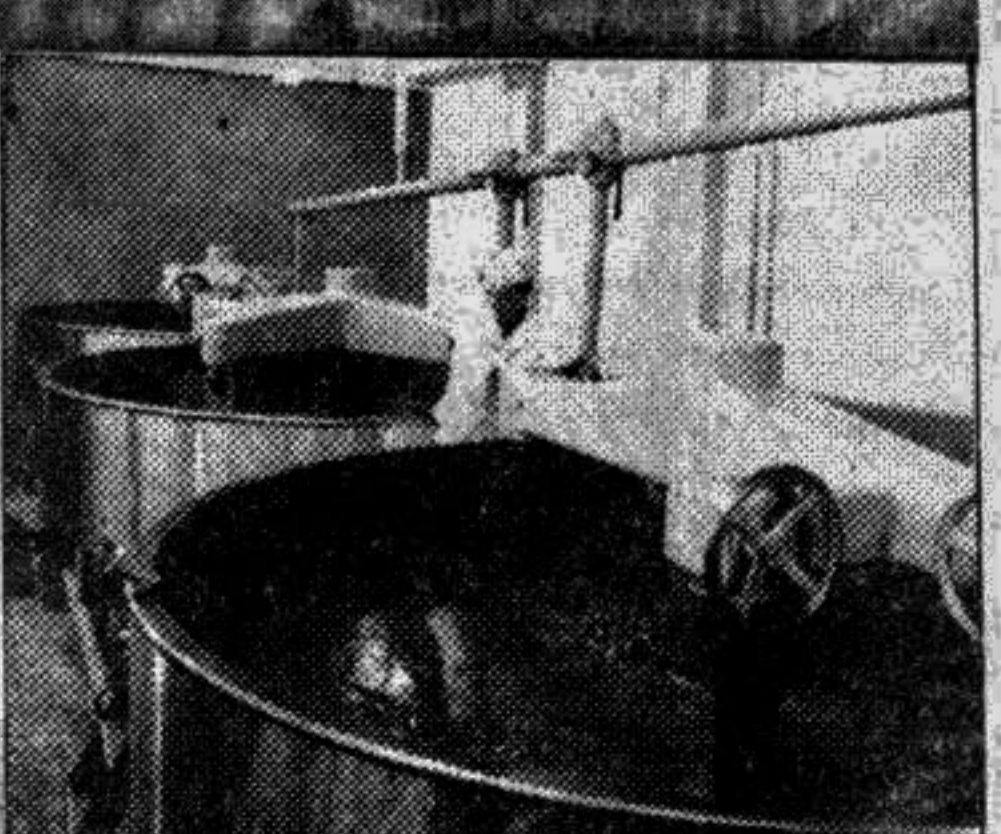
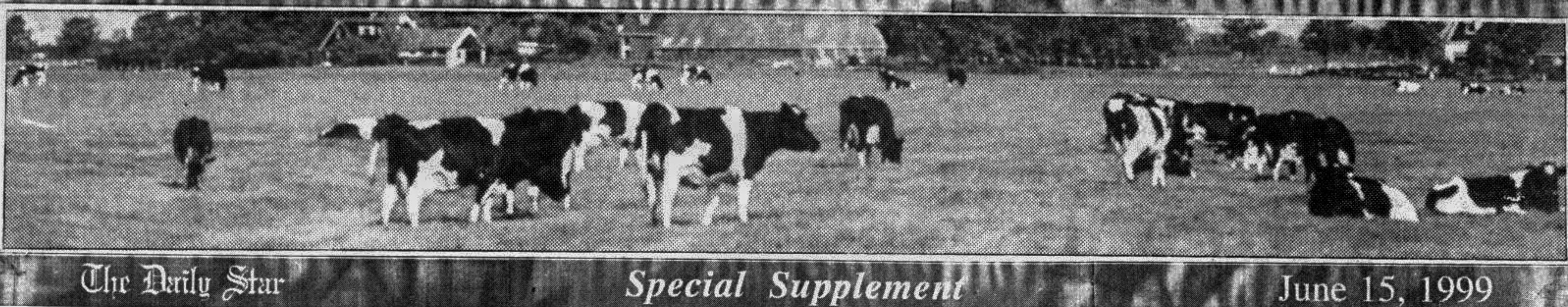
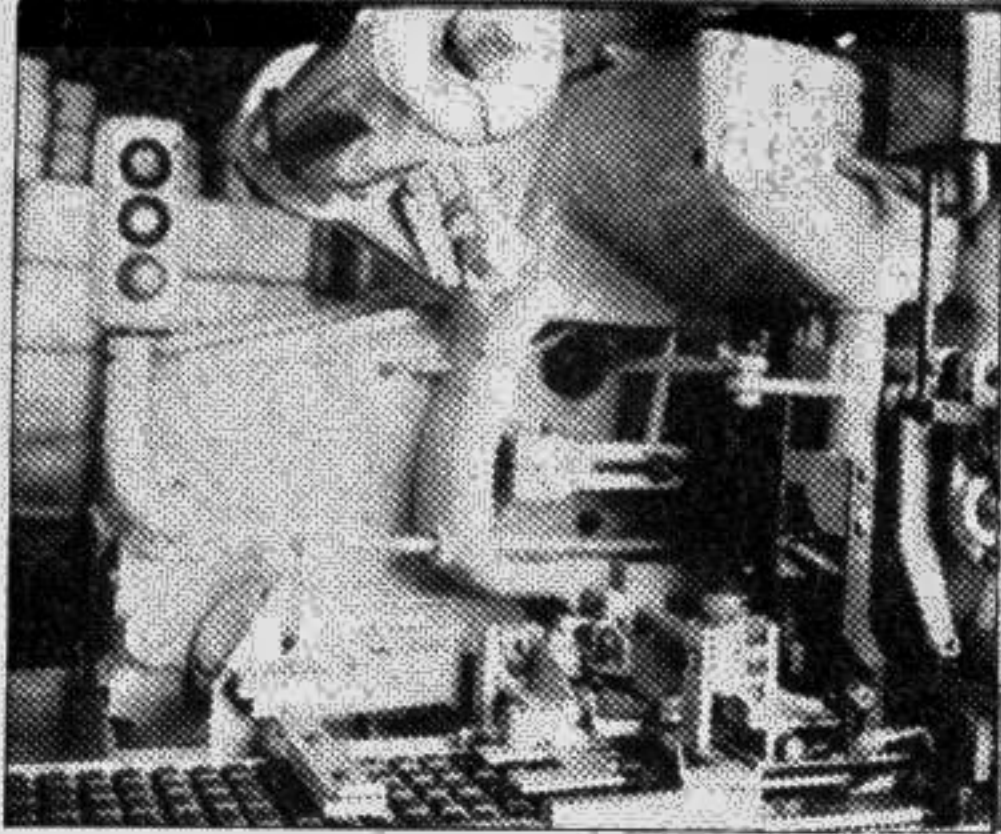


# MILK AND MILK PRODUCTS



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## Milk Production Strategy

### Cattle Management and Consumer's Safety

by Khed Syed Alef Hossain

In order to increase agricultural production to meet the increasing demands for animal protein, development of livestock and poultry industry is an urgent necessity. But the land and capital are limited, therefore it is essential to utilise these resources efficiently and wisely for maximum production. It has been recognised, in order to improve the nutritional status of the people, the diet needs inclusion of animal protein. Poultry and animal productions have received people's attention over the last few decades. Consequently the livestock production has increased substantially thus reducing the need to import milk products resulting in considerable savings of foreign exchange. However, yet per capita consumption of these items is lower than the recommended levels. Again, because of this particular reason an inclusion of these items in the diet is essential for the average population.

Poverty and malnutrition is a serious national problem in Bangladesh. About 43.6% of the people live in below the poverty line level. The extent of malnutrition is more among the poor income families.

Specially, malnutrition is severe in infants and women. Malnutrition not only harms the intelligence, livability, working ability and immunity against diseases, but also stands as obstacle in development of socio economic condition of the country. The rural economy as well as the problem of malnutrition may be improved through poultry and livestock development programme.

The role of livestock in the agricultural sector is secondary to crop production, but is, nevertheless, crucial in at least one respect, as the power furnished by animals is the most important source of non-human power in this sector, since it delivers the needed energy for most of the heavy farm work, such as ploughing, thrashing and transport. Though the livestock sector is the primary source of power for land preparation, the sector also provides substantial meat, milk, hides, skin, manure and fuel. This sector has grown more rapidly than crops as the demand for livestock products has sufficiently increased. The index of production of livestock products grew 4.1 per cent from 1990 to 1995, while the index of cereal production declined

slightly over this period (FAO, 1997).

The sub-sector has also been an important foreign exchange earner through the export of raw hides and skins, and also leather products. In 1995-1996 the export of hides and skin and leather products earned US \$212 million dollar and accounted for 5.5 per cent of foreign export earnings (the fourth largest foreign exchange earner after garments, jute and shrimp as per Export Promotion Bureau information). The value of these exports grew at the rate of 9.5% per year from 1990-1991 to 1995-1996. The livestock sub-sector is labour intensive and provides full time employment to about 20% of the rural population (MOFL: 1999, Alam P.). With the advancement of nutritional knowledge and income of the people, the cereal consumption is gradually coming down and the milk and meat consumption is going up day by day. The present production of milk and meat is 1.62 and 0.62 million metric ton respectively.

But the requirement is 11.4 m mt of milk and 1.16 million metric tons of meat considering 250 ml milk and 20 gm meat (other than chicken) per day per head. Hence, there is tremendous scope for the improvement of the livestock industry. Besides, if we succeed in attaining quality livestock products by using modern technology, we can earn foreign exchange exporting those after meeting own requirements. Milk and meat is the important source of animal protein. Today a common expression used in reference to nutrition is that "milk is the most near perfect food." It is the only food upon which all nutritionists agree about its value for the growth and development of children as well as young animals. Not only it is the most important food during early childhood, but in later life as well it is required in normal diet specially during ailment it is the only food most often called upon to sustain and nourish the body. No other single substance can serve as a complete substitute for milk in the diet.

Livestock sector is growing at 8% and contributing at least 3% to the GDP 9.7% & to agricultural GDP (Real GDP, 1995/96) which shows much potential for developing it as a commercial sector with employment and income opportunities to reduce poverty and malnutrition both in the rural and the urban areas. Meanwhile

about 30,000 small size dairy farms have come up in the private sector. Livestock population is estimated (1994/95) to be 23.5 million cattle heads, 1.9 million buffaloes, 10.7 million goats. The percentage of milking cows is about 44% and average milk yield is 200-300 kg per lactation of 180-240 days. In some milk pocket areas the production is 600-800 kg in 210-240 days of lactation. In 1997-98 total milk production was 1.62 million metric tons in place of only 1.48 million metric tons in the year 1993-94.

The impact of power milk is gradually declining. The total powder milk import in the year 1989-90 was 0.65 million metric tons which dropped to 0.35 million metric ton in 1993-94. It is presumed that it has further drop in later years (statistic of which could not be shown here). Reasons for these achievements are some government initiative, private participation in dairy farming and financial support from financial institutions.

Land and feed are the chief constraints for developing livestock but maintaining them in ensured condition is a must for health, productivity and performance so that maximum benefit can be derived from them. Fodder and feed are no longer available in sufficient quantities. Grazing land is becoming increasingly scarce. To meet the food needs of a growing population, and which were once used for grazing, is now being used for human food and cash crops production. The consequence is deterioration of livestock.

Internal parasites are reported to be causing harm to livestock. There have been a marked debilitating effect on the animals resulting in slow growth rate and reduced capacity for production in animals. Animal health services are almost nonexistent being limited to vaccinations for the prevention of contagious diseases. Insemination service is insufficient (only 1%). Livestock are generally infested with parasites, and these coupled with deficient diets, result in poor production of meat and milk. Internal parasites alone consume 25 to 50 per cent of the digestible nutrient intake of the animal. Removing this impediment along with other debilitating diseases would surely increase productivity by as much as 50 per cent.

Livestock in Bangladesh is mostly nondescriptive indige-

nous type (98% local, 2% cross bred). The average milk yield is only 1.3 kg in local stock and 2.16 kg in cross bred animals. This is too poor a performance for an animal needed to yield profit for the keeper. Considering the associate factors of the price of feed, labour and management cost, a cow must give average 8.0 kg of milk per day to compensate for its up keeping and the other cost factors with tendency of further going up. These days of breeding technique the production of 20kg or more milk from individual cow is not uncommon. Over the past few years many dairy farms have come up but unfortunately due to poor management, want of poor feeding and lack of scientific breeding techniques desired achievement was obviously not attained. Milk is highly perishable in nature though it contains high nutritional value. For want of proper marketing infrastructure and lack of milk processing, preservation and failure in quick distribution, the producers often deprive themselves from getting remunerative price of their product.

Of many threats that the livestock sector faces, the disease aspect still stands at top—greater these days than what it was in the past. Failure to check mortality even with the adoption of modern treatment facility, the disease control paraffinaria is going up and up. Yet people are rushing towards this business without obtaining the needed knowledge. Some people failing to get employment for a reasonable living are tempted to make money by rearing cattle without knowing the possible hazards they may come across whilst doing so, ultimately landing themselves in a real mess.

With advancement of science and technology people now understand the fact that "prevention is better than cure". The present livestock rearing needs many scientific management procedures to keep the animal in a healthy condition. These necessarily are not just vaccination or medication but constitute a great number of management technique and other practices like scientific feeding, housing and hygienic control. Improvement of quality through selection and breeding with intensive use of artificial insemination in cattle is the need of the hour. The genetic potential of the indigenous stock has to be improved for increased production and performance. The indigenous cattle have stood the test of time and are adapted to the local environment, poor feeding and endemic diseases, but they lack the genetic potential for production. Through a combination of selection, culling appropriate breeding programme, the prospects for improvement of the genetic make up and production level of livestock within the shortest possible time are great. For the purpose of implementing this programme, genetic pools in the form of breeding and multiplication centres are necessary and from where improved sub-continental and exotic breeds can be used for cross breeding to improve the germplasm. These infrastructures are essential pre-requisites and must be established before a wide scale programme can be launched successfully. For the sake of rapid improvement in milk production, import of high yielding cattle may be useful, where scientific management and feeding would be practised. Embryo transplantation technique may be adopted for immediate development of the livestock sector. The most common constraint in livestock development is the scarcity of feed.

## Development of Rural Co-operatives: Milk Co-operative Structures

by Gobinda C Saha

A livestock is a secondary type of activities for deriving economic benefit. The nation paid very little importance to its improvement in the past decades. The five-year plans of the country, aimed at increasing the income and thereby the purchasing power of the poor people, have identified the landless and marginal farmers and women traditionally engaged in the management of milking cows as the beneficiary of livestock development.

The government had also extended priorities to the dairy sector at the later part of the 4th FYP/3-YRP which has further been intensified during the present (5th FYP) period. Under these conditions procurement of suitable quality milk fit for processing into marketable products is a formidable organizational task, as opined in a recent ADB survey which portrays the real picture.

The quantity of milk produced in the country cannot cater to the existing demand of the country resulting in the import of powder milk (20-30 per cent of the total milk consumed) spending the national hard-earned foreign exchange to the tune of Tk. 1500-2000 million in the recent years.

Though the local demand is being met by import, even the developed countries has put the local production at stake. This is because of the fact that, the consumers are use to prefer imported powder milk which is comparatively cheaper and easy-to-use. Moreover, the colourful packaging and promotional campaign in the media attract more attention of the consumers. As a result, the local processing sector faces unfair competition and thereby becomes frustrated with a feeling of economic deprivation.

To shun off this situation, it is needed urgently to ensure an economic production system and increased local production by improving the local breed of cattle. However, the situation is partly improved presently as the government has extended priority for the dairy sector.

### Background of Milk Vita

In the year 1973, the government of the People's Republic of Bangladesh undertook a project titled 'Co-operative Dairy Complex' based on the recommendation jointly made by the Danish International Development Agency (DANIDA) and United Nations Development Programme (UNDP) in the pattern of AMUL, India.

The project envisaged purchase of milk from the individual poor, marginal and landless milk producing farmers under the fold of Primary Milk Producers' Co-operative Societies at fair price and guaranteed market, transportation of the collected milk to the rural plants for preliminary processing and further transportation of the milk to the production plants for final processing and marketing of milk and milk products under the brand name 'Milk Vita'.

Under the project, a co-operative infra-structure for the milk producing farmers was created in four milk-shed areas of the country viz Tangail, Tarkhat, Baghabarighat (Sirajgonj) and Manikgonj. During the project period (1973-78), at a total cost of Tk 155.61 million (including the foreign currency), five dairy plants at Dhaka, Tangail, Tarkhat, Baghabarighat

(Sirajgonj) and Manikgonj were established. Thereafter with BMPCUL's own resource, two more plants were added in the line at Sreenagar (Munshigonj) and Rangpur in the recent years.

During the period of its activities, the organization has further succeeded in bringing together over 50,000 farmer members into the fold of 350 village milk producers co-operative societies who deliver milk to this organization twice a day. Thus, around 300,000 farmer family members are being benefited by this organization. Moreover, the activities of Milk Vita has created about 4000 job opportunities in the urban and rural areas. The cooperative members get reasonable price of milk produced by their cattle.

The project infrastructure further could drive away middle men, who used to exploit the farmers paying low price for their produce. The cooperative farmers are also given incentive bonus against their milk supply. In addition to that the organization extends the following services to the farmers:

- Free medicare (preventive and curative) for all cattlehead by qualified veterinarians.
- Free vaccination against common epidemic diseases.
- Free artificial insemination service with deep-frozen semen for upgrading local breed.
- Fodder extension services for high yield of raw milk.
- Arrangement of Bathing (pasture land) for milk cooperative farmers' cattle grazing.
- Distribution of balanced concentrated cattle feed on "no-profit-no-loss" basis.

- Training for better animal husbandry practices.
- Display of audio-visual shows for imparting knowledge and information regarding cattle and cooperative management.
- Arrangement of national and international training/study tours by the farmers to acquire up-to-date knowledge in the dairy sector and cattle keeping practices.

All these programmes are designed for the benefit of the farmers to a great extent. On the other hand Milk Vita products are mainly marketed in the major cities of the country through the established marketing network of the organization which includes Rickshaw Van Cooperative Societies in addition to the retail agencies and wholesale distributors. The major products of Milk Vita include Pasteurised Liquid Milk, Flavoured Milk, Butter, Full Cream Milk Powder, Skimmed Milk Powder (Balancing, Modernisation, Rehabilitation and Expansion) of the Cooperative Dairy Complex was approved by the government for implementation during the financial period of 1994-96. The original cost of the project was Tk 1741.42 lakh and through widening the scope of the project the cost was further revised to total Tk 2636.85 lakh with the extension of project period by further one year.

Two major objectives of the project are:

- To replace old, inefficient, worn-out and technologically obsolete machinery and equipment of the existing five plants, installed about 15-20 years back under the original 'Cooperative Dairy Complex' in order to cooperate in and maintain the increasing demand of production as well as marketing of different dairy products.
- To add new machinery and equipment and to increase production, transportation and marketing facilities of the ongoing project in order to expand the production capacity and efficiency.

### Overall Goal and Purpose

The project was designed and prepared to meet the need of milk producing poor and landless cooperative farmer members. Through the implementation of the project the milk producing farmers would be able to increase their income by way of selling increased volume of milk at a fair price. This milk will then be processed in the dairy plants and safe and hygienic milk products marketed to the potential consumers at reasonable price.

To attain the objectives of the project, the activities were designed as follows:

- To replace the old, less productive, worn-out and obsolete machinery and equipment by highly economic, productive, efficient, financially viable and technologically modern equipment.
- To produce economically viable quality milk and milk products and to add new vari-

eties in the product range.

- To expand marketing facilities through appropriate and modern marketing techniques thereby to aid catering to increased market demand.
- To strengthen cooperative activities in the rural areas by way of purchasing increased volume to milk, used as prime raw material for the plants, through the established cooperative network.

### Beneficiaries of BMPCUL

Bangladesh Milk Producers Cooperative Union Limited (BMPCUL) dedicated towards the rural socio-economic development of the country has emerged as a pioneering cooperative organization in the country. The activities of the organisation are spread over six milk-shed areas covering about 15 districts with 41 police stations and 925 villages. The direct beneficiaries of the project are:

- 40,000 poor, landless and marginal milk producing farmers who were earlier exploited by the traditional middlemen but at present receive fair price through sale of milk to primary cooperatives;
- 3,00,000 farmer families are directly dependent on the income of the cooperative members;
- A Large number of city dwellers who receive continuous supply of pure, safe, hygienic and nutritious milk and milk products at a reasonable price.
- More than 300 rickshaw-pullers cooperative members engaged in the procurement and distribution process along with their dependent family members.
- Nearly 650 people who are engaged in the different plants and head office earn livelihood.

Butter is Butter  
- it has no substitute



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milk vita - nutrition for the day.

## New Nourishing Food Drink

by HM Jahid Siddique

VICO is the new fortified food drink that's uniquely formulated with the highest quality ingredients to give more chocolate taste and aroma. Manufactured by using modern Swiss technology, VICO is a great drink for the family every day as it contains essential food values.

VICO Enriched with more vitamins A and B-complex and minerals such as calcium is the nourishing food drink with more goodness. Everyday likes its extra chocolatey taste. VICO will continue to be positioned as the nourishing chocolate malt food drink that is more chocolatey and contains more goodness for the family's enjoyment, whilst providing the necessary nutritional benefits for day-to-day requirement. VICO is the only of its kind by taste, quality and more. It's new, exciting, fun and vibrant that is bursting with energy and vitality.

VICO is manufactured from malt extract, skimmed milk powder, sugar, cocoa, refined palm oil and contains permitted food flavouring (vanillin).

VICO is fortified with vitamins and minerals for added nutrition. Everybody can enjoy delicious VICO hot or cold with plain water, tea or milk for its healthy energy-giving goodness. If you want to have it hot, place two or more teaspoonful of VICO in a cup. Add hot water and stir. Add milk powder or sweetened condensed milk and stir well. Sweeten to taste. If you want to have it cold, dissolve VICO with sufficient warm water with milk powder or sweetened condensed milk and stir. Top with chilled water and ice cubes. Always keep container tightly closed and use a dry spoon. Food value content per 100g:

Vitamin A 1600 IU, Vitamin B1-1.2 mg, Vitamin B2-1.6 mg, Vitamin B6-2.1 mg, Vitamin B12-2.5 mg, Niacin-18 mg, Vitamin C 28 mg, Vitamin D3 168 IU, Vitamin E 15 IU, Phosphorus 640 mg, Calcium 600 mg, Magnesium 160 mg, Ferrum 15 mg.

The writer is General Manager, Banisia Limited.

## THE DRINK FOR CHAMPIONS

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একদম খাঁটি গরুর দুধ



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(ইসলাম গ্রুপের একটি প্রতিষ্ঠান)  
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