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OPPORTUNITIES AND CHALLENGES IN INDIAN DAIRY INDUSTRY

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Short Profile

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ABSTRACT:
The dairy co-operative movement has been central to the development of dairying in India. The inspiration for this movement was the success of the " Khaira District Co-operative Milk Producers' Union " – popularly known as AMUL. Founded in 1946 in response to the exploitation of district's dairy farmers. Amul grew rapidly from its initial base of two societies and 200 litres of milk.

KEYWORDS
Economic Growth, MSMEs, employment, credit facilities, investments, distributions, etc.,

INTRODUCTION

Today the Indian dairy industry stands at the mammoth size of US $ 70 billion. Given the highest mulch bovine population of 115.487 million in the world, India exhibits tremendous potential for further strengthening its position in the world dairy market. The operation flood program promoted and implemented by the National Dairy Development Board (NDDB) has been instrumental in bringing about the white revolution in India. Changing life style, feeding habits and urban culture has somewhat effected the transition of the Indian Dairy Industry into highly diversified and exciting business proposition.

OBJECTIVES OF THE STUDY:

1.To study the current scenario of dairy industry.
2.To study the milk production in India.
3.To examine the statistics of Indian Dairy Industry.
4.To know the SWOT Analysis of Indian Dairy Industries.
5.To understand the major breakthroughs of Indian Dairy Industry.

METHODOLOGY OF THE STUDY:

The present study is descriptive in nature. The entire study is based on secondary data. So desk research method is followed here. The concerned secondary data has been collected from books, articles and websites.

INDIAN DAIRY PRODUCTS:

A variety of dairy projects are indigenous to India and an important part of Indian cuisine. The majority of these products can be broadly classified into curdled products, like chhena, or non-curdled products, like khoa.

Curdled dairy Products –

•Paneer is an unaged, acid-set, non-melting farmer cheese made by curdling heated milk with lemon juice or other non-rennet food acid, and then removing the whey and pressing the result into a dry unit.
•Chhena is like paneer, except some whey is left and the mixture is beaten thoroughly until it becomes soft, of smooth consistency, and malleable but firm.
•Sandesh is a confection made from chhena mixed with sugar then grilled lightly to caramelize, but removed from heat and moulded into a ball or some shape.
•Rasgulla is a confection made from mixture of chhena and semolina rolled into a ball and boiled in syrup.

Non - Curdled dairy Products –

•Khoa or Mawa is made by reducing milk in an open pan over heat.
•Peda is a confection made by mixing sugar with khoa and adding flavouring, such as cardamom.
•Barfi is a confection made by reducing milk and sugar until it solidifies and adding flavoring, such as

pistachio.
•Gulab jamun is a confection made by mixing khoa and sugar, caramelizing it by frying, and soaking it in syrup containing rosewater.
•Kulfi is made from slowly freezing sweetened condensed milk. In comparison to ice cream, kulfi is not whipped or otherwise aerated.
•Ghee is type of clarified butter that is cooked long enough to caramelize the milk sugar and sterilize the liquid.

Fermented dairy Products –

•Mishti doi is dahi (Indian yogurt) mixed with sugar
•Shrikhand is strained yogurt mixed with sugar, and often flavorings such as cardamom, saffron, or fruit.
Wheyvit is an alcoholic beverage prepared by fermenting whey with yeast.

Other dairy Products –

•Kheer is made by boiling rice or broken wheat with milk and sugar, and sometimes flavored with cardamom, raisins, saffron, pistachios, or almonds.
•Chhena Murki is made by frying cubes of chhena to burn the outside, then soaking them in syrup flavored with cardamom.
•Pantooa is like gulab jamun, except with some chhena mixed with the usual ingredients.
Basundi is also made up from milk.

MAJOR BREAKTHROUGHS CONCERNED WITH INDIAN DAIRY INDUSTRY:

1.Automation of Khoa production, moving this process from the backyard to the modern dairy.
2.Design of the process technology and equipment for manufacture of pedha, gulab jamun, cchhana podo, long life paneer, and other Indian milk products.
3.Development of continuous lines, including packaging, for ferments milk products like long life lassi, shrikhand, dahi (yogurt), misti doi.
4.Preservation of starter cultures for fermented milk products.
5.Process technologies for production of cheddar, mozzarella and emmental cheese as well as a variety of cheese spreads using both cow and buffalo milk.
6.Process of manufacture of dry mixes for gulab jamun and frozen deserts.
7.User – friendly milk testing kits.

CURRENT POSITION OF DAITY INDUSTRY IN INDIA :

1.Indian Milk Production (Top 5 States) (In 1000 Tonnes)

STATE	2008-2009
Uttar Pradesh	19,537
Andhra Pradesh	9,570
Rajasthan	9,491
Punjab	9,387
Gujarat	8,386

2. CONTRIBUTION TO GDP

Item	2008-09	2009-10	2010-11
Growth in GDP in Agriculture and Allied Sectors	**-0.1**	**0.4**	**5.4**
Share in GDP in Agriculture and Allied Sectors	**15.7**	**14.6**	**14.2**

(Source: Economic Survey 2010-11)

3.Milk Production in India –

YEAR	PRODUCTION (Million Tonnes)	Per Capita Availability (gms / day)
2005-06	97.1	241
2006-07	102.6	251
2007-08	107.9	260
2008-09	112.2	266
2009-10	116.4	273
2010-11	121.8	281
2011-12	127.9	290
2012-13	132.4	N. A.

Source : Dept. Of Animal Husbandry, Dairying and fisheries, Ministry of Agriculture, Government of India.

ROLE OF NDDB IN INDIAN DAIRY INDUSTRY :

A wide variety of institutions have contributed including the National Dairy Research Institute, Karnal, agricultural universities, veterinary colleges and, proud to say,the National Dairy Development Board (NDDB). At the foundation of our dairy industry are the cows and buffaloes that produce most of our milk. India does have some excellent breeds. Among cattle, the Sahiwal, Rathi, Gir and Red Sindhi stand out as milk producers; for the buffalo, pride of place goes to the Murrah, Mehsani and Jaffarbadi. However, these recognized and superior breeds represent but a very small, though valuable, part of our national milch herd. The majority of our animals are nondescript with limited genetic potential.

The most efficient way to improve the potential of our nondescript cattle and buffaloes is through artificial insemination. It was only in the mid-1940s that a major breakthrough was made in this field with the use of antibiotics to ensure that semen would remain viable. Since that time, major advances have been made in semen extension, cryogenic preservation and distribution. Today, NDDB supports this effort through 14 Bull Mother Farms that produce and supply exotic breed bulls to semen stations throughout India. NDDB also directly supports 11 semen stations and has financed a network of 10,556 artificial insemination centres that annually deliver 5 million semen doses to cattle owned by members of 20,000 dairy cooperative societies.

Good genetic potential cannot be realized without good nutrition. In India we face an important challenge: ensuring adequate nutrition for our animals without competing with man for available land and agricultural commodities. The solution has been reliance on crop residues and byproducts. Working with Australian scientists, NDDB has developed several innovations that enhance nutrition directly and by improving digestibility and palatability: urea molasses blocks and urea treatment of straw both improve the diets of our dairy animals and help reduce the methane released into the atmosphere.

NDDB has also supported animal nutrition through the financing of 46 cattle feed plants and supporting these plants with quality control laboratory services. A useful innovation has been the development of protected feed technology which minimizes the degradation of protein and fat in the rumen. Mineral deficiencies are also a constraint to improved animal productivity. NDDB is supporting area surveys resulting in profiles that lead to targeted mineral mixtures to be used as supplements in cattle feeds sold to farmers in these regions.

Last, but not least, animal diseases cost our nation's milk producers thousands of million rupees are lost annually in production. NDDB's efforts in this field are a matter of great pride. NDDB has developed a live tissue culture attenuated vaccine to control theileriosis, a blood protozoan infection that is usually lethal in European and crossbred cattle. This vaccine is the only one of its type commercially available in Asia.

Foot and Mouth Disease (FMD) is a major cause of reduced milk yields and diminished draught power in India. NDDB has pioneered the effort to identify the prevalent serotypes through analysis of Indian field isolates. In order to ensure that the vaccine would reach India's farmers, NDDB established a state of the art facility, Indian Immunologicals, which is the largest FMD vaccine plant in Asia.

Mastitis is another endemic disease that undermines the health and productivity of our national milch herd. It is estimated that more than 40 per cent of our cattle and almost 25 per cent of our buffaloes suffer from subclinical mastitis. NDDB has developed a simple diagnostic aid for its detection at a stage when therapeutic and control measures can reduce losses from decreased production.

Haemonchus controtus, India's dominant worm species, is a major cause of parasitic gastroenteritis which leads to poor growth, delayed maturity, reduced milk production, lengthened inter-calving periods and the death of young animals. Conventional treatment requires forceful oral administration, placing difficult demands on both the farmer and the animal and the presence of a veterinarian. NDDB has developed medicated feed pellets that kill even drug-resistant worms without the need to restrain the animal. This should lead to far more widespread treatment of worms and lowered losses from parasitic gastroenteritis.

Milk production is, of course, only half of the story. The other half is the sale of milk and milk products that provides the highest returns to our dairy farmers. Here too, S&T have played an important role in development of products, processes, packaging, handling, transport and storage.

OPPOTUNITIES FOR INDIAN DAIRY INDUSTRY:

(i) Competitiveness cost of production, productivity of animals etc.

The demand for quality dairy products is rising and production is also increasing in many developing countries. The countries which are expected to benefit most from any increase in world demand for dairy products are those which have low cost of production. Therefore, in order to increase the competitiveness of Indian dairy industry, efforts should be made to reduce cost of production. Increasing productivity of animals, better health care and breeding facilities and management of dairy animals can reduce the cost of milk production. The Government and dairy industry can play a vital role in this direction.

(ii) Production, processing and marketing infrastructure

If India has to emerge as an exporting country, it is imperative that we should develop proper production, processing and marketing infrastructure, which is capable of meeting international quality requirements. A comprehensive strategy for producing quality and safe dairy products should be formulated with suitable legal backup.

(iii) Focus on buffalo milk based speciality

Dairy industry in India is also unique with regard to availability of large proportion of buffalo milk. Thus, India can focus on buffalo milk based speciality products, like Mozzarella cheese, tailored to meet the needs of the target consumers.

(iv) Import of value-added products and export of lower value products

With the trade liberalisation, despite the attempts of Indian companies to develop their product range, it could well be that in the future, more value-added products will be imported and lower value products will be exported. The industry has to prepare themselves to meet the challenges.

(v) Provisions of SPS and TBT

At the international level, we have to ensure that provisions of SPS and TBT are based on application of sound scientific principles and should become defacto barriers to trade. Operation.

CONCLUSION:

Globalization and Liberalization are the mantras of the new economy today. Industrial production is rapidly moving ahead. The dairy industry is not an exception. The dairy industry, which includes dairy products, faces both an opportunity for growth as well as a threat for its growth. There is no doubt that there is tremendous scope for the growth of dairy industry in the new millennium. There is a vast potential for the export of dairy products, the cost of milk production in India being the lowest. The major factor influencing production of byproducts is the newer uses that may be developed through R and D support. Milk proteins are used to replace animal and vegetable proteins in bakery products and instant foods. Most of the dairy plants in the government, co-operatives and private sector produce almost similar dairy products like varieties of milk, butter, ghee, skimmed milk powder and whole milk powder. There is immense scope for the broadening of product range. There are more than thousands of varieties of cheese, which have been listed out of which cheddar, mozzarella, gouda and processed cheese are being manufactured in India. Pizza is becoming a very popular food item. Dahi has immense potential for growth. Varieties of milk shakes are also increasing. There are varieties of traditional milk based sweets manufactured in the country. Many of the organised dairies are involved in the manufacture of varieties of milk based sweets : pedha, paneer, etc. As the world is getting integrated into one market, quality certification is becoming very essential. There is scope for introducing new plants adopting new processes by the dairy industry in the country. Packing of dairy products is also a very important area.

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