

Coconut As Food

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WITH the advent of Philippine independence in 1946, the Philippine coconut industry, livelihood and mainstay of four million Filipinos, will face the worst crisis it shall ever have faced in its entire history. The coconut industry has for many years contributed to the wealth of our people. The annual exportation of copra, coconut oil, desiccated coconut and other coconut products valued at about sixty million pesos, will not only be diminished, but perhaps completely stopped and both the coconut planters and our government will suffer from the very heavy loss.

Fully realizing the gravity of this impending catastrophe, His Excellency, the President of the Philippine Commonwealth, by virtue of the passage of Commonwealth Act No. 518 on May 7, 1940, created the National Coconut Corporation to save the coconut industry from perdition. This corporation deserves much credit for the tangible accomplishments it has achieved within the short span of its existence.

One of the activities of the National Coconut Corporation is the population of coconut as food and I am very happy to say that the Plant Utilization Division of the Bureau of Plant Industry has been able to do its share in cooperating with the National Coconut Corporation. In fact, even before the creation of the National Coconut Corporation, and since 1933, the Plant Utilization Division, formerly Home Economics Division of the Department of Agriculture and Commerce, has been experimenting on the utilization of coconut as food and has made demonstrations all over the Philippines on the diversified ways of preparing it as a component of our diet.

On February 15 of this year, the opening day of the Exhibition of the nacoco products at the Manila Trading Center of the Bureau of Commerce, a mimeographed pamphlet by Mrs. Paciencia E. Lopez and Miss Maria Y. Orosa containing 66 recipes on COCONUT were distributed. These were recently printed at the expense of the National Coconut Corporation and are being distributed to all interested parties, free of charge. This is now being revised and enlarged to include 50 recipes of coconut dishes; 70 recipes using green coconut; 70 recipes on mature coconut; 50 recipes on coconut candies; and 70 recipes on coconmeal flour (Lava flour).

The value of coconut in our daily diet can-

not be over-emphasized. It is general knowledge that the diet of our masses is deficient in fat, protein, minerals, and vitamins and addition of coconut will undoubtedly mean its improvement, for coconut is rich in fat and protein.

Johns, Finks, and Gersdorff of the U. S. Department of Agriculture and Commerce, who perhaps made the first studies on

the nutritive value of coconut meat, found that the principal protein of the endosperm of the coconut contains all the basic amino-acids essential to growth and maintenance. Mitchell and Villegas who worked on the digestibility of proteins from different feeds found that on a 5% protein the average utilization of coconut meal protein is 77%, of corn 72%, and of soybean 78%.

Cajori, who made some metabolism experiments on men and dog on the utilization of the nitrogen in protein-rich nuts, found that the "coefficient of digestibility" of the different nuts are as follows:

Litchi nuts	81 - 82
Peanuts	81 - 85
English walnuts	83
Pecan	83 - 84
Almond	84 - 82
COCONUT	87 - 89
Brazil nuts	88
Almond	84 - 89
Peanut paste	90 - 92
Pecan paste	81 - 83

Langworthy and Holmes of the U. S. Department of Agriculture, found that the "coefficient of digestibility" of coconut oil is 97.3; sesame oil, 98; cacao butter, 94.9; and the energy actually available to the body is 93.1 for coconut oil; 93.9 for olive oil; 93.4 for cotton seed oil; 93.9 for peanut oil; 92.6 for sesame oil; 91.9 for cacao butter.

Godbole and Sadgopal found that while cow's milk contains only 63.5% of assimilable glycerides, buffalo milk 56%; beef fat 48%; and mutton tallow 45%; coconut oil contains 91%. In other words, the coconut oil contains the highest percentage of assimilable glycerides and is even more digestible than butter fat.

With reference to the vitamin content of coconut, the work of Sherman showed that it is a poor source of vitamin A; but a good source of vitamin B.

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min B and G. The work of Miller showed that the soft spoon or young coconut has a higher vitamin A content than the mature one. There seems to be a conflicting report on the vitamin C content of coconut for while some investigators believe that vitamin C is lacking in all forms of Coconut others believe that it is present in water and in the soft pulp juice of the young coconut. BANERJEE found that the coconut palm juice is very rich in vitamin C and that it did not change in quantity after spontaneous fermentation for 24 hours. He also found that the green coconut kernel contains less vitamin C than the coconut palm juice. Biswar and Ghosh found that the largest amount of vitamin C is found in the follicle of the germinated fruit, that the vitamin C content in the water is richest in the green nut with soft pulp and that it diminishes in the water and pulp as the coconut matures. Hehmano and Sepulveda who worked on the vitamin B content of different Philippine foods found that the immature meat contains no appreciable amount of vitamin B. Salmon and Goodman, however, found that mature coconut has sufficient vitamin B content.

NEW TURNS

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Conclusion

By and large, therefore, it may be broadly stated that—

(1) Prices of Resecada are the best since the start of the war and judging from recent trends it may be said that producers may yet obtain higher re-

A certain amount of roughage in our diet is conducive to a normal assimilation and the intake of concentrated foods alone is often the cause of digestive disturbance. It follows, therefore, that coconut may be most advantageously used in a diet consisting of bread, crackers, biscuits, cakes, boiled rice, and boiled roots.

Dr. Vicente Lava of the Bureau of Science, produces coconut milk which is very palatable and highly nutritious as a by-product of the Lava process in the manufacture of deodorized highly refined coconut oil. He claims that the lacking vitamin A and inorganic constituents, may easily be supplied. The coconut milk he makes when flavored with chocolate has a better taste than other coconut products here. In the Lava process, coconut flour is also produced as one of the by-products. This flour makes good cakes, breads, biscuits, muffins, and many other palatable preparations. Recipes of this flour will be included in the revised, enlarged booklet on coconut by Mrs. Paciencia E. Lopez and Miss Maria Y. Orosa.

I hope that I have succeeded in convincing you that coconut is an excellent food. For better health and for the good of the coconut industry and more coconut in your daily diet.

turns for copra, more particularly so if one of the objectives of the National Coconut Corporation to the effect that only white and clean copra be produced could be realized sooner than expected.

(2) The loss of the European market, at least while the war exists, may in time be offset by the increasing demand from nearby countries and the development of markets which are deficient in fats and oils.

TABLE I—PHILIPPINE COPRA EXPORTS

Country of Destination	1 9 3 9		1 9 4 0		1 9 4 1 (*)	
	Quantity (Kilos)	Value (Pesos)	Quantity (Kilos)	Value (Pesos)	Quantity (Kilos)	Value (Pesos)
United States	225,076,847	15,060,132	213,601,478	12,382,764	134,820,416	9,176,545
France	46,290,571	3,104,337	34,182,505	2,615,805	—	—
Russia	—	—	22,488,144	1,129,881	5,892,800	261,000
Sweden	16,578,194	1,108,828	12,126,695	857,978	—	—
Great Britain	—	—	8,079,437	425,305	—	—
Spanish Africa	—	—	4,927,600	388,000	—	—
Denmark	17,144,855	1,160,636	5,384,000	369,520	—	—
Spain	1,524,000	100,000	5,080,000	250,971	—	—
Italy	—	—	2,635,449	173,012	—	—
Mexico	27,292,795	—	2,336,800	160,000	—	—
Panama, Republic of	—	—	724,648	34,206	516,304	36,500
Japan	2,151,183	145,362	210,289	6,080	29,157,531	2,527,476
Egypt	2,328,996	153,367	51,690	5,000	—	—
China	499,060	32,280	101,600	4,200	8,271,166	560,418
Germany	5,853,213	367,163	—	—	—	—
Malaya	459,817	26,926	—	—	—	—
Netherlands	50,269,688	3,284,163	—	—	—	—
Turkey	610,759	54,490	—	—	—	—
Chile	2,292,121	163,740	—	—	406,400	60,143
Gibraltar	2,295,038	167,500	—	—	—	—
TOTAL	400,667,137	26,802,495	311,930,371	18,802,722	179,064,617	12,622,082

(*) January-July, 1941 only