

Milk Consumption, Distribution, In Fortaleza, Brazil

By Elmer L. Menzie and
Nilo Alberto Barroso

Fortaleza, with a population of more than 700,000 persons, consumes a relatively small amount of fresh milk each day. Estimates are that about 50 grams per day or about 18 liters per person per year were consumed in the area in 1965.

For the same year production per capita for the State of Ceará was estimated to be about 28 liters. However, some of this milk is used for products such as cheese, butter and cream. Some supplies of powdered milk are imported from other parts of Brazil, mainly to Fortaleza. In 1961 these imports were estimated to add about 12 liters per capita, on a fluid milk basis, to the supplies of milk in the city.

Severe Cost Factor

In general the population of Fortaleza cannot afford the luxury of fresh milk, which sells for 350 to 400 cruzeiros per liter (about 13 to 15 cents on basis of the current rate of exchange). Assuming one liter of milk consumed per day, this would cost the equivalent of about 20 percent of the current minimum salary in the State of Ceará.

Aside from the relatively high cost of milk in terms of income in Fortaleza, there is a lack of understanding of the value of milk, especially in children's diets. In most homes children drink coffee from a very early age.

In the United States, as income and numbers of children increase, milk consumption increases. A recent study in Fortaleza found that there was almost no relationship between milk consumption and either income or numbers of children in the family. In fact, there appeared to be a nega-

Elmer L. Menzie is a professor in the Department of Agricultural Economics, University of Arizona and advisor in Agricultural Economics, Fortaleza, Brazil; Nilo Alberto Barroso, assistente, Departamento de Economia Agrícola, Universidade Federal do Ceará, Fortaleza, Brasil.

tive relationship between per capita milk consumption and the numbers of children less than five years of age.

Many consumers apparently do not like milk, which undoubtedly has a bearing on the fact that children are not encouraged to drink it. For many the price is considered too high in relation to other foods. For some, product quality and other factors influence their decisions.

Some Milk Pasteurized

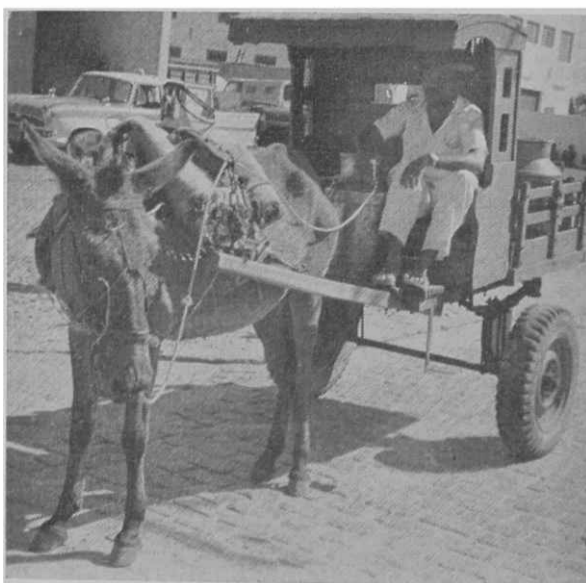
Milk marketing in Fortaleza is not well organized and product quality is generally low. Since June 1964, there has been one pasteurization plant in operation in the area. Until early 1966 this plant pasteurized only 6,000 to 9,000 liters of milk daily, or about 20 percent of the production in the area. In more recent months it has handled up to 18,000 liters. Milk from this plant does not meet standards for fresh milk in general, but it is a substantial improvement on alternative methods. (This plant was established in conjunction with a USAID Food for Peace Program.)

The remainder of the milk sold is delivered by truck, mule cart or other available means. Sometimes it is delivered to distribution centers in various parts of the city, or it may be delivered from door to door. In order to assure safety for health, consumers generally boil the milk before consuming it. Since few consumers have refrigerators, the milk may be boiled more than once before it is used.

Future Changes Indicated

These conditions are due for a rapid change in the near future. In addition to the current pasteurization plant, a new plant is nearing completion and will soon open. This plant will have a capacity of 60,000 liters daily, providing the area with capacity for milk pasteurization of 80,000 liters

MILKMAN delivering milk, Fortaleza.



PASTEURIZATION plant, Fortaleza.

daily, which is considerably in excess of current production.

It is anticipated that a law forbidding sale of other than pasteurized milk will be enforced. Since operators of the plant plan to use modern trucks for pick-up and delivery, the current system of milk handling and distribution will undergo a complete transformation.

Changes in distribution will not eliminate all the problems of obtaining a high quality product, since conditions of production also merit improvement. These are changing, however, and demands of the new system of distribution will force rapid adjustments.

Expect Higher Consumption

With an improved product and with education as to the value of milk in children's diets, milk consumption can be expected to expand. Nevertheless, low levels of income will continue to keep the product relatively unavailable for the majority.

It would be desirable to improve and expand such programs as milk distribution in school lunches. These programs act as an educational device in milk consumption, improve diets and assist the children from poorer families to attend school. If locally produced milk were included in the programs, that would also spur production.

The world has soil resources to more than double the present area of cultivation, according to soil survey data of the Soil Conservation Service.

The lack of increased and widely spread technology, and of the development of transportation and markets, limits food production in most countries far more than any lack of soil resources.

Interpretation of SCS maps indicates that there are about 7.8 billion acres of potentially arable soils in the world, of which about 3.4 billion are now cultivated. Most of this area is well or moderately watered.