

## **SMALL SCALE PROCESSING OF COCONUT PRODUCTS IN WESTERN SAMOA**

By

Opetaiia. Liu\*

### **Summary**

Some of the characteristics, of small scale coconut processing include the availability of the resources, quality control, right equipment for continuous operation and good opportunities in local and overseas markets.

Only four diversified processing companies currently exist, including the Samoa Coconut Oil Mill that concentrates mainly on copra processing and oil extraction. The other three wet processing companies are mainly involved in the production of coconut cream.

Export earnings dropped by 30% due to substantial decline in both the price and the volume of most of the traditional export commodities such as coconut oil, copra and coconut meal. The total earnings from a range of non-traditional products, including coconut cream, increased by 10%. In particular, the volume and average price of coconut cream exports rose by 5 percent and 4 percent, respectively, resulting in an increase in earnings to \$6 million in 1990.

Western Samoa attaches a high priority to the development of the agro-processing industries although a number of constraints account for its slow growth such as lack of trained manpower and technical know how, financial constraints, inadequate marketing strategies, and lack of government policies. Finally, agriculture has low status in society and is not a way to achieve matai (head of extended family status).

A large number of possibilities of the future development of agro-processing have been identified based on the availability of raw materials and potential markets. Coconut products such as husks and shells could be processed into coir and charcoal or used as direct energy source. There are prospects for the production of rubberized coir matting, but this largely depends upon the growth rate of the coir industry.

Few incentives have been given to small scale processing such as the Export free zone of 10 years and the Income Tax Holiday. The concession import duties is 5 years and the producers were encouraged to produce more nuts. This paper concludes with suggestions and plans for future directions of coconut industry in the country.

The development of small scale coconut processing largely depend on further processing of coconut into several differentiated products. Wet processing is currently undertaken by three private processing companies.

-----  
\* Senior Information Officer, Department of Agriculture, Apia, Western Samoa.

## **Introduction**

The rapid establishment of small scale processing in Asian and Pacific countries enlighten the new direction of economic development. Small scale processing has a clear advantage in mobilizing two resources, entrepreneurship and local raw materials.

The concept of integrated processing is based on an optimal use of the coconut crop in one particular area. It can be used to complement already existing industries or it can be used to build up an entirely new industry.

## **Characteristics of Successful Small Scale Processing**

The success of small scale coconut processing mainly depends on high production, good quality and the availability of local and overseas market. The plant must have necessary machines for a better operation which provide good quality.

## **Profile of Existing Industries**

A limited number of diversified processing plants currently exist including the Samoa Coconut Oil Mill and the Samoan Tropical Products Ltd. The Oil Mill concentrates mainly on copra processing and oil extraction. Wet processing is currently undertaken by three private processing companies. The Samoa Tropical Products Limited is involved in a number of product development including coconut cream and palusami while the other two are mainly involved in the production of coconut cream.

The Coconut Oil Mill is located at Vaitele industrial Zone while the three wet processing companies are scattered around the town of Apia. The products are selling to the spot markets in the town while most are exported to New Zealand, Australia, United States, West Germany, United Kingdom and the Netherlands.

## **Contribution of Small Scale Processing in the Economy**

Export earnings fell by 30 percent to \$21 million due to substantial decline in both the prices and the volume of some of the traditional export commodities -coconut oil, copra and coconut meal. The volume and average price of the country's major traditional export product, coconut oil, declined by 18 percent and 28 percent, respectively.

However, the volume and average price of coconut cream exports rose by 5 percent and 4 percent, respectively, resulting in an increase in earnings to \$6 million in 1990.

In general, coconut cream became the largest single export earner in 1990, replacing coconut oil. It shows that total export earnings went up to 27 percent in 1990 compared with only 17 percent in 1989 (See Table 1).

## **CONSTRAINTS**

Practically all South Pacific countries, including Western Samoa, attach a high priority to the development of agro-based industries, although a number of constraints account for its slow growth such as a lack of trained manpower and technical know-how, financial constraints and inadequacy of marketing strategies.

Table 1. EXPORTS BY COMMODITY

During period	1985	1986	1987	1988	1989	1990
Value in Tala thousand, fob						
Coconut oil						
Volume (metric tons)	10926	12552	11527	10330	6292	5188
Value	15622	6542	8730	11688	7000	4168
Unit value (Tala)	1430	521	757	1131	1113	803
Cocoa						
Volume (long tons)	581	884	839	467	595	220
Value	2356	3185	2622	1260	2143	502
Unit value (Tala)	4055	3603	3125	2698	3602	2281
Copra meal						
Volume (metric tons)	5926	6152	5170	5281	3058	2215
Value	560	658	757	929	653	375
Unit value (Tala)	94	107	146	176	214	169
Copra						
Volume (long tons)	2752	3297	561	3230	5850	2400
Value	954	1049	65	1970	3237	1101
Unit value (Tala)	347	318	116	610	553	459
Taro						
Volume ('000 cases)	220	188	224	191	264	128
Value	5113	4335	5077	5201	5849	3502
Unit value (Tala)	23.24	23.06	22.67	27.23	22.16	27.36
Timber						
Volume ('000 bd.ft)	1277	612	309	955	112	18
Value	817	592	396	1084	135	21
Other exports						
Bananas	28	39	40	24	34	3
Beer	385	280	469	643	725	861
Cigarettes	558	688	618	684	694	586
Coconut cream	2833	2822	3109	3874	5093	5576
Fruit juice	1002	319	195	53	75	is
Veneer	169	481	36	-	-	0
other	2015	IM	1032	2323.	2256	2724
Domestic Exports	32412	22329	23146	29731	27894	19437
Re-exports	3783	1158	1822	1666	1312	1057
Total	36195	23487	24968	31397	29206	20494
In percent of total values						
Total Domestic	90	95	93	94	96	95
Coconut oil	43	28	35	37	24	20
Cocoa	7	14	11	4	8	3
Copra meal	2	3	3	3	2	2
Copra	3	5		6	11	6
Taro	14	18	20	17	20	17
Timber	2	3	2	3	1	-
Bananas	-	-	-	-	-	-
Beer	1	1	2	2	3	4
Cigarettes	2	3	3	2	2	3
Coconut cream	8	12	12	12	17	27
Fruit juice	3	1	1	1	-	-
Veneer	-	2	-	-	-	-
Other	5	5	4	7	8	13
Re-exports	10	5	7	6	4	5
Total	100		100	100	100	100

Lack of Government policies, support and incentives to encourage private investors to make improvements in processing and product development, have limited the scope of developing the coconut industry.

Agriculture has low status in society and is not a way to achieve matai (head of extended family) status. Although many matais are successful farmers, their statuses come from their titles and not their occupations. At the present time, there is prestige to be gained in urban employment particularly in the public sector.

### **Programmes and Strategies**

Agro-industry constitutes the major part of the industrial sector in Western Samoa. A large number of possibilities for the future development of agro-processing have been identified based on the availability of raw materials and potential markets.

Additional processing of coconut products is recommended since husks and shells largely go to waste in the country. It has been suggested that this resource could be used as coir and charcoal and in direct energy production. Copra drying and steam for use in oil production could also be husk-fired. A coir processing plant is to be set up by Samoa Tropical Products Ltd, which will provide the basis for the production of rubberized coir matting, but this will be dependent upon the growth rate of the coir industry.

### **Incentives Accorded to Small Scale Processing**

There are not much incentives accorded to small scale processing. Few incentives can be mentioned such as the Export free zone for 10 years and the Income Tax Holiday. The Concession import duties is 5 years. The producers were also encouraged to produce more nuts without spelling out the markets. This means that the supply will be maintained or even increased in the future for the continuous progress of the industry.

### **Research and Development**

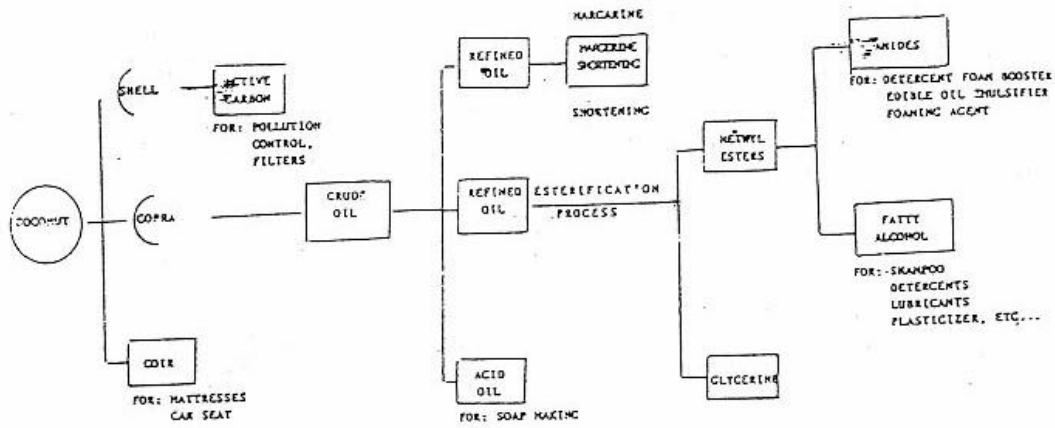
Research and development are developed on an individual basis. Individual enterprises carry out their own research to improve their products. There are no researches on the national level.

### **Future Prospects**

The key development in the coconut industry is the future processing of coconut into several differentiated products. The Samoa Tropical Products Ltd. is involved in a number of product development, including coconut-cream and palusami (a local coconut-vegetable blended product). It has started venturing into other new coconut products. Wet processing is currently undertaken by three private processing companies in Western Samoa.

Further integrated processing projects have been proposed to complement existing industries. The projects are based on optimal use of the coconut crop in a given location.

PROFILE OF COCONUT PRODUCTS



NOTES

1. Copra is the dried meat of the coconut fruit. It is either sundried or kiln-dried.
2. Samoa Coconut Products Ltd is processing Grade I Copra: having the following analysis:
 

Moisture Content	6% maximum.
Oil Content	70% (dry basis)
Free Fatty Acid (Lauric)	1% maximum

and be free from visible impurities, moldy copra and immature kernels.
3. Copra is used as the raw material to manufacture crude coconut oil, but not as food.
4. Crude coconut oil is composed mainly of lauric acid. As a polysaturated oil, crude coconut oil is chemically more stable than soybean oil and groundnut oil. Crude coconut oil from the Project would be a clear gravity of about 0.915 to 0.920.
5. The processing of copra cake as a by-product which is further processed into copra meal pellets also called coconut expeller pellets. Copra meal pellets are used as animal feed.
6. Crude coconut oil is refined to produce edible coconut oil for use in food industries or for home consumption. Crude coconut oil is also made into glycerine, fatty detergent, cosmetic, pharmaceutical and plastic industries.

## References

1. World Bank, Western Samoa Agricultural Sector Strategy Review, pg 7 & 9, 1991.
2. Asian Development Bank, Western Samoa Agricultural Sector Study \_Vol 1 & 2, Vol 1 pg 52 & 157, vol 11 pg 103, Agriculture Sector Study, 1985.
3. Department of Statistics and Department of Agriculture, Report on 1989 Census of Agriculture Western Samoa,
4. Department of Trade Commerce and Industries, Annual Report Western Samoa 1989 & 1990.
5. Fred Opio, Coconut Industry in Western Samoa pg 12, 18-19 No. 7, Asian and Pacific Coconut Community.
6. Central Bank of Samoa 1991 Bulletin Vol (vi) No 1 P9 13, 46.