Coconuts at the Crossroad

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Coconuts can help provide a great improvement in livelihood but it takes time to adjust to the change. Farmers can see the benefits from farm gate values and will react accordingly. The agribusiness sector already sees the benefits and investment is flowing more than before. The administrators are the last to appreciate the change and have to follow where the market leads.

When the average coconut in Mindanao can be sold for 25 US cents at farm gate, it looks as though at long last farmers are getting a just price but the situation is not tenable and the symptom of far reaching changes that are taking place. Action is required to bring the sector into the 21st Century.

Coconuts need little care but have always offered shade, food, drink, fibres and charcoal as well as fronds and timber. They can withstand high winds and can adapt to different conditions such as altitudes, droughts and many natural and man made disasters. Thus, for those who live with coconuts there is little choice as to the desirability of coconuts, they are simply accepted and left alone in most cases. When prices are bad, coconuts can be consumed or left unharvested while when prices are good access problems are overcome to maximise harvesting.

At times they have been valued and sometimes treated as 'yesterday's crop'. Most of all they are taken for granted. Which can be a good thing since little tending is required but also a bad thing in that they are not valued. Today, the bandwagon is strongly in favour of coconuts and they have never been more valued. It is a time for questioning our perceptions, expectations and uses.

That has been a major problem for coconut development, when prices for copra are good, there is no incentive to do anything and when they have been bad, there was no expectation that would justify intervention. Commodity selling has no memory, the only thing that counts is the price today. It has also no expectation that things will be different in future from today. Development agencies and donors also tend to suffer from that thinking.

Today, the price of coconuts in major markets is 25-30 cents each, copra is selling at $ 900-1,200 and coconut oil is above $ 1,500. That makes return per ha for coconuts approach $ 2,000 per ha which compares favourably with traditional returns from alternative crops like oil palm, coffee and cocoa except of course they have all doubled and trebled in price during the last year and particularly in the last quarter of 2010. Even rice is above $2,000 per ha today and rubber at $ 3,000.

If the bubble was to last and grow even bigger as the financial pundits are predicting, the global development poverty line problem would have been partly solved but you have to be an immense optimist to really think so. The rational conclusion is that it is a bubble and largely a financial one.

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Even without the bubble, it is time to rethink coconuts because there has been a fundamental shift in market demand. It has taken the shape of increasing markets for high value kernel products and a fundamental change in the economics of husk use with a growing market for coir peat which leads to a tripling of returns from primary processing into baled coir fibre and peat. Additionally, China has become the world's leading importer of coir fibre which is subsequently processed to produce higher value products of which rubberised coir is the most important.

One other factor that is being given increased attention is the potential contribution of coconuts to energy generation. The first to receive attention has been the use of coconut oil to mix with diesel or to substitute diesel. This is not restricted to coconut oil. Various incentives and subsidies have led to biofuel becoming popular in USA and in Europe and is now backed in other countries including Malaysia. The use of edible oils for the purpose links prices of petroleum and edible oils as a safety net since when the price difference widens it becomes more commercially attractive to use vegetable oils. The argument becomes irrefutable on isolated islands where there are coconuts but the high cost of freight prevents export of oil while the same factor greatly increases costs of diesel and electricity.

A safety net is also provided for by-products since energy can be generated while producing charcoal from shells and although husks are less appropriate, they can be used to generate biogas or burnt as biomass.

How many coconuts are there?

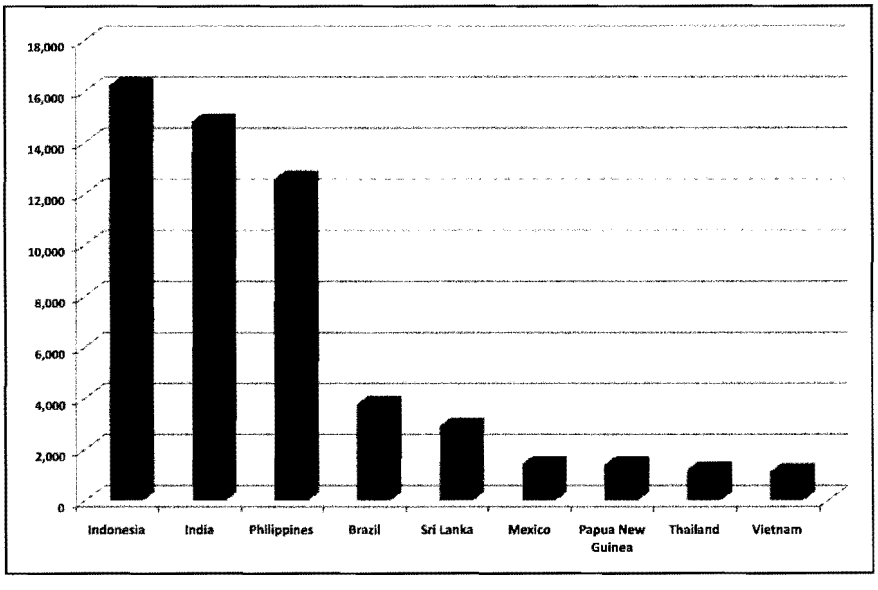
It is virtually impossible to count coconuts and regional, national and global statistics can be grossly inaccurate. Production is imputed from reported copra production, area planted or administrative estimates. Production has to be imputed since there is no other choice. Likewise, productivity is most often based on extrapolation from sample evidence.

A factor that makes it a little bit easier to guess estimate with some degree of accuracy is that production is concentrated in Indonesia, Philippines and India and errors in estimates in other countries do not materially alter the situation substantially.

Errors in estimates, however, are important for countries and regions in assessing potential for development. Whether there are 2.4 billion coconuts every year in the Pacific Region, in the way of an illustration, or 4 billion may not matter much since so many are either not accessible or commercially viable. One billion coconuts this way or that is important for planners.

Then there is the problem of a gap between production and harvesting. Changes in production are most often ascribed to climatic conditions at any one time but may well have more to do with prices than the weather. The price paid for coconuts determines the cost benefit of reaching less accessible ones. For most farmers coconuts are an additional income rather than the main source of livelihood. A low price discourages harvesting and in statistical terms that looks like a change in production.

The APCC estimates that there are 12.2 million hectares planted to



Leading Coconut Producers in millions nuts

coconuts and this estimate is a more useful figure than estimates of 61 billion nuts per annum and the slightly ridiculous attempt to quantify in tons at 61 million tons by FAO which throws all the figures into doubt. These figures suggest an assumption of 5,000 nuts per ha based in turn on 100 palms with 5 nuts each, the normal pattern followed in plantations or organised plantings. However, most coconuts are grown by small farmers who do not generally follow such guidelines. The nature of coconut production would suggest that the data under estimates actual production. There may in fact be a fairly substantial under estimation which may even be nearer 70 than 60 billion.

An element of caution is required in auditing what precisely is happening to the coconuts. Since there is a significant room for error in knowing production, audit of physical flows becomes absurd when taken too far.

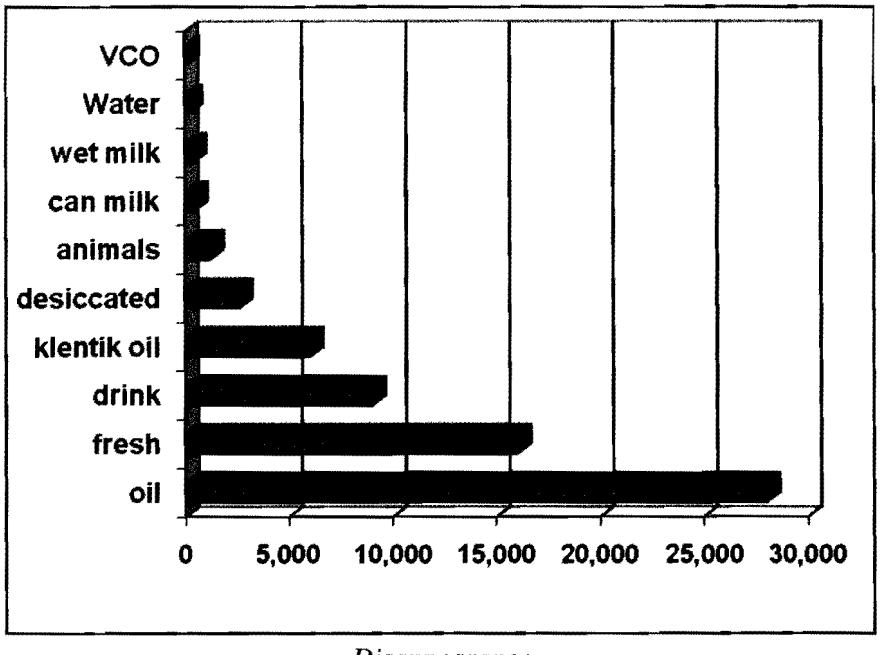
Consumption

If we cannot be certain how many coconuts are produced or harvested each year, we know even less about how they are consumed. There is relatively good data on use of coconuts for copra and thus for oil. There is also good data on production of desiccated coconut. The rest has to be estimated. Based on experience, the consumption of coconut is estimated by us as follows, bearing in mind that it can only be a very rough guide but that some idea of quantities is better than none.

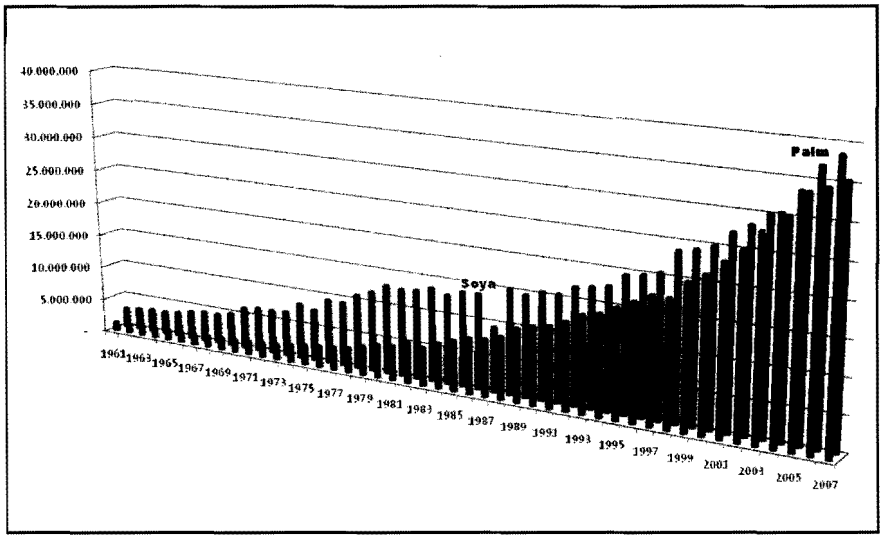
The estimates above assume that coconut oil remains the most important form of consumption of coconuts, particularly when Klentik (home or village based extraction) is included. The author believes that fresh consumption, including drinking nuts is often under estimated and is impossible to measure reliably.

A large number of coconuts do not enter commercial markets but broadly speaking, there are two markets for coconuts, namely, for copra and fresh. The latter prices are always higher since the nuts have to be fresh and command higher prices in wholesale and retail markets than can be paid for copra. Fresh nuts may be sold for desiccated, milk, jelly, candy or household use. In the form of tender coconuts, they are also sold for drinking. Fresh consumption of coconuts is more akin to fruit consumption than to the edible oil market. Prices can be as high as required to satisfy demand. In the way of illustration, China is currently importing coconuts at over 30 US cents per nut from Vietnam. Prices being paid in other markets are also abnormally high although not often quite as high as in Vietnam at present.

Under normal circumstances, 12-20 cents for fresh coconuts is typical in Asia, Africa and the Caribbean. Retail prices are higher and can reach one dollar in coconut producing countries such as Oman and Guyana and is quite normal in non coconut producing countries. Fresh coconut consumption is normal in producing countries where culinary traditions reflect their use but they are only an exotic item in non producing countries with minor levels of consumption. Sometimes, as is the case in China, Sri Lanka and Thailand at present, coconut producing countries run short and have to import although that is more likely during particular seasons or times of peak use.



Disappearance



Soybean and Palm Oil Global Production in tons

Fresh coconuts are also supplied to processors to be sold as drinks, desiccated, milk and candy. In these forms they sell to international markets in processed form since they are available fresh in coconut producing countries. These markets can be described as high value markets with prices determined by demand and supply but also through brand promotion as with tender coconut water. They are with the exception of desiccated not commodities but are products. As such the products sell in competition with other products with coconut water, for example, selling in competition with other soft drinks.

Copra still determines the average price paid for commercial coconuts. Copra is used to extract coconut oil which is part of the edible oils market. As a proportion of that market, coconut has shrunk to around 2% of the sector. It costs more than soy and palm oil in most years and has largely been substituted whenever it could be. There are some uses for which coconut oil is unique, mostly fatty acid extraction and a few edible uses. The battle for the edible oil market took place over recent decades between palm and soy and was won conclusively by palm oil.

All the propaganda mounted against lauric oils on health grounds by competing lobbies was in the end to no avail. It is not necessary to defend coconut oil on health grounds anymore since the old adverse arguments have largely subsided and there is little to gain. Coconuts today are largely regarded as a healthy food.

The majority of demand for coconut oil was and is relatively elastic since it can be substituted but part of it is inelastic and that sub-sector is growing with increased consumption of food products. In other words, although the world market needs most of the 3 million tons being produced today, it cannot easily do without a part of it. Where that line lies is not public knowledge although it is known within the industry. Some of the edible market, as is the case in India, is being eroded.

Only a minority of husks and shells are used commercially. Less than 12% of husks are used and probably around 50% of shells. Husks in particular represent a major under exploited sustainable resource. The author's own estimates of coir production at around 800,000 tons are far higher than the FAO at around 600,000 tons. However, the FAO data has an official standing and it does not really matter who is right. Increased husk use represents the largest potential growth area for coconuts.

What is important is that coir production is growing in non-traditional countries under the incentive of increased demand from China and prior to that the increasing market for geotextiles.

As stated earlier, it is also influenced by the new economics of production with incresaed demand for peat. Coir production increases are export driven with China acting as the engine for growth, importing over 170,000 tons or around 50% of total global imports, today. This makes China the second largest consumer after India. The speed of growth of imports by China has placed stress leading to new production in Indonesia and Philippines, both of whom are now firmly set to becoming significant coir producers.

The growth in consumption in Asia relative to other regions has also tended to make coir into an Asian fibre in market orientation even more than before. In particular, rubberised coir, which started life as

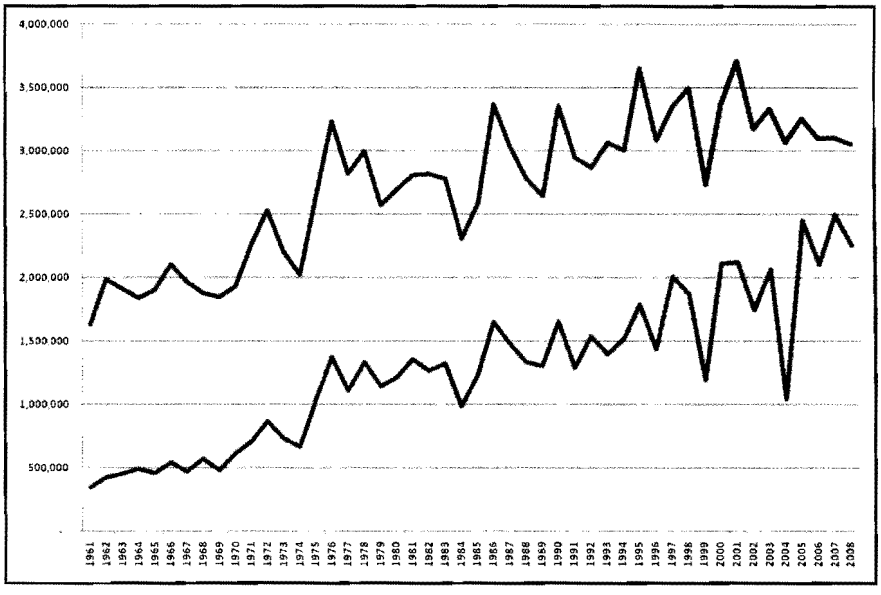
a German product leading to a consumption of around 40,000 tons (worth over $300 million at current user prices), is now firmly an Asian one with China and India by far the leading consumers together consuming over 250,000 tons (valued at over one billion at retail level). This fact has tremendous implications in the value of coconut products being produced since rubberised coir is the single most valuable product that can be made with coconuts.

Coconut Oil

Production of coconut oil has been rising over the past decades, as have exports. However, consumption of coconut oil has not been increasing at as fast a rate as edible oils in general and production has not been rising as fast as exports. The inescapable conclusion is that coconut producing countries have been consuming less of their oil and exports are increasingly directed to essential uses for coconut oil.

The above is not really surprising, with global development there is a greater need for the essential characteristics of coconut oil. And yet the average price of oil is constricted by that for edible oils in general.

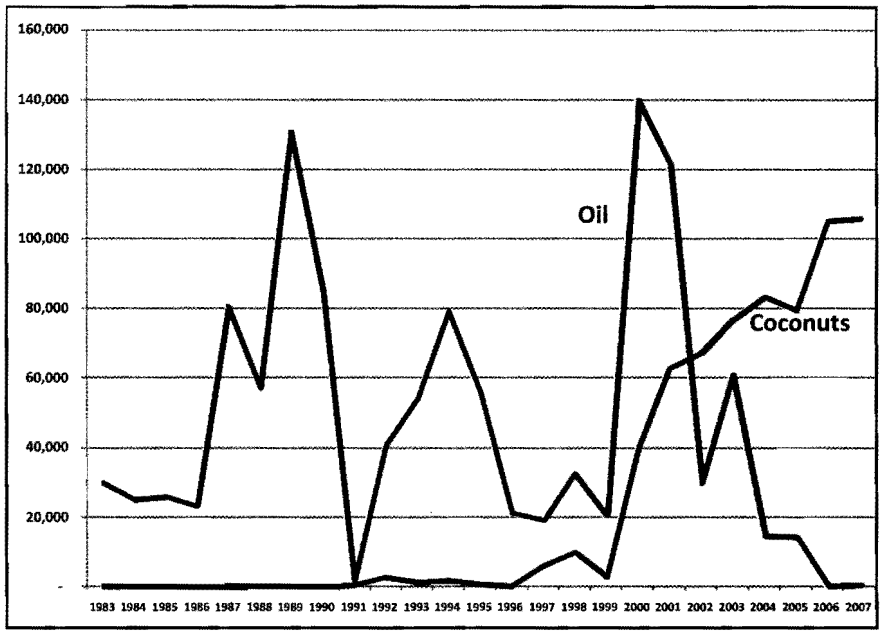
In an increasing number of countries the demand for fresh coconuts for higher value food uses has increased prices to a level where copra prices are no longer viable. Even at the current $ 1,500 per ton for oil, the processed value of each coconut is only 20 cents per nut and at this price, many countries simply cannot produce coconut oil.



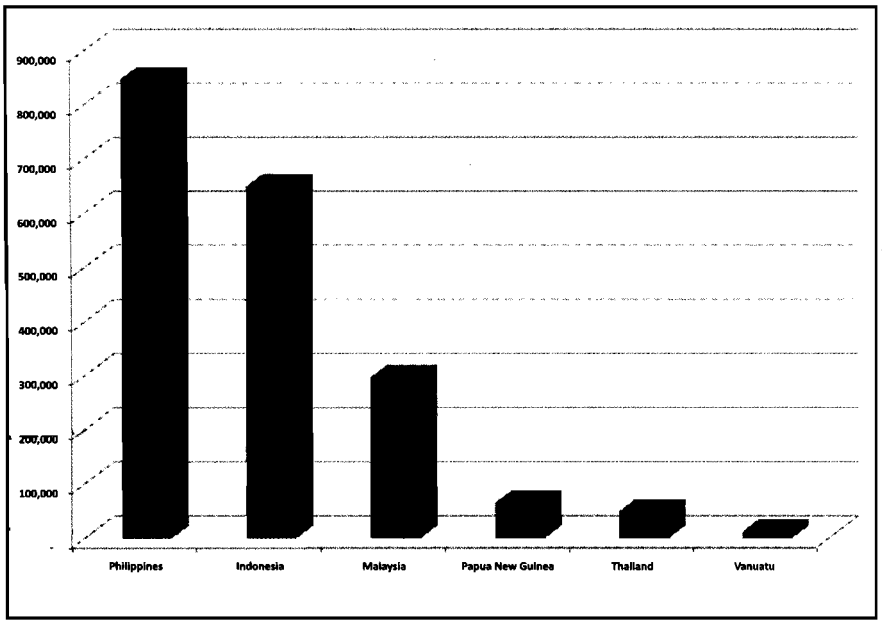
Production and Exports of Coconut Oil in mt

Indonesia and Philippines can produce coconut oil in most months, and Papua New Guinea can do it in all months. Two-thirds of the coconut oil being produced is produced by Philippines. Indonesia is the only other major producer/ exporter and India has continued in production only because the country has protected the domestic market leading to local prices that are generally twice those of the world market price.

The increase in prices of fresh coconuts has led to Vietnam, the fourth largest producer from ceasing production of oil and it is no longer



Vietnam Exports of fresh nuts and nuts for oil



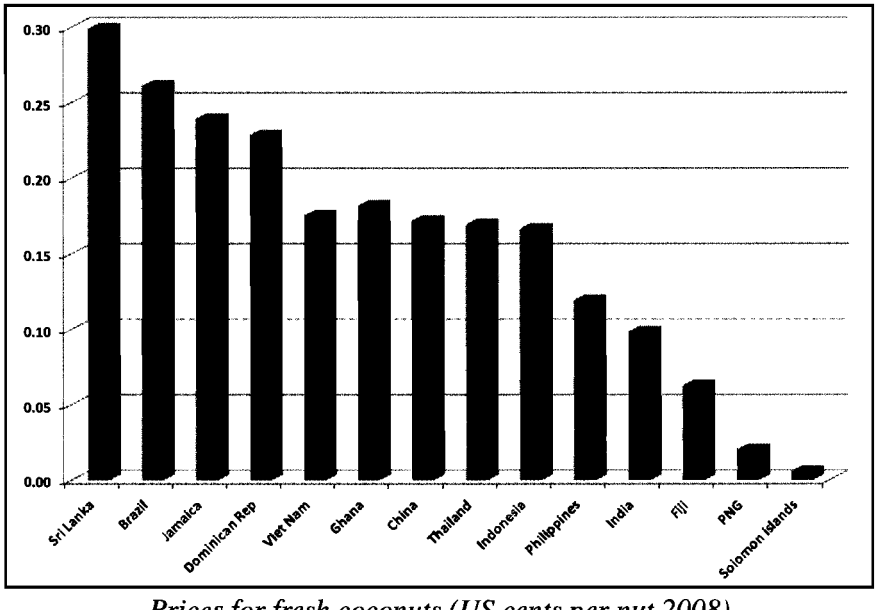
Leading Exporters of Coconut Oil in mt 2008
Source: APCC

commercially interesting for Malaysia or Thailand to produce. Vietnam has roughly 100 million coconuts spare after fresh consumption and used for food products. The nuts used to be exported as coconut oil mainly to China, during the last ten years, there has been a substitution of oil by fresh exports which took place over a 7 year period. Vietnam is now largely a fresh nut exporter with its oil production ceased and desiccated in trouble. Malaysia and Thailand have been moving into coconut milk and food product production.

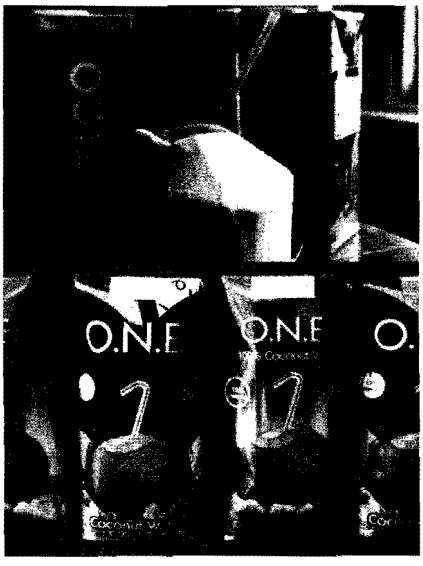
Coconut oil simply became uneconomic to extract and that transformation has also been taking place in Sri Lanka, Thailand, Malaysia and Mexico. Thailand and Sri Lanka are short of coconuts and are actually importing them.

It all depends on how much nuts cost and even if we ignore the present hike in nut prices, the chart illustrates the wide range of prices charged for coconuts. Only the Philippines amongst the leading producers and PNG have nut costs low enough for viable coconut oil production today. Everything depends on the Philippines which produces under 2 million tons of coconut oil per annum out of a global production of 3.5 million tons, 500,000 tons of which is produced in India behind a wall of protection and subsidies. The 2 million ton trade in coconut oil depends a great deal on Philippines, Indonesia, Malaysia, PNG, Thailand and Vanuatu. Of these, Malaysia and Thailand have coconut costs that gravely bring into doubt viability and Vanuatu farmers get very low rates that are likely to curb exports of oil in favour of use for biofuels.

The problem for the three leading producers of coconut oil, Philippines, Indonesia and India is that they have tens of billions of coconuts between them with PNG using one billion, India 3 billion, Indonesia may be 5 billion and Philippines 8 billion coconuts for oil is that, if coconut oil was not viable, what would they do with their coconuts, and that fact limits the rise in coconut prices for these countries. The ceiling for coconut oil prices is



Prices for fresh coconuts (US cents per nut 2008)



Tender Coconut Water

determined by that of palm and soy oils and that then determines how high coconut prices can go. India has tackled that fact by protecting the domestic market but coconut oil is becoming less popular.

This dilemma is most acute in isolated small island states. They have problems of collection that often leads to not harvesting nuts on islands that are remote and have little or no inhabitation. In turn, this leads to the false impression that their production is actually lower than it is. In the way of illustration, the author believes that the actual production of coconuts in the Pacific Region is around 4 billion although harvesting is probably around 2.4 billion. The region has traditionally exported copra (Kiribati, Samoa and Solomon Islands) or oil (Vanuatu, PNG and Solomons in the past) but coconut oil exports are difficult when not made in bulk since freight costs of coconut oil are the same as for petroleum in barrells.

This leads to farmers in the Solomon Islands receiving $28 for 5,000 nuts when the FOB price for copra falls to $ 400 per ton and $ 600 in Manila. The farmer price is but a fraction of the prices secured in South East Asia with the $ 28 above compared to $ 500 in the Philippines and higher in Vietnam. At the same time, the isolated islands pay a lot more for their diesel making biogas and biofuel attractive options to explore. The value chain in the Solomon Islands in 2008 is illustrated below.

Fresh Coconut Products

There is a range of products that are produced from fresh coconuts and they include: milk; virgin coconut oil; tender coconut water, and desiccated coconut.

Desiccated coconut

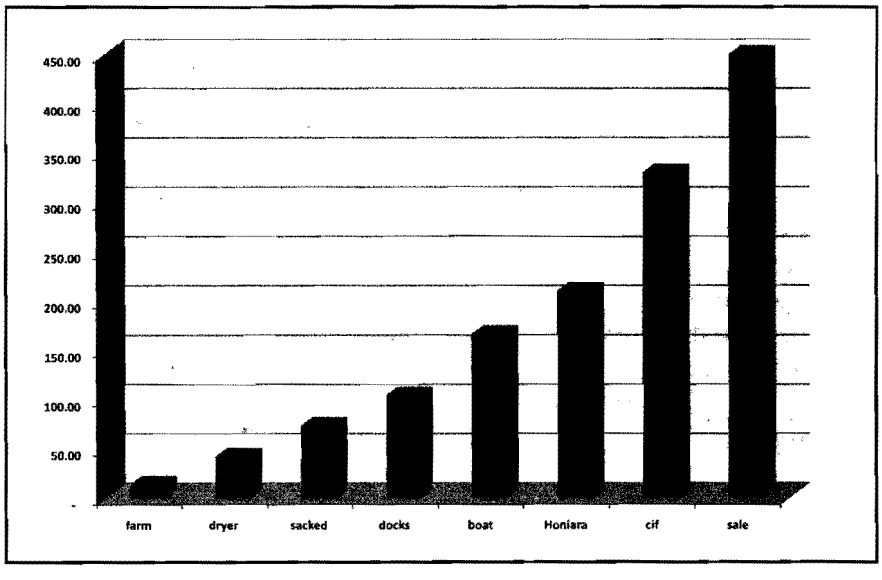
This is a well established product. Prices are inflated just now but desiccated coconut is valued at around US$ 2,000 per ton or 40 cents per nut although normally half that. A larger range of countries can produce it than is the case with coconut oil. Demand is fairly stable and resilient to normal market price fluctuations.

Global market demand is supplied with 180,000 tons from the above with total trade around 220,000 tons. Production of desiccated coconut falls between oil and milk in revenue terms. Consumption is growing in emerging economies.

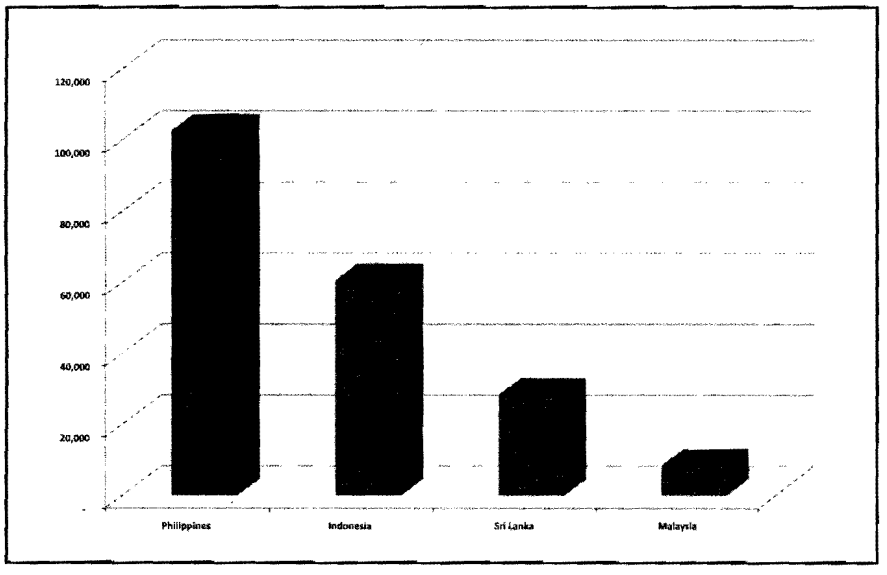
Desiccated Coconut production is becoming uneconomic in off season periods in Vietnam and Thailand while it is under pressure all the time in Brazil and Sri Lanka. New capacity is, however, being developed in Papua New Guinea.

Tender Coconut Water

Tender coconut water is a unique form of coconut consumption. It brings well established and proven health benefits. As a product it is well known for centuries and a favourite way of consuming fresh coconuts. But in the past its qualities were really only available in coconut producing countrires. Best taste is when it comes off the palm.



Price Formulation Copra Export Chain US$



Major DCN Exporters in tons 2007

There has been recent interest led by two Brazilian manufacturers, one now purchased by Coca Cola and the other by Pepsi Cola. The concept was not new to the soft drink giants as Coca Cola had considered it on their market entry in India. The marketing input from Brazil and promotion as a health drink helped determine a good image for the product and production has been growing as fast as possible.

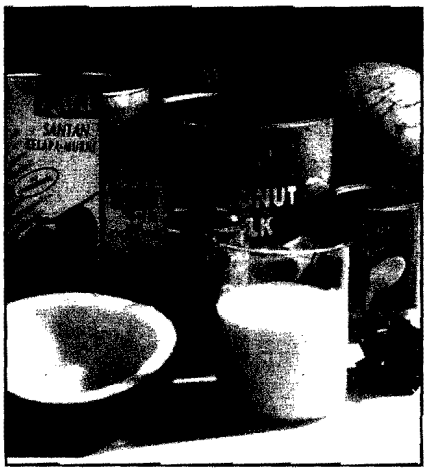
Investment in other countries was bound to follow and Philippines is a prime candidate. The author estimates that roughly 180 million coconuts are already being processed and the figure is likely to grow fairly fast. Within 5 years, the author would expect the figure to more than double. Tender coconut water has entered the mainstream soft drinks market albeit so far as a niche product.

Coconuts of between 7 and 8 months are required and the husk has only limited uses at that age so the entire financial return has to be from the product which does not constitute an obstacle as tender coconut water is probably worth over 70 cents per nut at factory gate. Selling as much of the mositure in coconut kernels as possible was always a good idea.

The main obstacle had always been preservation and packaging. Canning leads to an inferior tasting product. The FAO has undertaken further work on a process that lengthens shelf life for a bottled product by days but long shelf life is really only possible through aseptic packaging and that does require use of expensive Tetra Pak paper at some stage or other.

Coconut Milk

Preservation and packaging have always also been central to the production of coconut milk. Many households in coconut producing countries produce their own milk for immediate consumption by grating and squeezing. The need to supply urban concentrations and emigres led to packaging in cans but this leads to a significant loss in flavour. Aseptic packaging and Tetra Paks provide a superior product.



Coconut Milk

However, the market is still dominated by what the author estimates at over 440 million coconuts that are packaged in cans rather than the 380 million now in aseptic packaging. The future belongs to the aseptic packaged products which also sell for twice the price.

Demand for coconut milk started with emigres and progressed to tourists who had tried mainly Thai cuisine but is now infiltrating to a larger consumer base. Nearly every supermarket in Europe and Australia carries more than two brands of coconut milk.

Since you can do almost everything with coconut milk as with dairy milk, there are a range of coconut milk products that are being and have been developed.

Virgin Coconut Oil

Virgin coconut oil is extracted from fresh coconuts directly without going through the copra drying

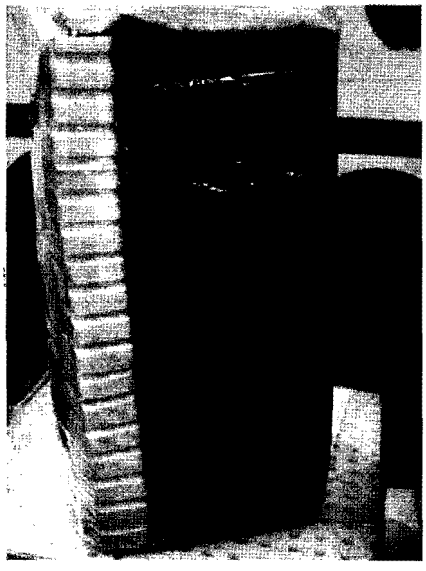
process. There are a number of ways of extracting VCO, some use heat, others fermentation and cold presses. Early work on virgin coconut oil focussed on industrial processes and the Alfa Laval plants acquired in Indonesia and Malaysia are perfectly able to extract oil on an industrial scale. No one did so because the economics of milk production are better on an industrial scale than those for VCO.

In recent years production of VCO has received a lot of publicity and interest. This is mainly due to small scale extraction requiring low capital inputs allowing village scale processing. It is very much a niche market with between 3,000 and 5,000 tons only being produced globally. This figure is rising with new investment attracted by the large margins between factory gate and retail prices. While factory gate prices have in recent years been as low as $ 1,500 per ton, retail pricing approaches $ 40,000 in some cases.

With increased production the gap between factory gate and retail is falling. As long as production remains on a small scale there will be a very strong prmium paid for VCO but should it be produced industrially we may end up with Robert Haggenmaeir's prediction[1] of a 15% premium in prices. The book remains the authoritative guide on coconut milk, cream and virgin oil production.

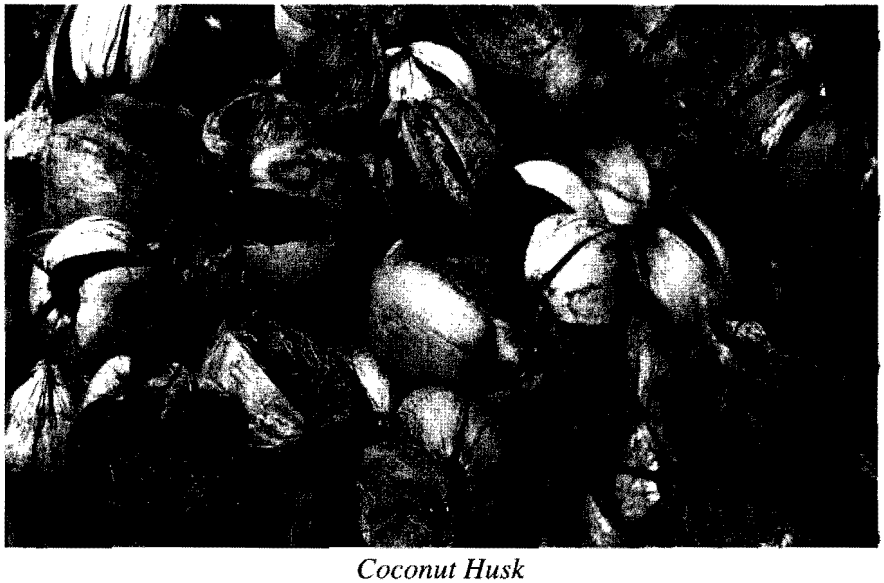
Coconut Husk

Coconut husks are mostly either left on the fields where coconuts have been harvested or burnt to avoid clutter. Some were used for orchid cultivation and some have pursued this by shredding husks or for sale as a growing medium. There is also the possibility of using them to produce biogas although there are no accounts of this happening on a significant scale thus far. Similarly, husks can be burnt for fuel and are valued at 2 cents per husk for that purpose.



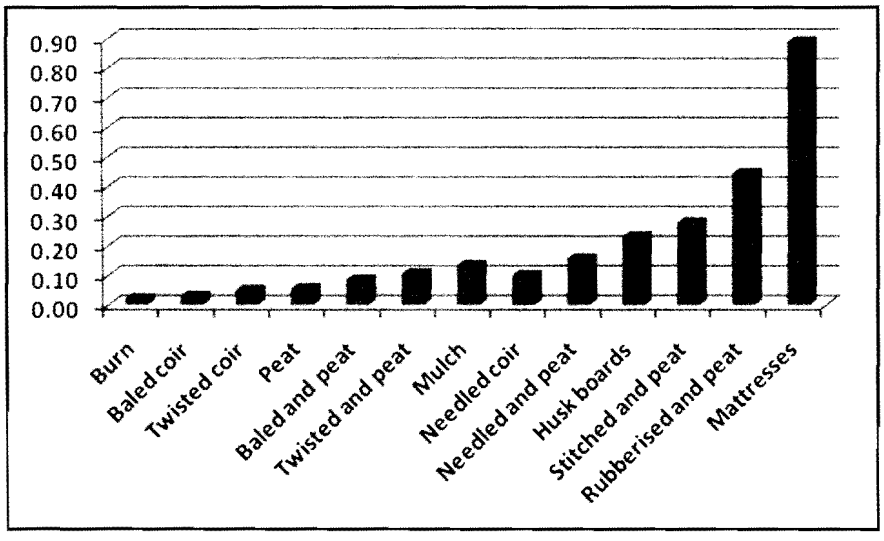
Rubberised Coir Fiber

Coconut husk processing to extract coir fibre started off in India and Sri Lanka extracting fibre from husks of immature husks as 'white fibre'. The process was so labour intensive that it was viable only with very low wage rates and low husk prices in Kerela and Sri Lanka. The latter started a specialisation in fibre from mature husks as 'brown fibre' and for some years India specialised in white and Sri Lanka in brown fibres. India exported twine, mats and matting of mainly white fibre and Sri Lanka brown fibre for industrial purposes such as needlefelt or rubberised. Production of white fibre has run into problems because it is labour intensive while brown fibre is increasingly extracted mechanically. Both India and Sri Lanka today specialise in production of brown fibre and less than 100,000 tons of white fibre are produced with its production continuing to decline.



Coconut Husk

[1] *Robert Haggenmaier in 'Coconut Aqueous Processing' published by San Carlos Publications 1980*



US Cents per husk

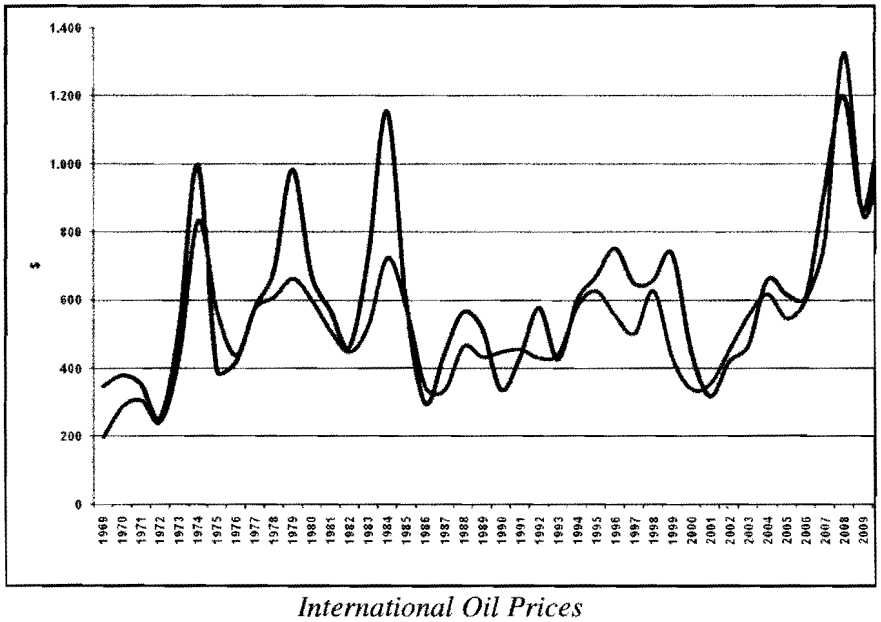
Over a 40 year period, coir production has increased from 200,000 tons to 800,000 tons today. First Malaysia, then Thailand followed by Vietnam, joined India and Sri Lanka and also started to produce brown fibre. Many other countries, including, PNG, Fiji, St Vincent, Guyana, Jamaica, Tanzania and Kenya, set up small scaled production. However, in all production of brown fibre, coir constituted one-third of the husk with the two-thirds remaining as waste in the form of mounds in producing sites.

The quality of husks as a growing medium and for mulch was well known but it is only in relatively recent years that a market has been developed for coir peat and the former wasted mounds have acquired a value. In fact, baled coir fibre sells for much the same price as peat, so if the peat is processed and sold, revenue from husk processing can be three times what it used to be. A husk that costs just below 3 cents to collect yields only 3 cents of baled fibre but another 5 cents of peat. The profits are more if husks cost less than 3 cents or the fibre is further processed. But the revenue of 8 cents per husk after primary processing rather than 3 cents as it was before changed the economics of coir extraction.

This opens up a number of production permutations for coconut husks. The highest value single product from coconuts are rubberised coir products such as mattresses and vehicle upholstery. At that level, the contribution of peat becomes insignificant because peat is processed for retail at the market place by the distributors who need that value added to justify their role as distributors.

The two most important market drivers leading to increasing husk use are the demand from China and the market for peat. At the lower end, primary processing yielding 9 cents per husk is enough to attract producers in Philippines and Indonesia. At the other higher end, production of geotextiles with peat yielding 28 cents led to investment in Ghana and the prospect of 90 cents and more for finished rubberised coir products has led to rapid development of coir and thus imports in China.

The new producers in Philippines and Indonesia are



International Oil Prices
$ per ton

commodity traders in orientation, happy to settle for the lower end of returns with little risk. They take advantage of spare husks and low labour costs to supply richer industrial units in importing countries. Either way, there has been a ten fold increase in imports of coir by China over the past ten years. This 180,000 tons additional demand has injected badly needed vigour in the coir industry. The domestic markets in Indonesia and Philippines remain largely undeveloped.

The Crisis

There is a long term crisis quite apart from the current price bubble. There appears to be an increase in consumption of fresh coconuts. In part this is due to increased urbanisation in coconut producing countries. Cities like Mumbai, Ho Chi Minh, Hanoi, Jakarta, Manila, Bangkok and Shanghai are consuming more fresh coconuts with a consequent pressure on supply. There is also a fundamental shift in the health perception of coconuts with growing markets for tender coconut water and milk.

The world market price for coconut oil varies with that for edible oils in general and has tended to fluctuate in cycles as illustrated below:

The average price for coconut oil has tended to be at a premium over soy and palm and most main edible oils but the premium is usually modest. The cyclical fluctuations have been regular but vary in intensity in a way impossible to anticipate. They have, of course, been falling in real terms for over 4 decades and that accounts for the widening gap between coconut farmers and citizens of industrialised countries.

However, in common with other commodities the price of coconut oil has more than doubled in the last year. The increase in price is a bubble and will collapse. But there has to be a longer term increase in nominal prices due to increased demand for edible oils from China, India and other Asian countries and for oleochemicals from coconut oil in particular. The increase in nominal prices will not be enough to recover real price loses but even at 10 cents per nut, less than half current prices, farmer revenues from coconuts will have greatly improved and coconut oil would have to average at a higher price than in the past 40 years.

The average coconut oil FOB price over the last 40 years is around $ 600 per ton. This implies a copra price of $ 450 and a nut price of just over 3 cents. The fresh market traditionally paid 8 cents. With growing demand in the fresh market, the farmer is increasingly reluctant to sell at 3 cents, particularly if he can get 3 cents for the husk alone. In the current off season prices are above 20 cents in the Philippines and 13 cents in Indonesia. But that is a temporary situation.

The Future

In the future, coconut prices are unlikely to fall to the old 3 cent levels. With improvements in the value chain alone it should be possible to pay farmers more and with an improvement in the average, farmers can expect 6-9 cents per coconut. Wherever there is coir production they can expect more. The revenue per ha of coconuts is likely to change from $150 per annum to $300-500 from copra nuts.

The trends towards higher value food uses such as tender coconut water, milk and VCO should serve to further strengthen coconut prices. Substantial increases in coir processing will bring much value addition and employment. Both the developments, higher value products and husk use, are already being financed and more investment funds should become available.

A safety net is provided by the fact that if coconut oil prices fall too far, part of the production can be used with diesel or to substitute diesel. Production of coconut shell charcoal while generating biogas should make charcoal production more profitable. Those husks not used for coir and peat extraction can also be used for biogas or as biomas although they are not as attractive for the purpose as are shells.

The most significant change is likely to be development of a husk industry to match the kernel one. 5 cents from husked coconuts can be matched by 3 cents from husks. For producing areas that represents a revolution. It represents a substantial increase in farm gate values.

While the kernel then gets processed into oil and meal with an average value of 14 cents and coir and peat with an average value of 30 cents, increasing to 35 cents if the fibre is twisted the value of primary processing in coconut growing areas more than doubles.

Coconuts that are used for milk production lead to even higher processed value of more than 50 cents per nut. The permutations that are possible are illustrated.

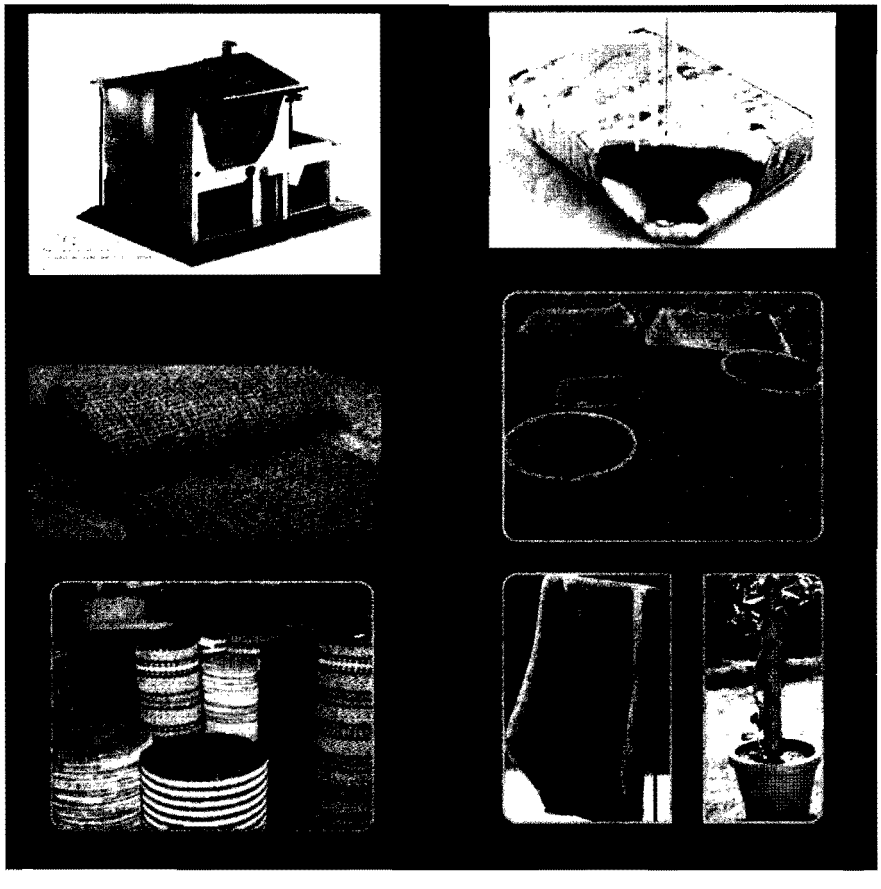
These are based on long term averages, current prices are higher but may be temporary. The potential value of higher value integrated processing of coconuts would take the sector to new heights in value and lead to efforts to increase productivity and perhaps even planted areas.

What slows the changes and has done so for a long time is that those in coconut producing countries had acquired a commodity colonial mentality of not valuing coconuts highly. An understandable reaction given prices as low as 2 cents or lower per coconut to produce copra and oil. That traditionally led to very low revenues per planted area and could not afford a livelihood for farmers. The latter used income from coconuts as a residual incremental income above whatever else they were doing.

	US$ per ton	US$ per nut			US$ per ton	US$ per nut
Husks			+	Kernels		
Mattresses	8,000	1.60		Ice cream mix	3,000	0.75
Rubberised coir	4,000	0.80		Tender water	3,000	0.66
Stitched bankets	1,800	0.18		Milk	2,000	0.50
Needlefelt	700	0.07		Virgin Coconut Oil	4,000	0.33
Twisted	380	0.04		Cream	3,000	0.28
Baled coir	250	0.03		Desiccated coconuts	1,500	0.25
+				Oil & meal	950	0.12
Dust and pith	225	0.03				
Shells						
Charcoal	180	0.01				
Activated carbon	2,000	0.03				

Indicative producer prices

Source : VCA



Value Added Products from Coconut Husk

With the changes in motion, coconuts can help provide a great improvement in livelihood but it takes time to adjust to the change. Farmers can see the benefits from farm gate values and will react accordingly. The agribusiness sector already sees the benefits and investment is flowing more than before. The administrators are the last to appreciate the change and have to follow where the market leads.

The industry needs all the stakeholders to adjust attitudes. There is much to be done to understand and develop new markets. One near certainty is that the husk market will develop much further.

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