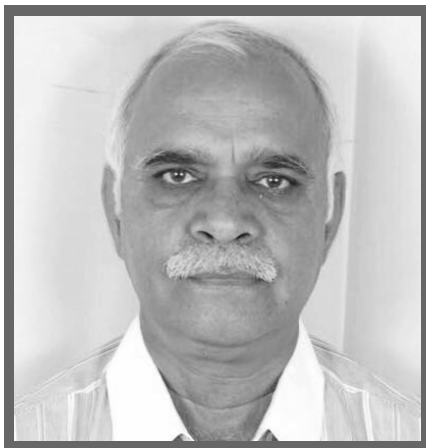


Branding of Buffalo Milk for Better Economic Returns



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Branding means “the process involved in creating a unique name and image for a product/products in the consumers' mind, mainly through impactful advertisement campaigns with a consistent theme. Branding aims to establish a significant and differentiated presence in the market that attracts and retains loyal customers ...”. While there could be many objectives; the prime objective is to have more economic returns. Presently there is no threat for buffalo milk, but one has to plan and act wisely to project the buffalo milk capabilities for harnessing more profits.

Why branding for Buffalo milk?

Both, the buffaloes and cows have long standing and immense importance for dairying in India. It has come a long way from being in deficit from 20 MT in 1970 to being the world's largest milk producing country at 160 MT accounting for a huge 18.5% of world production. In last 35 years, India's milk production outstripped with 4.5% CAGR as against mere ~1.6% CAGR posted by global milk production. Going ahead, India's milk production is expected to outperform global

production and grow at similar 4.2% CAGR going ahead to 185 MT per annum/507 million litres per day and surpass EU to emerge the largest dairy producer by 2020 in value terms at ~15% CAGR to INR 9.4 trillion over FY 2016-2020. Today milk production is estimated to have increased by 6.6% to 176.35 MT during the last financial year.

Virtues of Buffalo milk that need to be projected

Buffalo milk differs considerably from cow and other milks. However, it has several virtues that make it superior to others since the composition of milk of various species is in the knowledge of all dairymen only differences are presented. Buffalo milk contains more fat, SNF and TS and hence yield of products prepared from buffalo milk will be always higher, be it cream, butter, cheese, condensed milk, etc. The higher fat content helps in extending the milk supply in city milk supply schemes by toning. The higher TS also provide more calories per unit weight approximately ~100 calorie per 100 g for buffalo milk and ~70 calories per 100 g for cow milk. The higher proportion of β casein makes humanization of buffalo milk easily possible. Cream separation and churning of butter is facilitated by larger size fat globules and higher proportion of solid fat in buffalo milk. The

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recovery of fat is also higher compared to cow milk.

The emulsifying capacity of buffalo milk fat is better due to high proportion (50%) of butyric acid containing tri glycerides compared to only 37% in cow milk. The yield of butter and ghee from buffalo milk is higher. Buffalo milk contains less cholesterol (total and free cholesterol respectively 275 and 212 mg/100 g fat) compared to cow milk (total and free cholesterol respectively 330 and 280 mg/100 g fat) and more tocopherol (334.21 μ g/kg for buffalo and 312.3 μ g/kg for cow milk). Buffalo milk can be preserved naturally for longer period due to high peroxidase



activity. Buffalo milk contains more Ca, Ca/P ratio and P and less Na and K than cow milk makes it a better nutritional material for infants. Among minor constituents, higher amount of taurine (5.9 moles/100 ml for buffalo vs. 4.14 moles/100 ml for cow) and lactoferrin (0.320 mg/ml for buffalo and 0.05 mg/ml for cow) and lower amount of urea (17-22 mg/100 ml for buffalo and 37-40 mg/100 ml for cow) in buffalo milk makes it superior material for infant foods and feeding.

The vitamin A content of buffalo milk is higher than cow milk. Buffalo milk fat contains lower tocopherol per gram of fat; however, due to higher fat content it contains higher tocopherol than cow milk. Ascorbic acid in buffalo milk is more heat stable than that of cow milk. Raw buffalo milk due to its higher lectenin content inhibits bacterial growth more than cow milk. The frequency of occurrence of most pathogenic bacteria in raw market milk from buffaloes was lower than that in cows' milk. The higher buffering capacity, high pH, higher viscosity, more curd tension of buffalo milk may be considered wherever these properties are involved in making/designing a process. The lower heat capacity, higher thermal conductivity and expansion of buffalo milk clearly indicate that definitely a lower quantum of heat energy is required to achieve certain desired heat effects in buffalo milk. Therefore, time temperature combination for its processing may have to be standardized and suitably modified.

Buffalo milk is liked by majority of Indians as it

forms a thick cream layer (malai). This layer thickens further upon boiling and storage. The high viscosity of buffalo milk exerts an additive influence on the consumer's preference. It is known to impart a distinct whitening effect to tea and coffee because of higher quantity of casein and whey proteins. Boiling of buffalo milk causes the release of more amounts of sulphhydryl compounds, which contribute to nutty, cooked flavour leading to its high acceptance as a drink. Full cream buffalo milk is sold at premium price because of its flavour and its ability to produce good quality products. .

It possesses lot of medicinal, therapeutic and bioactive properties.

Health Benefits of Buffalo Milk

The health benefits of buffalo milk are not fully explored and well documented. Some of them are described as follows:

- The presence of higher levels of immunoglobulins, lactoferrin, lysozyme, lactoperoxidase make buffalo milk suitable for special dietary and health foods. Buffalo milk Improves heart health. Compared to cow milk, there is actually less cholesterol in buffalo milk, which is a good thing for anyone concerned about their cardiovascular health. That being said, there is more fat in buffalo milk, about 100% more, so moderation is key. Given the widespread epidemic of cardiovascular disease, atherosclerosis, heart attacks and strokes around the world, adopting buffalo milk and rebalancing your

cholesterol is not a bad idea.

- It helps in regulating the blood pressure. It is not a well-known benefit of buffalo milk, as the potassium content of this milk is often overlooked. However, there is more potassium in buffalo milk than regular cow milk, and since potassium functions as a vasodilator, buffalo milk can help you lower your blood pressure. By reducing the strain on blood vessels and arteries, milk from buffalo can prevent the development of atherosclerosis and other coronary complications.

- It promotes growth and development. Research has shown that buffalo milk is impressively high in protein content. It has about 10% more protein than its cow-derived cousin. This is good for the growth and development of children and adolescents, as well as adults, considering that protein is needed for nearly every bodily process. Buffalo milk also provides complete proteins, which are highly valuable and can be converted into usable energy or applied for the repair and growth of our body.

- **Buffalo milk boosts immunity:** Vitamin A and vitamin C are found in significant amounts within buffalo milk, and these two vitamins are key to the functioning of our immune system and the overall protection of the body. Both of these vitamins act as antioxidants, cleansing the body of dangerous free radicals and toxins that can cause chronic illness. Furthermore, vitamin C stimulates the immune system by producing white blood cells, the first line of defence for the body. Zinc and certain other trace minerals in this milk variety can also act as antioxidants and immune system boosters.

- It also improves circulation. Anaemia is the formal term for iron deficiency, and this is a major problem for people all over the world. A great cure for this condition is high-iron foods, as iron is an important component of red blood cells. By increasing RBC count in the body, you are able to increase circulation, which boosts oxygenation to the extremities and organ systems, keeping them operating at full capacity. This also speeds healing and growth of new cells and tissues.

- **Improved bone strength:** It seems that milk of all varieties is quite well known for its impact on bone strength and development. As it turns out, milk from buffalo actually has more calcium than cow milk, making it even better for the prevention of osteoporosis and general bone strength and resilience. This is in addition to the number of other essential minerals found in buffalo

milk, including copper, manganese, phosphorous and zinc. Buffalo milk also helps in curing many skin diseases including eczema and psoriasis. It induces sound sleep and beautifies your skin.

In recent times there are lot many advertisements telling to consume milk. But there is a bias with respect to the species and at times cow milk and its products are being projected as superior to buffalo milk. This is highly unfair. Buffaloes have remained the largest producers of milk; roughly 55% of the milk production in India is from the buffaloes. In fact the common consumer, the private trader, the private and co-operative dairy plants, all prefers the buffalo milk for the reasons described above. It is now high time that the good points/hidden qualities/favourable things/untold stories be brought to the notice of the common man. The consumer needs to be educated about all these and be told how buffalo milk contributes to the health and wellbeing of him and his family. This is because it is he who ultimately provides the money to run the cycle. This has become more pertinent as the share of calories from milk in total food calories increased from 1.8 to 2.4% in very poor income group and 8.6 to 9.2% in the high income group between 1983 and 2004. The industry study show that there is lot of scope for traditional value added and emerging value added dairy products, the segments are growing at 16 and 25% rate respectively.

Considering above it is now the moral responsibility of the processors and/or product manufacturers to incorporate these facts on buffalo milk to create its powerful brand image.