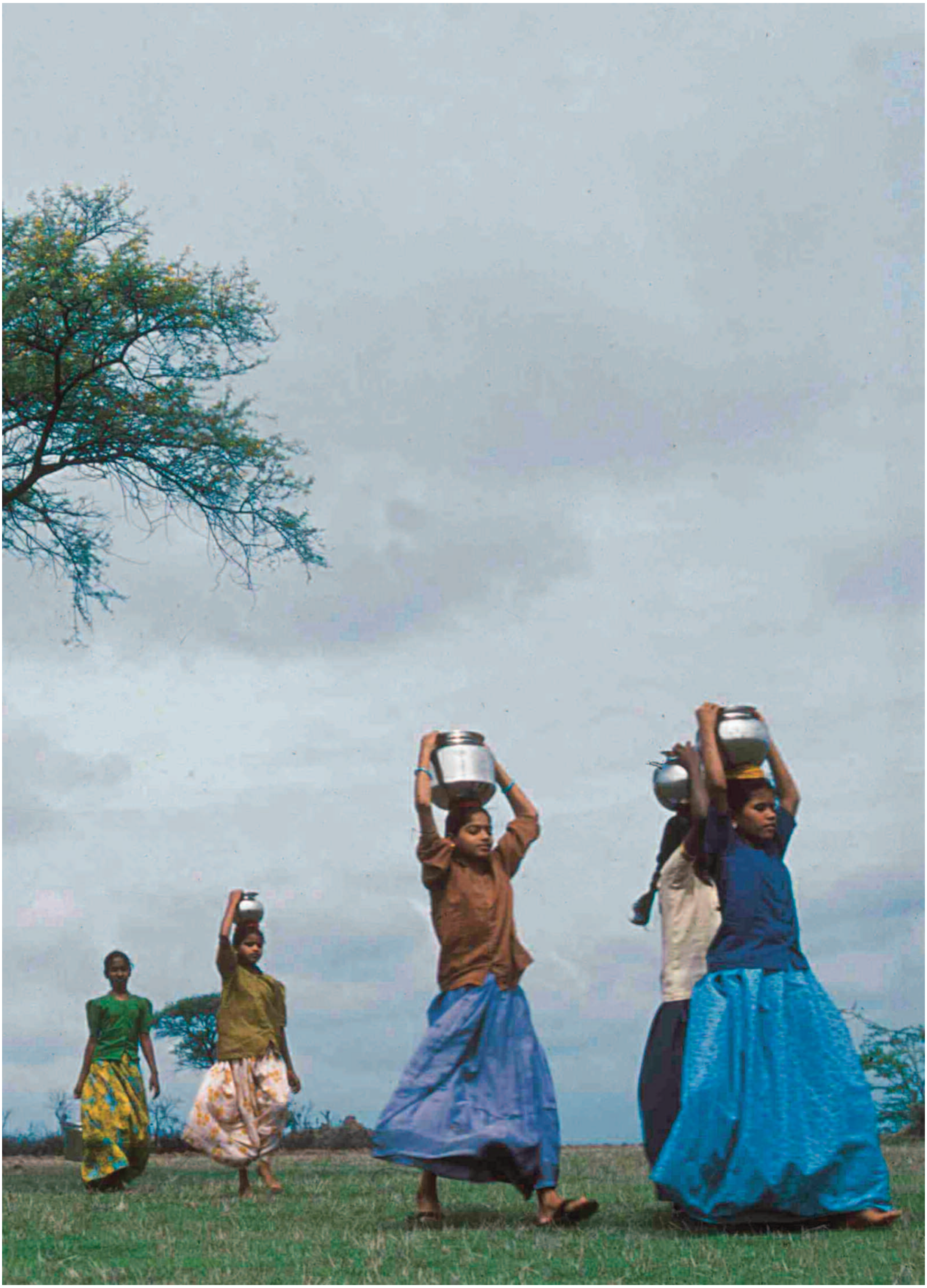
THE FREE PRESS JOURNAL
&
INDIAN MERCHANTS' CHAMBER
present
FORUM
MARCH 2016

The Dairy Industry and Its Relevance To India



THE DAIRY INDUSTRY AND ITS RELEVANCE TO INDIA

A Panel Discussion Jointly Organised by The Free Press Journal and Indian Merchants' Chamber.

On 22nd March 2016 at the Indian Merchants' Chamber. Mumbai.

Preface

Seven decades ago, few would have thought that India could become the world's largest milk producer.

This became possible only because a visionary like Dr. Verghese Kurien – known as the man behind Operation Flood – saw the strategic advantage that India enjoyed in milk production and consumption (see page 4). He also promoted the concept of "Production by the masses, not mass production". Using this philosophy, he became the champion of the small farmer who owned 2-10 heads of cattle in his backyard. Thus, even landless farmers could participate in India's milk story.

The trick was how to reduce collection costs, process it with ruthless efficiency, and finally create a market for it.

Kurien saw the solution in the milk co-operative. He was also fortunate that the then prime minister, Lal Bahadur Shastri, admired Kurien's vision, and asked him to take charge of NDDB as well.

NDDB's role could not be underestimated. It had been created by a separate Act of Parliament, and was thus an autonomous body. Kurien used the NDDB to persuade the government to ensure that no diary products got imported into India except through NDDB, even if the product was meant to be a gift. He knew that a free gift is the most deadly enemy of market prices.

Largest Bovine population in the world: 300 Million

Buffaloes account for 33% of cattle but 55% of total milk production

Cows account for 66% of cattle but 45% of total milk production

Kurien used the NDDB to take such cheap imports and sell them at market prices, and use the surplus funds for promoting the cooperative movement. He arranged for loans for marginal farmers; finance the purchase of milk processing equipment, and even transport systems. NDDB became the vehicle to promote an industry without any government subsidy.

Even nowadays, each time the government tries to import milk or milk products, with the foolish short-term notion that it can cool prices that might have raced ahead in some pockets, it creates a panic among milk producers. Marketmen still recall how milkmen came out onto the streets, and poured milk on the highways to protest against the price of Rs.14 per litre that middlemen had begun paying them. This was because imports had flooded the markets, and excessive and uncoordinated supply had resulted in a glut which middlemen took advantage of.

India could do without such short term, expedient, wisdom.

Economists point to the way how uncontrolled imports in agriculture have destroyed India's home-grown edible oil market.

That disaster could multiply manifold if this were to happen to milk which accounts for almost one-third of total agricultural output in value terms, and 'employs' countless millions.

The milk story does India proud. It needs to be nurtured, and expanded. Fortunately, both political acumen and economic sense have propelled India's policymakers to see immense merit in promoting milk cooperatives and long-term private players. Milk will play a huge role in augmenting rural incomes. As one of the panelists remarked, "If farmer incomes have to be doubled, you can be sure milk will have a major contribution in achieving this goal".

R. N. Bhaskar

R.N.Bhaskar,
consulting editor, FPJ

Year	India's Milk Production (Million Tonnes)	Per Capita Availability (gms/day)
1991-92	55.7	178
1992-93	58	182
1993-94	60.6	187
1994-95	63.8	194
1995-96	66.2	197
1996-97	69.1	202
1997-98	72.1	207
1998-99	75.4	213
1999-2000	78.3	217
2000-01	80.6	220
2001-02	84.4	225
2002-03	86.2	230
2003-04	88.1	231
2004-05	92.5	233
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	299
2013-14	137.7	307
2014-15	146.3	322

Source: NDDB

Industry Report

– Pankaj Joshi

India is in the enviable position of being the largest producer as well as the largest consumer of milk worldwide. The growth story of India's production is very inspiring:

• Till the 'seventies, there was a milk deficit in India. It had to be rationed out.

• Production was largely unorganised, and ownership of cattle barely 2-3 per family. Even today 80% of the milk comes from farmers who have less than 10 cows. Can India still manage to boost its milk production?

• Along with rise in production, per capita milk consumption has also been enhanced.

• Global growth as seen alongside has been clearly outpaced.

According to Dr. Kurien, India was actually destined to become the world's largest milk producer. It enjoyed several strategic advantages:

• India has a predominantly vegetarian population. This vegetarian consumes cereals -- mostly rice and wheat. India also has a large population. The first function of any government is to feed its people. That means more rice and wheat.

• Traditionally, every kg of grain produces 4 kg of chaff.

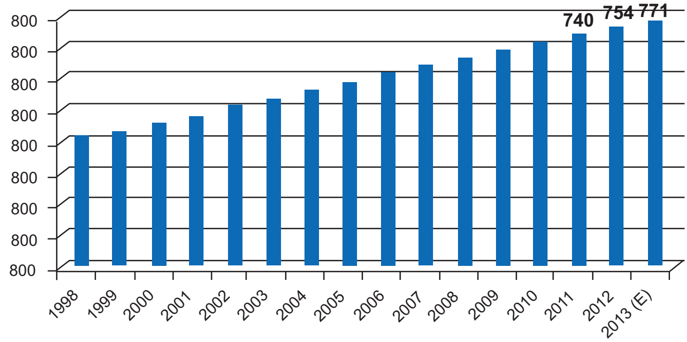
• In India, thus, cattle feed is largely a byproduct. In other countries, it must be grown. India would, therefore, remain the lowest cost milk producer in the world.

• These factors, in conjunction, could enable large scale production of milk at marginal cost by small farmers.

• Indians like milk and digest it easily, unlike countries like China, which have large populations, but are unable to digest milk.

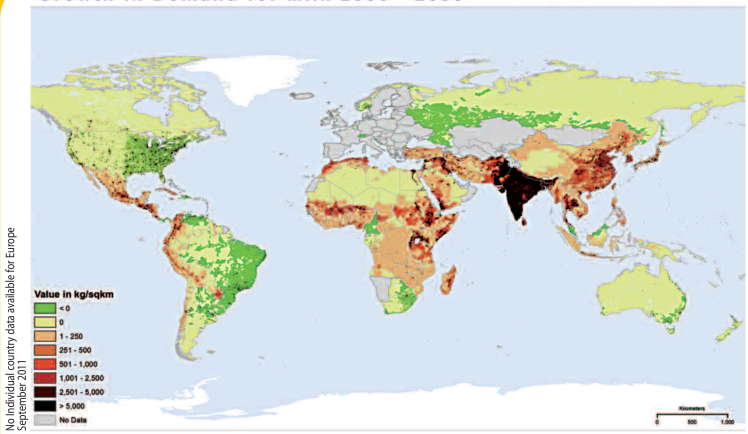
CAGR: 2.2%

World Milk Production: MMTs / Annum



Source: FAO, GCMMF
(All GCMMF slides in this document are from a presentation made in May 2014 in Italy)

Growth in Demand for Milk 2000 - 2030



September 2011

The designations employed and the presentation of material in the map do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal or constitutional status of any country, territory or sea area, or concerning the delimitation of frontiers.

FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS
Animal Production and Health Division

Source: FAO/GCMMF

On the basis of these factors, Dr. Kurien laid the foundation of a growth model – based on a very efficient collection and distribution system.

This growth is no flash in the pan. India is poised to see a steady growth in demand for the foreseeable future. Global consensus places India at the very top where demand growth is the fastest. And the factors are as follows

• A large base of population with a steady growth rate.

• A favourable demographic pattern which has resulted in a steady rise in the share of its working population.

• Increasing incomes have nudged people away from cereal consumption to more nutritious sources like milk. Thus, increasing population and a rising share of milk, translates into a strong growth in demand for dairy products.

Demand for milk and milk products consumption is therefore likely to grow stronger in the coming years.

If the farmer's earnings from milk also keep increasing, he will produce more What can hurt milk production is, unremunerative prices for milk producers. That is where Kurien's strategy of milk co-operatives helped. They ensured that milk producers were not fleeced by middlemen.

Thus, from accounting for 12% of the global milk production in 1995, India today enjoys a 19% share of world milk production. This figure is said to grow to 21% by 2020.

That this has been done by a country largely dependent on dairy imports five decades ago is an incredible achievement. India's journey to being the largest producer and the largest consumer of milk and milk products worldwide is stuff for most management schools today.

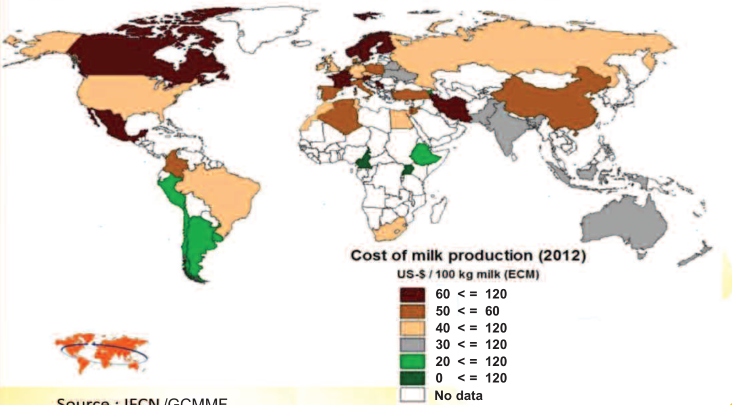
Milk Production Outlook 2020

Region	Past 1995	+19 Years	Present 2014	+6 Years	Future 2020
World Milk Production	560 Million MT	211	771 Million MT	96*	867 Million MT
India Milk Production	66.2 Million MT	74	140 Million MT	40 **	180 Million MT

* FAO Estimates,
**GCMMF Analysis

In terms of Cost of Milk Production, India is competitive as compared to EU & US and is at par with Oceania

Cost of milk production in average sized farms per country in 2012



Source : IFCN /GCMMF

Amul's journey of growth is admirable because it has addressed the needs of small farmers, without sacrificing the basic principles of economics. India is among the most competitive large players worldwide in terms of cost of production compared to New Zealand, the US and the EU nations.

This is mainly due to the co-operative model, epitomised by Amul. Amul is the single brand under which milk from Gujarat's co-operatives is collected, processed and sold as dairy products. Amul's modus operandi is simple:

• It collects large amounts of milk through its extensive reach and its pricing policy for milk producers.

• It sells as much as it can in liquid form (which does not amount to more than 10% of the collection, but is steady source of cash flow).

• It converts the rest of the purchase into value-added products. This includes skimmed milk powder (SMP) which gets reconstituted into milk during the lean season. SMP is low on the value chain whereas cheese, ice cream, exotica are high on this scale.

Amul has created new benchmarks:

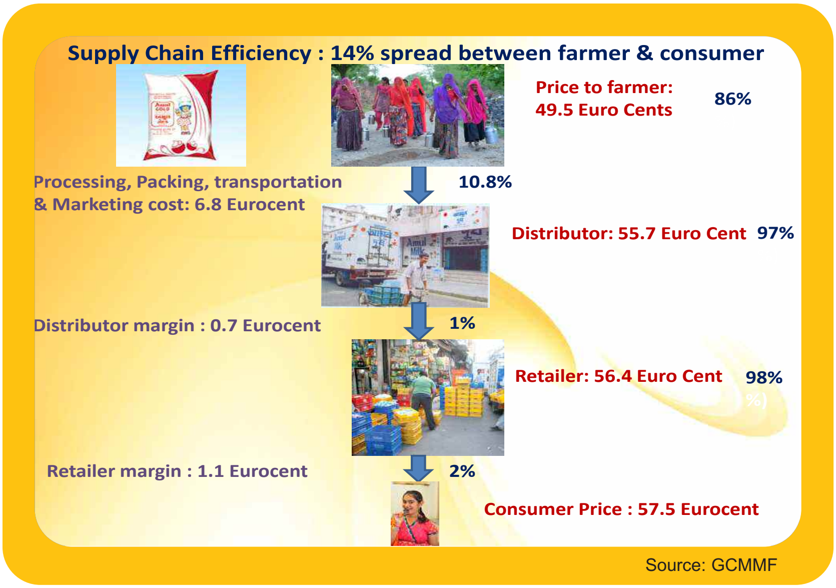
• It pays around 86% of the consumer sale price of milk back to the farmer.

• This is a global benchmark. Worldwide, the milk producer / seller gets approximately one-third, a third goes to the processor and the balance to the distributors.

• This payment benchmark attracts more and more farmers under its procurement umbrella.

• It also incentivises production, without having to invest in bovine and other assets.

• Integrated farms have to bear the cost of employment/ labour, which Amul does not. The beauty of the Amul model is self-employment and consequently controlled operational costs.


Supply Chain Efficiency : 14% spread between farmer & consumer
Price to farmer: 49.5 Euro Cents
86%
Processing, Packing, transportation & Marketing cost: 6.8 Eurocent
10.8%
Distributor: 55.7 Euro Cent
97%
Distributor margin : 0.7 Eurocent
1%
Retailer: 56.4 Euro Cent
98%
Retailer margin : 1.1 Eurocent
2%
Consumer Price : 57.5 Eurocent
Source: GCMMF


COW TO CONSUMER
The Consumer
State Co-op. Milk Marketing Federation
District Milk Co-operative Union : 17
Village Dairy Co-operative societies: 17000
Milk Producers : 3.3 Million
The Amul Model
Source: GCMMF

The impact of NDDB/Amul's working on the Indian market cannot be over-emphasised:

• Amul's track record has created market pressure on other co-operatives to fall in line.

• Even so, many co-operatives still pay the farmer Rs. 23-26 per litre (the middleman pays even less: Rs.14-23 a litre), which is 60-65% of the retail sale price of milk. Payment in many co-operatives is made on weekly or fortnightly basis. Amul pays its producers each day.

• It is the Amul model which compels other cooperatives and private players to pay more to the farmer.

• Amul has a fixed rate throughout the year, irrespective of the state of supply. Most processors or co-operatives in other regions pay less in the flush season.

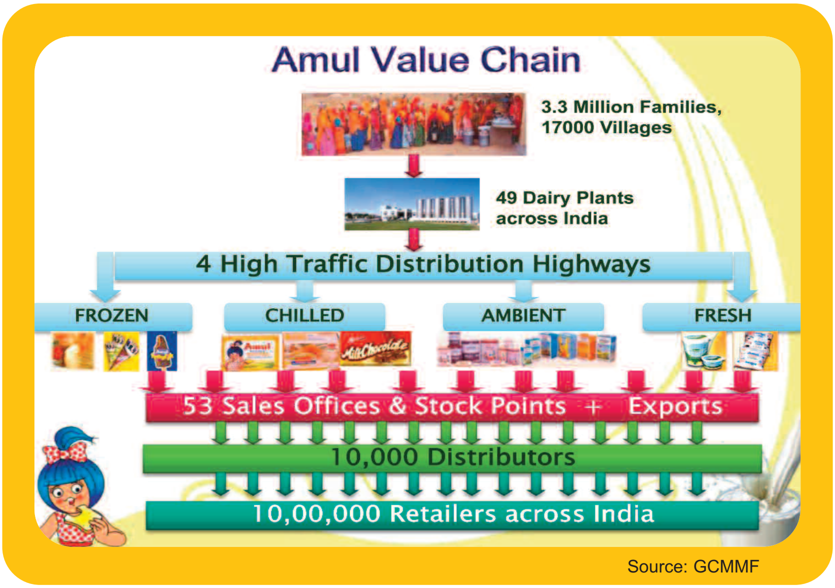
• An impressive 3.3 million small farmers are suppliers to Amul on a daily basis.

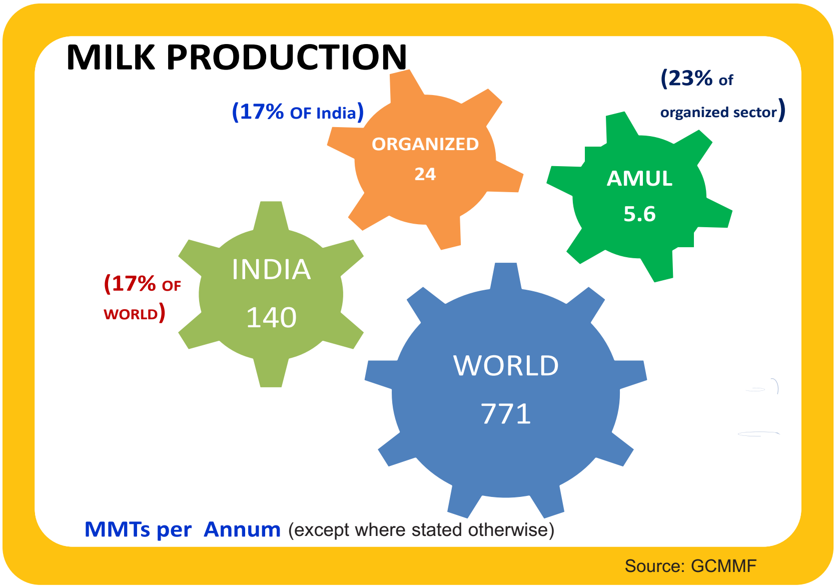
• Today, the consumer gets a good deal in terms of steady milk supply at reasonable prices. The farmer gets a good deal by earning 85% of the retail price for milk.

• Globally, at present, you have a picture of depression. Thanks to reduced demand (the China factor, and economic meltdown), and increased supply, farmers in other countries today get roughly 40% lower prices compared to two years ago.

• Even in India, farmers in locations other than Gujarat have borne the brunt of lower prices -- by anywhere between 20-40% -- largely because export markets have shriveled.

• However, even while global prices have softened, Amul has maintained and slightly bettered its prices.


Amul Value Chain
3.3 Million Families,
17000 Villages
49 Dairy Plants
across India
4 High Traffic Distribution Highways
FROZEN
CHILLED
AMBIENT
FRESH
53 Sales Offices & Stock Points + Exports
10,000 Distributors
10,00,000 Retailers across India
Source: GCMMF


MILK PRODUCTION
(17% OF India)
ORGANIZED
24
(23% of
organized sector)
AMUL
5.6
(17% OF
WORLD)
INDIA
140
WORLD
771
MMTs per Annum (except where stated otherwise)
Source: GCMMF

The Amul model has been replicated by the private sector players like Hatsun, Heritage Foods and Nestle. They all give their respective milk producers 70% and more of the sale price. The private sector's contribution to the milk industry enormous.

The impact of NDDB/Amul's working on the Indian market cannot be over-emphasised:

• Amul's track record has created market pressure on other co-operatives to fall in line. It compels them and private players to pay more to the farmer.

• Amul has a fixed rate throughout the year, irrespective of the state of supply. Most processors or co-operatives in other regions pay less in the flush season.

• An impressive 3.3 million small farmers are suppliers to Amul on a daily basis.

• Amul's distribution chain in incredible. It sends its products in frozen, chilled, ambient and fresh states to over 10,000 distributors and 1 million retailers across the country

• Today, the consumer gets a good deal in terms of steady milk supply at reasonable prices. The farmer gets a good deal by earning 85% of the retail price for milk.

• Globally, at present, there is a picture of depression due reduced demand (the China factor, and economic meltdown) and increased supply, farmers in other countries today get roughly 40% lower prices compared to two years ago.

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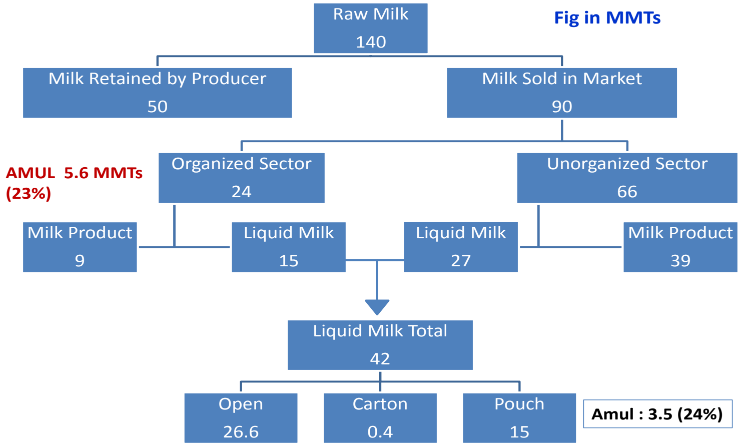
INDIAN DAIRY INDUSTRY : MILK FLOW



Source: Dairy India Year Book 2009 / GCMMF

NSS Round	Milk	Total Food and Milk Products	Total Non-Food	Total Exp.	Average Size of Household	Milk % of food
1970-71						
Rural	3.03	25.98	9.33	35.31	5.22	**11.66%**
Urban	5.01	34.04	18.81	52.85	4.72	**14.72%**
1990-91						
Rural	19.04	133.34	68.78	202.12	4.81	**14.28%**
Urban	32.37	185.77	140	326.75	4.55	**17.42%**
2000-01						
Rural	42.97	278.57	216.34	494.9	5.1	**15.43%**
Urban	75.9	400.57	514.01	914.57	4.5	**18.95%**
2011-12						
Rural	116.38	621.56	657.38	1278.94	NA	**18.72%**
Urban	187.14	923.71	1475.53	2399.24	NA	**20.26%**

Source: NDDB

The NDDB/ Amul model accounts for barely a quarter of the organised sector in India. However, the organised sector too is but 24% of the domestic production. The need of the hour is to increase the share of the organised sector in India. This is because the integrated organised sector is less exploitative than procurement through middlemen. Like Amul and Mother Dairy (a wholly owned subsidiary of NDDB), the organised sector also believes in selling value-added products, which improves net revenues. Sale of commodity milk is useful. But one cannot depend on this market alone.

• As the remuneration gets stable, the production goes up, the scale of procurement increases and so do the economies of scale. Thus a virtuous cycle gets created.

• Quality control can be exercised at the point of procurement.

• Consumer gets assurance that the product has not been adulterated during the processing stage.

• The propensity of the organised sector to invest in fodder improvement programmes, better milk production technologies, vaccines and similar farmer support systems is very high. It complements the initiatives taken by NDDB, GCMMF (which processes and sells dairy products under the Amul brand) and major private players like Hatsun, Heritage and Nestle. They set up hospitals, veterinary services, insemination programmes and the like.

Indian producers are reasonably secure, buttressed by strong local demand growth and protective government policies. But growth will also depend on:

• Higher penetration of organised players (corporates or co-operatives).

• Ability of the industry to galvanise the market's appetite for value added products, which is what prevents the 'surplus' milk from going waste or rancid.

Milk is the largest Agricultural Crop in India in value terms

FARMGATE VALUE OF MAJOR CROPS IN INDIA

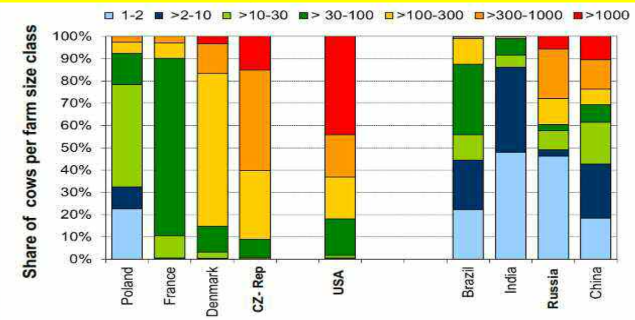
	Output (Million MTs)	Price @ US$/Kg	Value of Output Billion US$
Milk	133.7	0.42	55.7
Rice*	156.6	0.21	32.6
Wheat	92.5	0.23	20.8
Oilseeds	31.1	0.50	15.5
Sugarcane	339	0.04	14.1
Pulses	18.45	0.58	10.7
Cotton**	17.34	0.60	10.4

**Paddy Equivalent **Unginned Cotton Equivalent*

@ Support Price except Milk

Source: Hindu Business Line, Dec, 2013 / IFCN/GCMMF

Farm Size Segmentation : 10 countries
India : 48% have 1 -2 cows, 86% have < 10



Source : IFCN / GCMMF

The impact of Dr. Verghese Kurien's vision, as implemented by NDDB/Amul stands out:

• Milk is the largest agricultural crop in India.

• Milk output, in value terms today, is more than that of rice and wheat combined.

• This has been achieved without any kind of subsidy or incentive.

When juxtaposed against the high-growth production curve and the steady underlying demand, it shows the vitality of the product as it courses its way from the farm to the consuming family.

In this context, the NSS data on spending patterns tells its own story. It can be seen that expenditure on milk and milk products has increased exponentially.

• Milk and milk products outlay has grown faster than inflation.

• This outlay, as a share of total expense on food, has been increasing consistently.

• The increase is steady across both rural and urban parts of the country.

• This increase has come during a period when the average family size has remained steady or declined marginally.

The factors pointing to higher consumption in future have already been discussed. Given the need for reducing the incidence of malnutrition, milk is bound to play an important role. If the industry were to get its act together in curbing adulteration and increasing the availability of value-added products, growth would be boosted further. Overall, whether as a producer, processer or distributor, it is a good time to be in the Indian milk industry, provided one looks at this industry from end to end, not just as a middleman.


IDMC

Recommendations I

• Provide more reach for players who are willing to pay milk producers more – for this it is necessary to expand the footprint of both cooperatives and the organised sector. The average milk producer/farmer needs to get more and more into the ambit of the organised sector.

• Provide more facilities -- better milking technologies, logistics, more efficient chillers and suction cup milking machines of different dimensions, cattle feed, quality semen and vaccines. Fortunately, most of this equipment is already being manufactured in India. But more research is required to further reduce costs, even while improving the quality of such offerings.

• New technology facilitating gender selection to ensure the birth of female cattle will also help enormously.

• Focus on controlling adulteration. This has to be done by diminishing the unorganised segment's operations, where much of the loose milk (often adulterated) is sold. Then bring in good manufacturing processes which further reduce the possibility of adulteration.

• Increase transparency of operations and transactions, through better machines for recording milk quantity and quality.

• Stable remuneration to the farmer is a must, irrespective of lean / flush seasons. GCMMF has laid down the benchmark of daily cash payment. The organised sector too has largely fallen in line with these practices. It is the unorganized sector which often exploits the farmer.

Recommendations II

• Invest in value-added products. This is the only way any milk that is not sold as fresh milk can be given a longer shelf life. If the product mix is handled well, some of the value added products can add substantially to the bottomline.

• Government has to take steps to protect the domestic industry from imports in all segments of dairy products, particularly in the face of excess supply in the global market for the past few years.

• The farmer needs to be updated on the schemes and facilities currently available, which can in turn boost procurement and hence income.. Improvement in productivity at the farmers' end, and value-addition at the processors'' end is the key to exponential rise in the sector size.

• Such huge investments in processing, logistics and marketing can be possible only if the organisation is large. Private entrepreneurs with deep pockets is one option. Cooperatives which harness the inputs of thousands of producer-farmers is another option. Both need to be encouraged.

• Do not allow shrill, irresponsible cries against cow slaughter. It is a huge expense on the farmer to look after an unproductive cow. The shrill cries could shrivel this wonderful industry.

Panel discussion

Welcome address by Dilip Piramal, President, IMC

"Welcome to the FPJ-IMC Forum on the subject of Indian dairy industry and its relevance to the economy. I sincerely thank you all for sparing your valuable time to participate in today's discussion.

Indian Merchants' Chamber was set up in 1907 as a chamber of trade, commerce and industry in the country with headquarters in Mumbai.

It has around 2,700 direct members, comprising a diverse cross-section of the business community, including public and private limited companies and over 220 trade and industry associations. It has a vibrant ladies wing of around 2,000 members, an Economic Research and Training Foundation, The Ramkrishna Bajaj Quality Award Trust and a Young Leaders Forum. Overall, it reaches out to around 250,000 diverse businesses in the country.

We believe in broad-basing economy growth to make it truly more inclusive and socially distributive for every Indian. Dairying has been considered as one of the activities aimed at elevating poverty and unemployment especially in the rural areas. It has provided source of income to people who previously depended on payments from small seasonal crops or from occasional labour.

I welcome all of you to hear the esteemed panelists now.

T. NANDA KUMAR,
Chairman National Dairy Development Board (NDDB)

"Doubling farmers' income by 2022 is impossible without dairy farming which has a CAGR of 19.6%. 85% of the farmers in India who are marginal and small own 45% of the land, but 75% of the bovine. So probably for a landless person, dairying is one of the best occupations"

Significance of the milk industry

NANDA KUMAR: If agriculture's contribution to GDP is so low, why is dairy important? About 33% of agri-GDP is dairy, and more importantly, we have about 50% of people in agriculture. In Dr. Verghese Kurien's words, we at Amul are not in the business of dairying, we are in the business of rural prosperity.

Regarding the [recent] Budget the government's aim is to double farmers' incomes by 2022. It is impossible to do this without dairy. Dairy is a more equitable agri-occupation. 85% of the small and marginal farmers in India own 45% of the land, but own 75% of the bovine. For a landless person, dairying is one of the best occupations.

In a country which is predominately vegetarian how do you handle children between six months and five years without dairy? Also, we've always worried about the levels of under-nutrition.

SODHI: Today we have become not only the world's largest producer and consumer, but also self-sufficient, because the Amul model gave all a win-win situation. India is the only country where farmers get 80-85% of what consumer pays. In most of the world, farmers get only one-third.

Processors accessed a good system to procure from millions of farmers, process it and market it. Lastly, consumers are very happy to get very hygienically packed nutritious milk at a very, very reasonable cost vis-à-vis other countries.

We have to see how we can continue to grow and how we can encourage tomorrow's generation to go for this profession. Dairy can help in the 'Make-in-India', in the rural areas where most of the population lives, since you do not require much land. It can provide a livelihood source to the maximum people in rural India.

MAHESH PATHAK,
Principal Secretary Animal Husbandry, Dairy Development & Fisheries, Govt of Maharashtra

"Population growth, demography, rising incomes, all will keep dairy industry demand in a very comfortable position. Our target is to produce some 220 million tonnes by 2020. Private sector role is vital, especially when nearly three-fourths of the industry is unorganised"

PATHAK: For doubling rural incomes, animal husbandry, dairy and poultry are important. These reduce the farmer's risk, mitigate the strain when rains are not good, keep income flowing. Our aim is that the farmers' income comes throughout the year and not seasonally.

SODHI: If you ensure a remunerative price on a continuous basis to the farmer, the farmer will produce milk. In Gujarat there is a district called Banaskantha, which is a very semi-arid area on the border of Rajasthan desert. About 45 years ago when co-operatives were formed there people said, when there is no water how can you produce [milk]? Today that district gives 45 lakh litres per day, which is the maximum all over India.

[Similarly] 4-5 years ago when we went to Kolkata the people said West Bengal has no milk. Now whatever milk we are selling in Calcutta in year is procured locally.

Milk industry background

NANDA KUMAR: The story of milk production growth is well known, from 22 million tonnes in 1970 to 146 million tones of milk in 2015. The monetary value of this is more than the current combined value of rice and wheat, and this was achieved without subsidy and incentives. The

R.S. SODHI,
Managing Director,
GCMMF (Amul)

"India is the world's largest producer and consumer of milk and the only country where farmers get 80-85% of the MRP. In the '70s India's production was 20 Million tonnes. Today production is 146 Million tones"

important element in this growth was the farmer institutions, which worked on three basic principles of 'trust, transparency and technology'. With a base of small farmers, we are 18% of global production.

SODHI: There was a time in the 'seventies when you had to have the aluminum card of Delhi Milk Scheme to buy two bottles of milk – that too, if you stood in the queue two hours before the booth opened. India then was producing only 20 million tonnes of milk and this was static – we were dependent more on imports from the developed countries, Australia and New Zealand. Thanks to Dr. Kurien, the model of Amul was created, and replicated, and today we are self-sufficient, whereas most of our neighboring countries are still importers from the same nations.

Growth opportunities

NANDA KUMAR: There is a shift in food expenditure, with spend on staple cereals coming down and milk rising. Food spend today is on high value agriculture, including fruits, indicating a prosperous and aspirational India.

International studies are looking at a growth of about 19.6% CAGR till 2020 for India's dairy market. Consensus is that India's GDP growth cannot be below 7-8%. Combine this with urbanization. In another 8-9 years 50% of India is going to live in cities, and a hundred of them will be smart cities. Also right now we process only 20-22% of output. Any increase here will contribute to growth.

Both the public and the private sectors can grow with the same basic principles. How transparent you are, how much trust the farmer has in you, will ultimately determine whether you can work with the farmers.

SODHI: In the 'seventies India's per capita consumption was 110 gm. Today it is 340 gm. along with increase in population, consumption is growing because of prosperity.

From today's population of 1.25 billion, it is expected that by 2050 it will be around 1.7 billion. With growing consumption, if today we consume 150 million metric tonnes, by 2050 we will consume three times more. When value-added products increase, industry growth will be beyond three times in value terms. People involved in the dairy industry, whether in production, processing or marketing, are very fortunate, because it is definitely going to grow.

PATHAK: Population growth, demography, rising incomes, all will keep dairy industry demand in a very comfortable position. Our target is to produce some 220 million tonnes by 2020. Private sector role is vital, especially when nearly three-fourths of the industry is unorganised. They have to enter even production, which today is substantially unorganised and hence has lot of inefficiencies.

Integrated dairy farms is the next opportunity for the private sector. For co-operatives, there is opportunity in regional imbalance in the eastern, north eastern and extreme northern regions.

Recently there was a FSSAI report that almost three-fourths of the milk samples are failing the test, even for pouched milk. Most of the milk sale is non-standardized, from local suppliers, and most of the test-checking is done on the organised sector. The move to being organised is important from the point of safety, and also from the point of better prices to the farmers.

MADAN SABNAVIS,
Chief Economist, CARE

"The dairy industry stands on four pillars 1: Output - dairy segment output is highest in value terms in the entire primary sector. 2: Demand - As rural incomes rise, a progressively larger proportion will be spent on dairy products. 3: Employment - 70-75 million households are dependent on dairy farming. 4: Price – in 1988 the price was Rs. 2 per litre of milk, which is around Rs.40 today"

NANDA KUMAR: Uttar Pradesh is a classic case in point, where about 1% of the total milk production is procured through cooperative routes. It's ready for large players, like Amul and Mother Dairy.

So is Eastern India which has adequate natural resources, where 27% of the cattle population gives 17% of milk. What they lack is good breeds, good institutions and probably a good marketing infrastructure.

SABNAVIS: Let us look at a macroeconomic model. The dairy industry stands on four pillars. First is output. The dairy segment output is highest in value terms in the entire primary sector. To grow the primary sector, focus on where the value lies. Second is demand. As rural incomes rise, a progressively larger proportion will be spent on dairy products. Demand for milk will increase, and production can grow in tandem. Third is employment. It has been mentioned that 70-75 million households are dependent on dairy farming. To enhance employment in the rural areas, we have to look for a factor with the greatest potential. Focussing on dairy segment would help halt migration from rural to urban areas.

Fourth is price. In 1988 or 1989, price was Rs. 2 for a litre of milk, which is around Rs.40 today, quite clearly a big increase, outpacing the WPI. If you are working in this segment there's a good chance that your income will keep increasing, it will keep pace with inflation. Also when prices of agricultural products go up, there's a huge noise, but for dairy products nobody has ever complained about paying higher prices.

SODHI: India's milk consumption is 340 gm per person per day, varying across states. In the North it is 600-700 gm, in the North East, it is 100-120 gm and West will have 300-400 gm. In Europe, it is 850 gm. In India around 30-40% are malnourished, and milk is the best source of nutrition, with protein and fat.

Current global and domestic position

SODHI: At present, the dairy industry worldwide is facing stress. In Australia and New Zealand, prices are lower by 60% compared to two years back. European prices are 30-40% lower.

There are four factors behind this. China, a large importer, has reduced imports. Russia has started to reduce or totally ban import of dairy products from European nations. Third is the in-tandem production rise in the European Union nations, which abolished their quotas on milk production in 2015, and started competing with Australia and New Zealand. The last is the crude price crash. Crude oil exporter nations are all dairy product importers.

Across India too, farmers today get 20-60% lower price of milk. But in Gujarat – where we procure 20 million litres of milk daily – farmers are getting 2-5% more prices compared to last year, because in Gujarat 93% of the milk is converted into value-added products and marketed. With a commodity market of just 7%, farmers are not exposed to price volatility.

SABNAVIS: In case we are actually self-sufficient, we can think of exports as an avenue. For this, the industry has to become more organized, convert milk into manufactured products.

Challenges to growth

NANDA KUMAR: We have serious issues of low productivity, which emerge from some indigenous breeds and also from our feeding challenges. Another challenge is pressure on feed, fodder and water due to climate change. Processing and support infrastructure is far from adequate for growth of 19.6%.

There is also the new definition of food safety and its newer challenges. Maintaining quality is a task when milk is collected, processed and probably sold twice a day.

SODHI: Gradually we will have more mouths to feed and lesser hands to produce thanks to population growth and urbanisation.

How can we encourage rural India to produce more food? How do we attract the younger generation to the dairy industry? Only if they find it commercially remunerative, and also more glamorous via modern industry techniques.

SABNAVIS: Increasing cattle livestock could lead to environmental issues. Second, in India once cattle stop giving milk, we destroy them. The current ban which you have on beef – do we have the wherewithal to actually look after cattle once they stop giving milk?

Support requirements

PATHAK: For integrated animal husbandry development, we need for better hospital infrastructure, as also better extension services. Departmental allocations – for farm development, for better quality of semen and artificial insemination, for improving the producer companies, for providing dairy infrastructure – have to go up, in order to double farmer incomes. The targeted production growth will strain the feed and fodder situation.

SABNAVIS: The NREGA wage can be a good support tool to compensate farmer for fodder. With the Government promoting small banks dedicated to priority lending, purchase of cattle can be financed. The National Rural Livelihood Mission (NRLM) can provide a back-ended subsidy.

NANDA KUMAR: We need a much better hold on the unorganised sector through the Food Safety Act. FSSAI should focus on loose milk and the kind of milk that is still sold in packet without branding and processing. We have to analyse the process capability of every processor to ensure that the customer gets a safe product. Strengthening institutions is something that we have to focus on.

PATHAK: The Government of India has given an advisory that SMP [skimmed milk powder] may be used in school education program. If The Government of India includes this in the 'Sarva Shiksha Abhiyan', even one day a week is enough. Gradually we can get into the school program, but we need Government help.

With more artificial insemination we need less male animals, which will improve productivity and commercial viability.

We are working on a milking machine for a single cow, which would be an inducement for small farms and younger people. About NRLM, it is more crucial that farmer be able to sell the milk and make money.

NANDA KUMAR: At the purchasing centre, you need a technology that demonstrates that the farmer is getting paid fairly. Fat content measurement, solids-not-fat (snf) measurement, transparent payment systems are important to gain

T. Nanda Kumar, Chairman National Dairy Development Board (NDDB); R.S. Sodhi, Managing Director, GCMMF (Amul); Dilip Piramal, President IMC; R.N.Bhaskar Consulting editor, Free Press Journal; Mahesh Pathak, Principal Secretary Animal Husbandry, Dairy Development & Fisheries, Government of Maharashtra; and Madan Sabnavis, Chief Economist, CARE

Abhishek Karnani, Director, The Free Press Journal , handing over a token of appreciation to Nanda Kumar in presence of Sodhi.

A section of the audience listening with rapt attention.

Ashok Karnani, Managing Director, The Free Press Journal, handing over a token of appreciation to Madan Sabnavis.

Vote of Thanks by G Chandrashekhar, Economic Advisor, Indian Merchants' Chamber

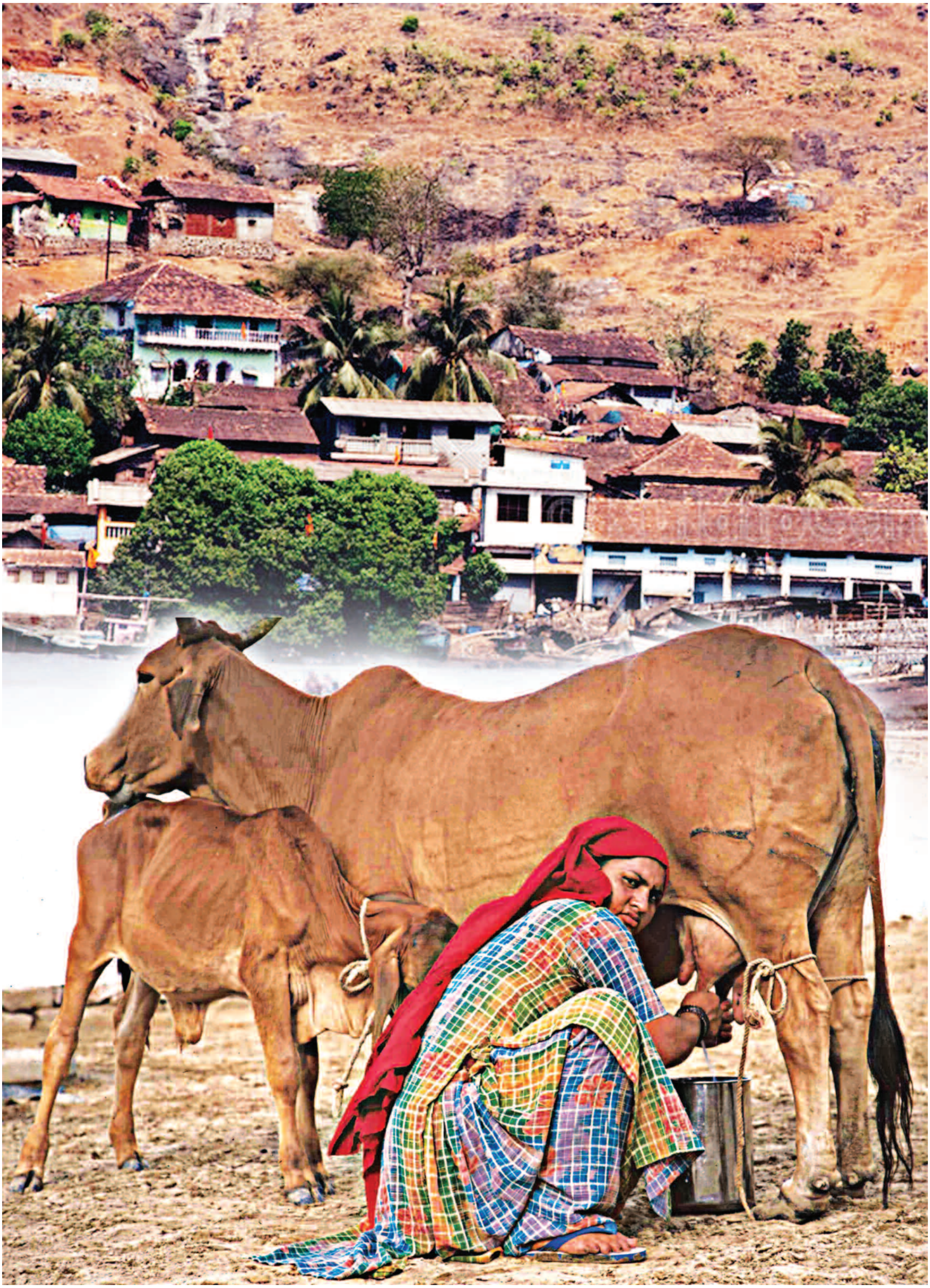
On Behalf of the Indian Merchants' Chamber, President Mr. Dilip Piramal and of course our partners 'The Free Press Journal', I want to thank each one of the participants and the panellists for bringing so much articulation and insight into the dairy Industry in India.

Obviously the future is absolutely bright with huge output increases, better prices, more employment etc. I think it's been a very interesting discussion today.

I want to thank the participants, it's been an interactive meeting. A number of questions were asked. I am sure there will be more questions. So if the panellists are going to be around for a few more minutes, you can ferret out your answers from them.

Thank you very much. Good luck and God bless you all.

Note: A more comprehensive version of the panel discussion alongwith videos can be found at www.freepressjournal.in/imc-milk



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