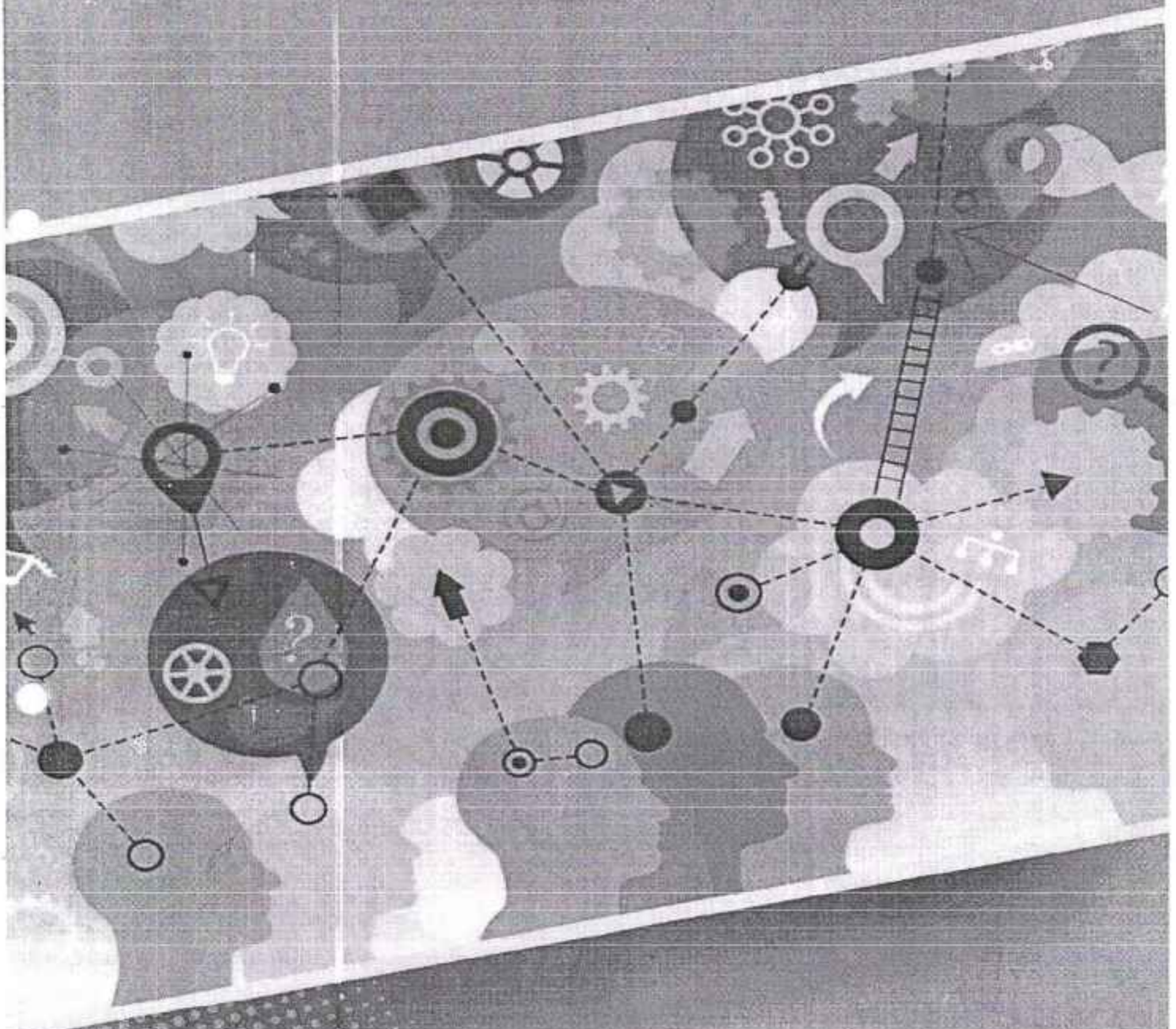


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A Multidisciplinary & Multilingual Book on  
**Innovative Best Practices in 21st Century**  
**(Opportunities & Challenges)**



Editors

**Dr. Devendra N. Vyas**

**Dr. Rupa Z. Gupta**

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## Impact of Globalisation on Indian Goat Milk Production

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### Abstract

India is the largest milk producer as well as consumer in the world and its milk production is estimated. India also has the distinction to be the lowest-cost milk producer in the world. Milk production and selling are crucial to the livelihood of over 600 million people in rural India. Foraging for and consuming essential herbs and nutritious shrubs, goats produce milk that can be compared to medicine. Closest in composition to mother's milk, it has the potency to provide essential nutrients, boost immunity, improve skin, treat diseases, and get digested despite that leaky gut. The quality of milk sourced from India's rural dairy goat farmers. The paper attempts to carry out an analysis of India's competitive edge in the global dairy production

### Introduction

The globalization of the dairy industry has led to the paradigm shift of international dairy markets from being supply-driven to demand-driven. Thus, the international dairy market is getting increasingly responsive to market signals and changing consumer preferences, rather than merely by excess production and depressing world prices. The dairy sector has become among the highest gross value sectors in agriculture with higher prices and correspondingly higher value of milk production. The prospects of sustained high prices for dairy products are creating incentives for investment expansion and restructuring of local dairy industries. Milk production, international demand patterns, and economic development in various parts of the world impact the world dairy trade. The expected growth in production and consumption of dairy products in developing countries would further reduce the ratio of international dairy trade to global milk production 2 to 6% in the next decade. However, during the last decade, the international trade volumes grew at an average of 3% per annum and overtook dairy production that increased by about 2.4% per year during the period. This reveals the growing significance of international trade and its rapidly rising integration of global production patterns and markets

### Global milk production and India

World milk production<sup>3</sup> is projected to increase at an average of 1.8% during the next 10 years compared to the 2.3% average annual growth experienced in the past decade. The world milk production is projected to increase by 164 million tons, out of which 74% of additional milk production is expected to come from developing countries out of which India alone accounts for 29% of global gains. After years of double-digit growth in milk production in China, the melamine crisis shattered consumer confidence in domestically produced dairy products. The Chinese focus has shifted from increasing milk quantity to improving milk quality and milk production is expected to grow at an average of 2% per annum compared with the previous decadal growth of 7% per annum. The average growth in milk production in Developed countries is expected to be at

the rate of 1% per annum in the next decade compared to 0.8% in the previous. This is due to the higher yield experienced in developed countries. Despite that, the milk production growth in developing countries is set to be at the rate of 2.5% per annum which is double the rate of 1% in developed countries. The share of developed countries in global milk production is expected to fall below 50% by 2022. The Indian subcontinent is among the few regions in the world where consumption of milk and milk products is historically imbibed in its culture unlike China and several other countries in Asia and Africa where consumption of milk products is a recent phenomenon.

The livestock sector in India has been regarded as one of the most pro-poor sectors with considerable positive development translating into increased income and employment to millions of people across the country. Over the last four decades, while India has made considerable progress in the industrial sector, the growth in the agriculture sector has hovered around three percent. This has been achieved through ingenious organizations of a large number of small milk producers spread across the rural areas of the country. Operation Flood, one of the world's largest dairy development programs, played a crucial role in achieving the transformation of the dairy industry in India. In addition to being the largest milk producer, India also has the distinction to be the lowest-cost milk producer. More interestingly, there is a wide gap in the next highest producers: the US (89 million tons), China (43 million tons), and Pakistan (33 million tons). This phenomenal growth in milk production has been due to demand-side development on one hand and supply-side promotions on the other. The per capita availability has also increased from 112 gram/day in 1970-71 to 297 gm/day in 2012-13. Despite India being the largest milk producer in the world, its yield continues to remain miserably low at 1.1 per ton per head during 2010-12. The USA has the world's highest milk yield with 9.7 tonnes per head followed by European Union (6.6 tonnes per head) during the same period

### **Price trends in dairy industry**

The prices of global dairy products increased to their peak in 2011 are expected to rise in nominal terms while are likely to remain flat in real terms. High production costs are expected to moderate the price fall even though food prices are likely to decrease over the short run. World market prices are expected to be 10% higher for SMP and 30% higher for butter during the present decade ending 2022.

### **Emerging trends in India's milk production**

International dairy trade India remains the largest milk-producing country in the world contributing about 15 percent of the total world milk production. But, due to its large and rapidly growing domestic demand especially in view of the increase in population and rising income levels, it has become the net dairy importer in the years 2010-12. India's share in global milk exports is 0.68% in 2013 whereas its share in the milk imports is 0.04%. This trade pattern is attributed to an increase in the production of the bulk of milk produced in liquid form by the dairy producer. India's dairy exports exhibited a highly fluctuating trend mainly due to fluctuations in dairy production, domestic demand, and prices in international markets. Traditionally, India has been a net importer of dairy products till Operation Flood began showing results. The trend for imports continued till 1993, when, for the first time, exports exceeded their imports. However, between 1993 and 1999 imports and exports kept edging each other out, and by 2000, India became a net exporter of dairy products. Its exports continued to increase almost consistently from

the meagre US \$ 3.45 million in 1996 to the US \$ 270 in 2008 but declined subsequently to the US \$ 88.95 million in 2009. Also, with increasing income levels in urban centers, the demand for processed dairy products has gone up leaving little surpluses for exports. On the other hand, the rapidly growing domestic demand led to an increase in India's dairy imports from a meagre of US \$ 1.48 in 1996 to the US \$ 177.4 million in 2011. As a result, India became a net importer of milk products during 2010-2011. However, India's dairy exports grew much rapidly during the subsequent years whereas its imports declined. In 2013, India's dairy exports grew to the US \$575 million compared to its imports of US \$ 34.6 million and India re-emerged as the net exporter of dairy products.

### **Major challenges in promoting exports of dairy products from India**

Despite phenomenal growth in milk production to become the largest milk-producing country in the world, dairy exports from India face a number of challenges that may be summarised as follows: Despite being the largest milk producer in terms of absolute quantity, India's average milk yield per cattle remains much lower compared to developed and even many other developing countries. The small size of milch-animal holdings in India makes it difficult to adopt the mechanized system of milking, cooling, and chilled storage which hampers the efforts to improve quality at the farm production stage.

India being a huge milk consumer owing not only to its large population size but also due to the largest vegetarian population in the world whose only source of an animal-based essential nutrient is milk, much low surplus is left for exports, unlike other major dairy exporting countries.

In many developed countries, India faces a perception of being a country with a common prevalence of foot and mouth disease (FMD) despite the sporadic incidences of the disease in some parts of the country. India needs to make concerted efforts both to eradicate FMD and increase its perception to be free of any disease in milch-animals.

Cow milk is the only popular milk in most developed countries and buffalo milk is unheard of, whereas India produces a substantial quantity of buffalo milk. As foreign buyers are not always sure of the suitability of buffalo milk for human consumption, they often insist upon dairy products manufactured from cow milk.

### **Emergence of new trade order and challenges to India's dairy exports**

Creating fairer markets in the agricultural sector including dairying has been the major contribution of the WTO. Although, the earlier rules of GATT did apply to agriculture trade they contained several loopholes. Some developed countries protected their high-cost production of temperate zone agricultural products (e.g. dairy, meat, wheat products, and other grains,) by imposing quantitative restrictions and variable levies on imports in addition to the high import tariffs. This high level of protection often resulted in enhanced domestic production which because of high prices, could be disposed of in the international markets only under subsidy. Such subsidized sales depressed international market prices of such agro products including dairy products. It also resulted in the taking away of legitimated market share of competitive producers such as India in the dairy and agro sector. As a result, the international trade in agriculture became highly "distorted" especially with the use of production and export subsidies which would not normally have been allowed for industrial products. Trade is termed as "distorted" if prices are higher or lower than normal, and if quantities produced, bought, and sold are also higher or lower than normal levels that usually exist in a competitive market. The opening up of the economy

under the WTO's multilateral trade regime increasingly exposed the Indian dairy sector to the international markets, which in turn are distorted by domestic support, prohibitive tariffs, and export subsidies in developed countries and offers several challenges both in production and exports of dairy products from developing countries like India. Until 1991, the Indian dairy industry was highly regulated and protected through stringent licensing provisions and quantitative restrictions (QRs). India embarked upon a liberal policy framework, which got reinforced, in 1994, with the signing of the Uruguay Round Agreement on Agriculture (AoA).

### Strategy to Promote Dairy Exports from India

As physical infrastructure and logistics remain a key concern for exports of dairy products from India, an integrated approach for the overall enhancement of export logistics in terms of creating cold chain facilities for transportation and storage needs to be adopted. Besides, India needs to focus upon exports of value-added products with increased shelf-life and improved packaging to compete in international markets. Concerted efforts to market especially in building global brands and establishing international marketing channels are also called for. India needs to address effectively the emerging challenges under the new trade order affecting exports of dairy products. Moreover, as import tariffs have considerably declined and quota restrictions fast disappearing in international markets, there is a strong fear that high-income countries are increasingly making use of quality standards as a formidable barrier to dairy exports from India and other developing countries. The research institutions and scientists in India need to keep a close vigil on such mandatory quality specifications in international markets so as to overcome the newly emerging international trade barriers.

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