

A B S T R A C T

The copra industry in Trinidad and Tobago has been on the decline mainly due to the difficulties experienced in recruiting and retaining labour for the largely manual operations involved in the processing of copra. It is believed that mechanisation of these processes may lead to a reversal of the current decline in copra production, and a study was therefore undertaken with a view to develop an appropriate sequence of mechanised processes for extracting the kernel (meat) from the shell of split, ripe dehusked coconuts.

The scheme of operations finally arrived at comprises the following sequence of processes:-

(i) Breaking the interfacial bond between the meat and the shell of the split nut. It is shown that this can be achieved by subjecting the split nuts, for periods up to about 18 minutes, to environmental temperatures of between 175°C and 275°C.

(ii) Breaking of the split nuts into smaller pieces subsequent to the above operation. It is shown that this can be achieved by an impact machine and that on being so broken, an intimate mixture of loose pieces of meat and shell results.

(iii) Separation of the meat and the shell. It is shown that this can be achieved by a mechanical separator, the operational principle of which is based upon the difference in hardness between the meat and the shell.

The processes and the methods described are capable of being utilised in a continuous flow operation and should prove of value in the copra industry.

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