A CASE TOWARDS REVITALIZATION OF THE DAIRY INDUSTRY IN JAMAICA

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Objective: Jamaica has been a major producer of cow's milk, however over time the importation of milk power into Jamaica is destroying the potential of the Jamaican Dairy industry. This paper seeks to investigate the socio-economic and nutritional implications of increased powdered milk consumption as opposed to locally produced pasteurized fresh cow's milk in Jamaica.

Design: Methodology followed in undertaking the Study included review of available literature in the Library of UWI and the Internet. Databases vistited include Trade Databases, Jamaican Ministry of Education, Agricultural and Production Databases. Using the statistics and estimates derived from the sites different scenarios were assessed to calculate;
How much fresh milk is required to produce the milk powder imported into Jamaica
The reconstituted yield of the milk powder imported into Jamaica
Estmation of the amount of cows required to produce the imported milk powder
Estimation of the amount of pasture land required to produce the imported milk powder
Estimating amount of grass required to produce the imported milk powder
Value Chain Analysis of milk production in Jamaica.

Results: Due to a lack of critical information the value chain analysis does not offer the true benefit of cost and production analysis. However, calculations were done using ranges obtained from JDDB, books and credible Journals. Jennings assesed overall productivity of Jamaican farms at 4032 litres per hectare, while JDDB estimated output per hectare in 2009 was 4300 litres. Given that Jamaica's permanent pasture land is 5170 square km or 517,000 hectares . Jamaica can produce 2,084,544,000 Litres per year (Jennings) or 2,223,100,000 Litres per year (JDDB)

Using WHO recommended consumption of 200ml of milk per day and given that the Jamaican population which is approximately 2,847,232 (July 2010 est.) .The yearly estimate of milk required to meet the recommended (WHO) milk intake for the Jamaican population would be (569,446.4 *365.25) = 207, 990,298 litres per year.
Thus, it can be assumed that Jamaica has the capacity to be self sufficient in meeting its fresh milk consumption needs according to WHO recommended intake.

Conclusions: From a nutritional standpoint it can be observed that powder milk offers no nutritional advantageover fresh pasteurized cow's milk. In fact, powder milk is more susceptible to nutritive loss during processing as well as during storage. As a result of the addional processing required for powder milk production heat sensitive nutrients and flavour compounds can be negatively affected. Milk powder is more economically and energetically expensive to produce compared to fresh pasturized milk. Regular consumption of low fat dairy is associated with weight maintenance, decresed LDL cholesterol, reduced hypertension, cardiovascular disease, diabetes, some types of cancer and promotes bone and dental health. Although consumption of fresh milk in Jamaica has dropped and current intake for the average Jamaican is 37.5 ml per day compared to the recommended 200 ml (WHO), value added dairy consumption has increased.