

INTRODUCTION.

Trinidad is a country which has normally imported most of its concentrated feeding stuffs from abroad. This is a rule involves the use of hard currency, and can therefore be a considerable drain on the dollar resources of the Colony. It is essential therefore to make every economy in dollar transactions, and reorganise the buying programme to make the fullest and most profitable use of all funds spent in hard currency areas.

Most of the concentrates imported are used to feed the cows producing milk. Any decrease in the supply of concentrates available would immediately reduce the already limited supply of fresh milk on the market. If, however it did become necessary to reduce imports for any reason, or if they were unavailable as in wartime, the only alternative is to utilise home produced foodstuffs. Some of these are already utilised here, such foods as maize meal, coconut meal, rice bran and molasses, etc.. Other possibilities are available, but experiments need to be carried out in order to find out to what extent they could be used successfully in livestock feeding. These include such by-products of local industries as citrus peel, rum yeast, and bagasse pith, all of which are potential foods. If these by-products could be ^{used} successfully to replace part of a more expensive concentrate ration, the cost of production of liquid milk would be considerably reduced. An increase in milk production would then become possible, which is very desirable since liquid milk is much more nutritious than the reconstituted product as largely used at present.

Much work has already been carried out on the possibilities of feeding urea to cattle as a protein substitute. The rumen bacteria are able to utilise the nitrogen provided in the urea and use it for the synthesis of body protein. This protein can in turn be digested by the animal. If urea could be used in large quantities many cases of protein shortage could be easily overcome. Unfortunately, when fed in quantity urea proves toxic even to ruminants. A certain minimum amount of protein as such must always be fed with it.

Work on feeding bagasse has been carried out in Trinidad, and also in Hawaii and the United States of America. However, it was suggested by the Sugar Chemistry & Technology Department of I.C.T.A., that the present experiment should be carried out using bagasse pith sifted from the bagasse. This is a finer and less fibrous material than the normal factory product. It would be used primarily as an absorbent for the molasses, but it may provide some energy for the ruminant animal by way of rumen cellulose digestion.

The feeding of molasses is already an established practice in cane and beet producing countries, and its value as a source of carbohydrate is well known.

If these by-products could be used to form a balanced ration, or part of a balanced ration, considerable saving would result, and the cost of milk production could be substantially reduced. Although molasses has risen in price from 16 cents per gallon when this project was undertaken to 35 cents, and the production of urea has been shelved indefinitely, the results would still be of great value, since the present price of molasses is extremely artificial, and urea could always be produced in Trinidad were sufficient demand and capital available.