SUMMARY & CONCLUSION

(I) Two main types of cheese were made during the investigations.

Viz: A soft cheese having a moisture content not less than 60% and a semi-hard cheese of moisture content 44-46%. The first type has poor keeping quality and is meant to be consumed within 4 to 4 days if kept exposed to external contaminants, while the other has good keeping quality and this is due to the fact that it is pressed and waxed. The manufacture of certain beverages using the by-product whey was successfully carried out, while precipitation of whey protein and its subsequent extraction in a powder form was looked into. However, more work has to be done in this field before one could make any head away in putting out a specific product.

(2) The feasibility of carrying out these operations at the village level was looked into and the chances of such a project working smoothly are good, if it is initially started as a co-operative based industry in a few selected villages, preferably in conjunction with what are called 'community kitchens'. The idea is to encourage the small holder to collect as many gallons of milk as possible and bring them along to the processing centre of village. The technical know-how has to be gradually conveyed to the people of the particular village by trained personnel and the quality of the cheese made by the former will have to be closely watched over a period of at least six months. It is

important to link this process with the so called 'community kitchens' now found in so many villages in Sri Lanka. 'Community kitchen' in its simplest form represents a central place where villagers bring their produce for the purpose of cooking.

(3) Implementation of such a co-operative based project should be done subsequent to pilot plant investigations, at the selected sites. The conversion to cheese of about 0.I% of the total amount of milk collected in Sri Lanka is justifiable for a start and it is important to introduce a standerd method for cheese manufacture at the village level. This will avoid instance where an unhygenic product is manufactured. Today three or four types of acid-curd cheeses are available in the local market but are by and large not satisfactory. However, according to Siegenthaler (I974), the production of a white unripened cheese under fairly primitive, tropical condition could be recommended, if the said cheese is stored in brine and put in fresh water for a few hours before consumption.

(4) Finally it should be stressed that though milk is a nutritious and popular drink, its keeping quality often is poor under local tropical conditions. The production of curd out of buffalo milk is one way of preservation of the milk. But cheese has more nutritious value per

unit weight than most form of dairy products found in Sri Lanka and its production at village level may involve only a fraction of the cost of manufacture of many processed milk products.

Protein contents & protein biological quality values of a selection of food stuffs.

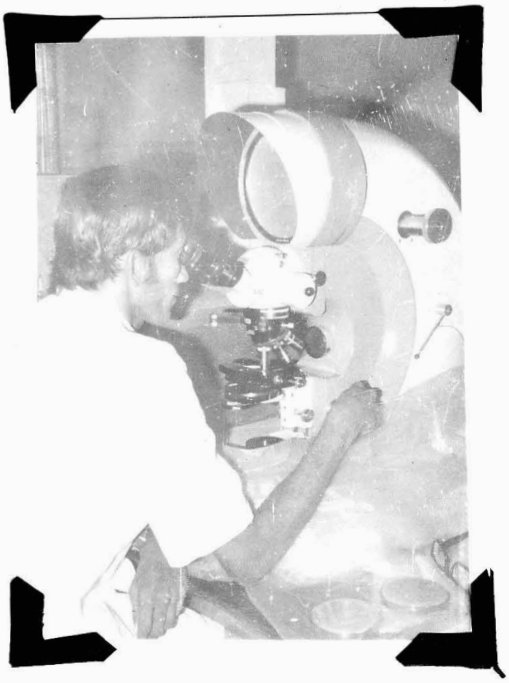
Foodstuff	Moisture %	Protein Content %	Protein Biological Value Chemical Score (x)
Milk, Cow's (Whole, untreated)	87.3	3.5	60
Milk, Cow's (powder)	4.0	26.0	64
Milk, Buffalo's (Whole, untreated)	83.0	4.0	73
Cheese (all types)	5I.0	I8.0	62

Extracted from "Amino-acid content of Foods & Biological Data on Protein" FAO Nutritional studies No:24, I970.

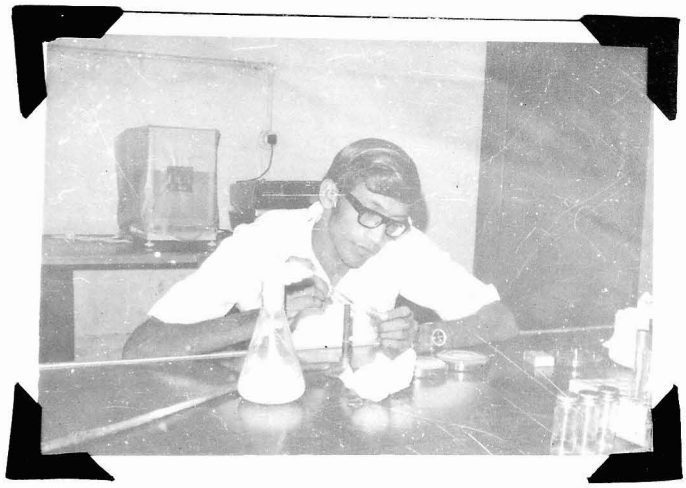
(x) Composed with the essential amino acid pattern of egg.

Therefore considering its keeping quality, nutritive value, cost of production and last but not the least the consumer acceptance, steps should be taken up by the Ministry of Industries & Scientific Affairs to carry out further investigations and implement such a project at village level.

PLATING OUT CULTURES

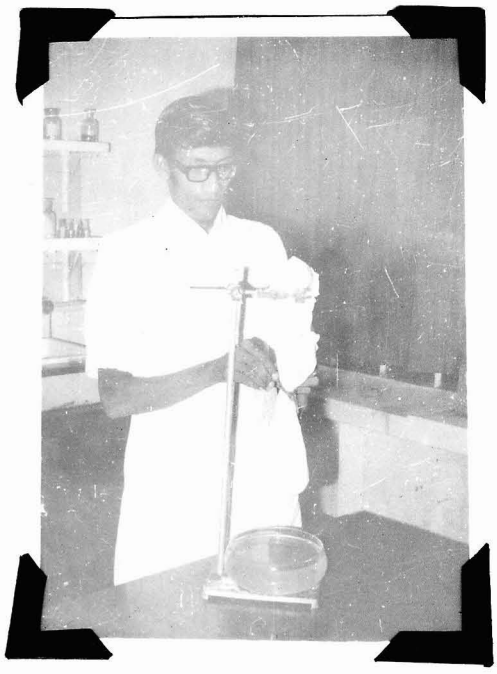


EXAMINATION OF CULTURES
UNDER THE MICROSCOPE

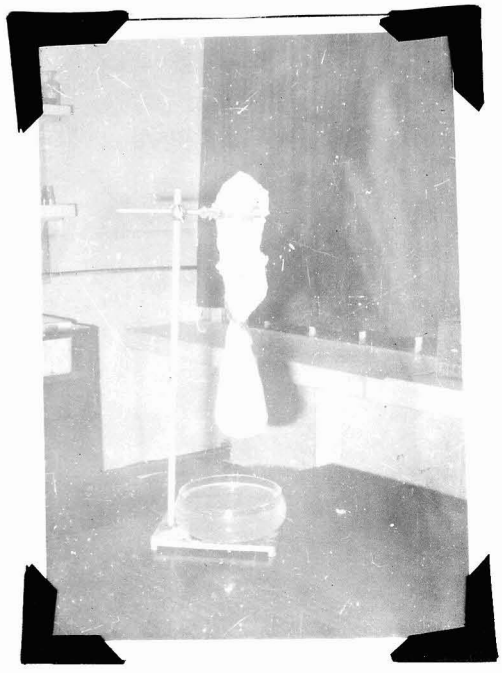


INNOCULATION OF THE MOTHER CULTURE USING A FREEZEDRIED INNOCULUM

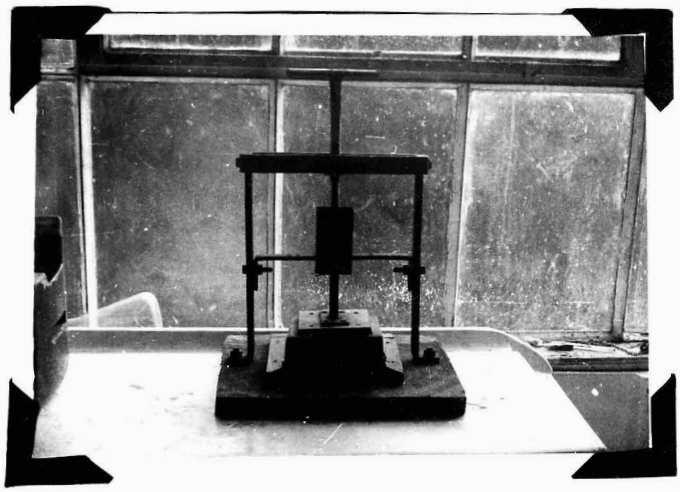
INCUBATION OF THE MOTHER CULTURE



SUSPENSION OF THE MUSLIN BAG WITH CURD



DRAINAGE OF WHEY FROM THE CURD



SMALL SCALE VERTICAL HAND PRESS
USED FOR PRESSING CHEESE

MANIPULATING THE PRESS

CENTRIFUGE USED IN THE EXTRACTION
OF WHEY PROTEINS

A BLOCK OF CHEESE AFTER 'WAXING'

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