. 4. Comparison of Domestic Prices of Coconut oil in Major Producing Countries**



ceived in the previous year, the recovery of prices has been rather violent in the case of coconut oil compared to other vegetable oils. Such uncertainty in prices is likely to affect the crop production. Coconut oil is facing strong competition from other vegetable oils, especially soybean oil and palm oil. Doubling of production of palm oil during the past one decade, and its availability at

lower price, are threats to the coconut industry. In order to get remunerative prices for farmers, stress has to be given for product diversification and by-product utilization.

(According to the latest statistics furnished in APCC Yearbook 1996, India ranks first in coconut production followed by Indonesia and Philippines

- Editor)

