

## Mauritanias experience in the commercialization and valorization of camel milk production

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### Abstract :

Mauritania, with its geographical position, is a Sahelian country whose climatic and socio-economic conditions make it a dromedary breeding country par excellence. The camelin population is estimated at 1.4 million heads for a population close to 3 million inhabitants. Dromedaries play an important role in the Mauritanian economy through their supply of meat and milk, transport and other services. With the urbanization and the population growth in the country are accompanied by an increase in demand for milk and dairy products. In recent years, we have seen the growth of camelin breeding near large cities and urban centers. This developed peri-urban camelin system is for the promotion of milk which is highly prized by Mauritaniens. During the night, consumers go to the outlets to buy fresh camel milk sold on site. These points of sale are easily identifiable and are generally located on the roads of urban centers. In big cities such as Nouakchott and its periphery, there is a large estimated number of 2000 to 2,500 head of dromedaries, particularly for dairy production. In dromedaries, two milking per day are practiced after stimulation of the camel by the camel. The daily production is of the order of 8 to 10 liters at the rate of 4 to 5 liters / milking. Dairy females raised in these urban centers are selected and selected from the best dairy in pastoral areas. Some breeders prefer to sell directly to consumers for economic reasons (high price). However, largescale livestock producers and cooperatives supply dairy farms that were established in the 1990s. These industrial companies supply the national market with a range of dairy products of camelina origin. The camelina industry in Mauritania, as a whole, suffers from a real lack of organization and the breeding conditions are fragile. But the start-up of the Camelin Livestock Development Center in Mauritania, with the support and backing of the FAO, will constitute a new framework and a strategic vision to enhance the sector.

At the world level, camel milk is representing 0.36% only of the produced milk: However, this proportion is doubled since 1961. Proportionally, the growth of camel milk production, which is 6% per year on average for 50 years, is 3 times higher than the

growth of cow milk. Moreover, camel farming being limited to arid countries, this proportion could be locally more important, overpassing 10% in the Horn of Africa. Besides, since the beginning of the year 2000, the demand for camel milk is exploding both in the "camel countries" and in western ones, and this, for 3 main reasons: (i) the "merchandizing" of the camel milk; (ii) the climatic changes; and (iii) the enthusiasm for the virtues of camel milk, proved or not. In this context of increased demand, we assist at two important trends: the modernization of the camel milk processing with an increase involvement of the dairy industry, and

a diversification of the offered products from camel milk. Traditionally consumed under crude form or in some areas under fermented form, the camel milk is expected to be proposed to the new urban consumers under more diversified products, responding to the modernization of the life style of most of the camel countries. Thus, new products as ice-cream, pasteurized

milk with different flavor, chocolate and other sweets are already available on different markets in Kazakhstan, UAE, Morocco, India, Saudi Arabia, Algeria, Mauritania, Egypt, Australia etc. Due to the physico-chemical characteristics of camel milk, other products such cheeses or yoghurt require more scientific investigations and financial investments to start market' valorization. The camel milk powder is taking its own way of development. Indeed, nowadays, camel milk powder is available on the international market, but its use is still limited, especially in agro-food industry, except for chocolate production. Camel milk powder is also included in para-pharmaceutical field as nutritional additives (capsules for diabetetic treatment for example). Moreover, camel milk is also valorized as ingredient in cosmetic products (skin cream, shampoo, lip stick, etc ... ). However, some of the available camel products as pasteurized camel milk or ice-cream were poorly investigated by agro-food research. Other products, despite more convenient studies, as cheese or yoghurt, are poorly available on the market. But, globally, there are strong new opportunities for both camel scientists and camel dairy industry to better valorize the 'white gold of the desert'.

Nancy Abeiderrahmane has addressed these issues over time in several ways through the design of her business model. She built a dairy with two units: a pasteurization unit and, more recently, a UHT factory, which was designed to capture overproduction milk during the rainy season. The cumulated investment in the dairy is an estimated four million euros (one million euros in the gradual growth of the original plant, and three million euros to build the UHT plant). The UHT plant required a loan of two million euros that was comprised of 500,000 euros from Proparco, 500,000 euros from the International Finance Corporation and 1,000,000 euros from GBM, a local bank (backed by a line of credit from the European Investment Bank). The remaining one million euro investment was provided by Tiviski's cash flow.

Some herders deliver their own milk to the collection centres; others rely on transporters to collect the milk in the villages and transport it to the collection centres. Milk collection in the villages and transport to the collecting points is done by pick-up trucks and donkey carts. Each supplier of milk to the collection centres has a supplier code number.

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