

SESSION 4: TO EACH HIS OWN MILK

Presided by Françoise Sabban

Milk– A Life Line of India

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Historical aspects

As in other parts of the world, milk integration in Indian subcontinent grew as human culture developed along the rivers. One of the two old Indian epics – Mahabharata mentions cattle centric communities and kingdoms depending on animal and milk economy. Lord Krishna belonging to this era – still worshipped and valued – represented community raising cattle for milk production. **During the period of 3,000 year B.C. archeological evidence** at Mohenjadaro and Hadappa demonstrates Indus Valley civilizations and presence of cows as an important aspect in life of the society. During the period of 500 years BC, Charaka a well-known practitioner of indigenous medicine recorded importance of milk and its products in human life; he has advocated that for human beings, besides mother's milk, can routinely consume milk from other mammalian species like cow, buffalo, sheep, goat, camel, elephant and horse for meeting daily needs, medicinal use of milk from other mammalian species (like donkey, tiger etc.) was also advocated by him in correcting specific ailments. During this period extensive study on varying uses of milk, specific products derived from milk fermentation and those heat-based products seem to have been made and their use in promoting well-being of human was demonstrated and advocated.

Socio cultural aspects

According to Hindu mythology, **a milking cow symbolized as 'Kamadhenu' (one who fulfills all desires)** still occupies an emotionally important place in the heart of Indians. Use of milk in India crosses all barriers of religions, castes, socio - cultural and economic classes in the society. It is still a common practice to find people of certain communities leading migratory life with milking and growing animals affecting availability and supply of milk and milking animals at a given time in an area.

Traditionally although milk, curd and similar milk products are used all over the country, in good old days, traditional types of milk products produced and consumed depended on the agro-ecological conditions in the regions although with improvement in communication and transport this trend has disappeared and all the products are available throughout the country. It is estimated that almost half of the milk produced in the country is converted into a variety of traditional milk products using processes such as coagulation (heat and/or acid), desiccation and fermentation. Over the millennia, these processes have largely been **in the hands of 'halwais' – traditional sweetmeat makers**, who form the core of this cottage industry.

Since Hindu way of life advocates vegetarianism, milk (and its products) traditionally was/is considered as an only animal protein source and in the light of variable utility of cattle in country's agro-based economy, cattle slaughter was/is prevented. Cattle of various ages thus were/are sheltered at various locations earlier by the kings in kingdoms and now through 4,000 Gaushalas distributed all over the country, partly financed by Government and partly by the societal contributions.

Many products incorporating milk are produced in daily village life for celebrating different events (for example- crop harvesting, religio-cultural festivals etc). The composition of these products vary according to region and season, are prepared and used fresh.

Commercial aspect

Unprecedented growth in milk production has been recorded from about 59 million tonnes in 1992 to about 106 million tonnes in 2005 – 06 and is expected to reach 220 million tonnes in year 2020. The overall estimated growth rate being 4%. There are two major channels for milk marketing in India, the Traditional or Un-organized sector and the Co-operative or Organized sector.

Emergence of major players like commercial milk processors, dairy cooperatives and individual entrepreneurs has strengthened diversification in use of milk besides creating necessary awareness amongst the consumers.

Presently **37% of milk produced in India** is being used for processing, of this the organized dairy industry accounts for 15% and unorganized sector accounts for 22%. Today dairy cooperative touches lives of 11 million farms households in 100 thousand villages in India. In the organized sector there are close to 68 popular milk products that are processed and marketed.



Nearly two third of milk produced is not being processed and is either consumed at farm level or is sold as fresh, non- pasteurized milk through unorganized channel (Doodhwala – person who delivers fresh milk at doorsteps). This traditional sector serves approximately 46 million small milk producer households, 111 million consumer households and a few million agents/vendors. Market access for small - holder livestock producers remains a major constraint in many parts of India.

Biodiversity aspects

Traditional integrated use of large and small farm animals for milk production for family consumption has helped to preserve animal breeds which other wise could have been extinct because of their low milk producing capacity. The style of low cost animal maintenance by these families being environmental friendly, helps in general well being.

There is a small fraction of society believing that milk is harmful and should not be used. More concrete data for implicating milk in cardiovascular disease, diabetes, and cancer is needed before the restriction of use is advocated.

It is concluded that under Indian conditions, the milk besides playing an important role in nutritional and health of the community, is important for commercial, religious, social and political spheres. It is an important source of sustainable livelihood amongst the lower income group of the rural society and hence it is recommended to further search lesser known milk products used in socio-cultural events and adopt ways to strengthen their integrated use to promote healthy global life defined in the world millennium goals.

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Veterinarian, Dr Suresh GoKhale is research director at the BAIF Development Research Foundation, India, of which he was vice-president from 1996 to 2005. The BAIF, a charity organization founded in 1967 by a disciple of Gandhi, aims to promote sustainable development in rural areas (in particular through dairy breeding), food safety and environmental protection through various programs set up in nearly 50,000 villages. Dr Suresh Gokhale has published several books and many scientific articles on dairy breeding, agriculture, development and social issues.