

THE COCONUT

The Role Of Coconut In Our National Defense

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MODERN war as well as modern defense involve mobilization of the entire population and adjustment of the whole economic structure of the nation. Since food is a vital element in the lives of people, proper nutrition is therefore of paramount importance in the defense program of any nation.

It is now acknowledged by military strategists that the value of food as a vital factor in life is much more significant in times of war than in time of peace. The need for a well fed army requires no argument. To be strong and sturdy the soldier must be well nourished. In times of emergency it is equally important that the civilian population should be well fed to maintain the morale. A diet, therefore, consisting of local materials which will offer the essential requirements but at a cost within the reach of the poor people should be sought by the government.

According to the latest statistics, we are importing a monthly average of 3,247,896 kilos of vegetables and 1,231,495 kilos of fruits and nuts. This volume must be reduced if not actually avoided. Ours is a tropical country where vegetables and fruits grow easily and luxuriantly all year around. We have a fruit grown abundantly in this beautiful isles rightly called the "fruit of life". This fruit is coconut and is entirely neglected by many of our people. I am not going to speak of the several uses of coconut for war purposes. Because of the limited time at my disposal I shall limit myself to say a few words on the food value of the coconut.

Human being requires for satisfactory nutri-

tion and growth air (oxygen), water and food. The food that we consume must contain the following factors:— proteins, fats, carbohydrates, minerals and vitamins.

The Mineral and Vitamin Content of the Coconut

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It is surprising how little work has been done in the Philippines on the nutritive value of the coconut. Some investigations, however, are in progress at the present time. As a source of minerals, the coconut contains an appreciable amount of phosphorous, a smaller amount of calcium and a very small amount of iron (1). According to the work of some investigators, the young coconut or "buko" is slightly higher in these minerals than the mature coconut (1). The availability of these minerals to the human body when they are furnished by the coconut is still unknown.

Coconuts also contain a small amount of some of the vitamins. Investigators have reported the presence of vitamin B₁ and riboflavin in the coconut. Analysis also show that some vitamin C is found in the water of the green nut having soft pulp (2), (3), (4). The juice of the coconut palm is higher in vitamin

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The kernel of the coconut contains all three of the major constituents namely, protein, fats and carbohydrates, though it is not equally good source of all of them.

By special process, it has been found possible to extract the protein from coconut in a pure form. This protein is valuable in animal and human nutrition. Unlike a number of plant proteins, (such as those of corn and barley) that of the coconut is fairly satisfactory. Studies in America have shown that the globulin fraction of the proteins of coconut produces normal growth when used as the sole source of protein in an otherwise complete diet.

But the coconut's highest contribution to human and animal nutrition is its oil or fat. Among many other val-

ues, coconut oil has been found to be the most easily digestible of all the edible fats in general use, and that margarine made from this oil is more readily digested even than butter. Recent work on the rate of digestion of fats by Miss Hartwell of King's College, London, seems to corroborate the above view. Coconut oil may prove a more valuable food than has hitherto been supposed. Coconut oil as a source of fat in the diet is more satisfactory than other fats in economizing vitamins E and B₁.

Estimates from various sources indicate that

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ROLE OF COCONUT . . .

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90 coconuts per capita are consumed annually in the Philippines compared with 150 per capita in Ceylon. The importance of utilizing coconut as a supplementary food in our daily diet may be summarized as follows: First, and foremost, the contribution of fat to the diet, is considerable. If we take into consideration that the main defect of Filipino diet is the low fat intake, the increase consumption of coconut oil or fat by our people will supplement this deficiency. Furthermore, fat as you all know, is high in caloric value. One gram of fat yields 9.3 calories, compared with 4.1 calories for each gram of either carbohydrate or protein. This country is importing fat for food purposes to the value of many thousands of pesos annually. A large part of this amount can be saved by utilizing coconut fat and oil as food in our daily meals. Second, coconut provides, biologically, good protein, some carbohydrates, particularly sugar, and little water soluble vitamins B and C in toddy. On the other hand, it contributes little or none of the fat-soluble vitamins and mineral salt requirements of diet, which must be provided by other foodstuffs particularly milk and eggs.

I believe the great majority of our people are yet to realize the value of good nutrition. Somehow or some way, as a nation, we have to adjust our food habits and our diets to the newer knowledge of nutrition. This adjustment, even if it takes a long time to filter through the entire population should be continued.

We need to make the Filipino people nutrition-conscious in terms of nutritional science of today. If the great mass of our people could be brought to understand the relatively simple, basic principles of the modern science of nutrition and understand our deficiencies, the unsatisfactory nutritional status of no less than 50 per cent of our population may be improved.

The human resources of the nation must be maintained to a high degree of reserve status, so that it can give its best if called upon in time of emergency and national crisis. If this nation should be forced into war, it is absolutely necessary that every man, woman and child in this country should be prepared by being in the best physical and mental condition to maintain, preserve and defend our democratic ideals. We can only accomplish this if our people are properly fed.

NUTRITIVE VALUE . . .

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One of the facts known about coconut is its oil content. A single mature coconut yields in oil alone about 116 grams or in terms of calories about one thousand and forty-four calories. From its protein we could get sixty calories and from its sugar content about forty-two calories. This gives us a total of one thousand two hundred and forty-six calories. Each person requires a particular amount of food for perfect health and vigor—which means so much in terms of calories. We take any person and knowing his age, height and occupation, we determine the total calories required. Let's take a girl of eighteen, five feet two and we know that she needs from 1,800 to 20,000 calories from food a day. If she is "skinny," she is probably twenty or thirty pounds underweight. If she took to eating any of the varied coconut confections, she would be getting additional calories not only from the coconut itself but also from the sugar used in the confection. She might take her coconut in the form of a refreshing glass of the young spoon or "buko" and taken three or four times daily this would insure her the much needed additional calories.

To a thrifty housewife with the limited allowance of sixty cents, eighty cents or even a peso a day, this food is certainly a God-send. For every two or three centavos invested in a coconut she gets one thousand and two hundred calories. A tablespoon of the coconut eaten with our rice cakes could give us two hundred and eighty-four calories. In preparing diets for our poorer classes we have found the greatest problem in providing sufficient calories for the whole family. There are usually so many members, and a family of twelve living on sixty centavos a day finds a great difficulty in adjusting food needs with the money on hand. Where one half of the money is spent for rice, the three centavos spent for coconut could give her as much heat as five pork sausages which might cost her from eight to ten centavos.

In case of emergency, the coconut would be a worthy substitute for whatever we may have to forego. The other speakers have given you all plenty of things to think about and so, I close asking all to join hands together in building up our youth with proper food habits and urging them to maintain the attitude that whatever eventuality may take place, it shall be faced with faith and courage.