

ECONOMIC LOSSES TO THE COCONUT INDUSTRY CONSEQUENT ON DETERIORATION OF UNDER-DRIED COPRA

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Resume of Paper*

Copra is a perishable food commodity, and the amount of deterioration and depreciation that can occur in the product after manufacture is very great indeed. It is considered that a proper understanding of this aspect of copra research would be of importance and positive value to both producer and consumer alike.

The coconut kernel contains reserves of stored food material for utilisation by the embryo during its germination and early phases of growth. These food constituents include the major and essential factors: fat, protein, carbohydrate, mineral salts and certain vitamins. In its fresh state the kernel also contains a good deal of moisture averaging about 44 per cent. A freshly opened coconut may thus be regarded as an almost perfect medium for the growth and multiplication of moulds, yeasts, and bacteria. The fact that biological deterioration sets in so readily in the fresh kernel and its products, is therefore quite easily understandable.

During the course of deterioration, the chief visible results on the copra may include a superficial or internal discolouration of the meat associated with a breakdown of the tissues. Whilst a slight and superficial discolouration may not have serious consequences, tissue degeneration is always known to materially affect the character and quality of the product.

The paper deals with the analysis of the causative factors of deterioration and a discussion of the different precautionary measures, that could be taken to prevent (or at least minimise) degenerative changes in copra. On the basis of experimentally obtained values the various types of losses involved in copra deterioration are considered from the quantitative angle. A survey is made of all available previous work on this subject.

The present investigations coupled with research done in other countries have convincingly shown that half cured and under-dried copra is a very unstable and unsatisfactory product. It is indeed very susceptible to

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processes of biological deterioration which bring in their train concomitant losses to the producer and the industry. It has been shown that these losses could assume very severe proportions under extreme conditions. On the basis of Ceylon's export statistics, it has been computed that losses ranging between 14 and 36 million rupees could be incurred by the industry annually, if the two major export products are prepared from the grossly under-dried meat.

It is generally reckoned that well over half the world's copra is sub-standard in quality and is handled commercially in an under-dried condition. This being so, it will be readily appreciated that the consequent global losses could be expected to be phenomenal.

Since the present investigations were initiated at the request of the Food and Agriculture Organization of the United Nations, it is hoped that action at an international level will be taken towards an amelioration of the situation which is indeed unsatisfactory.