India – Emerging Dairy Capital of the World The Amul Perspective



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Managing Director

AMUL INDIA

GCMMF

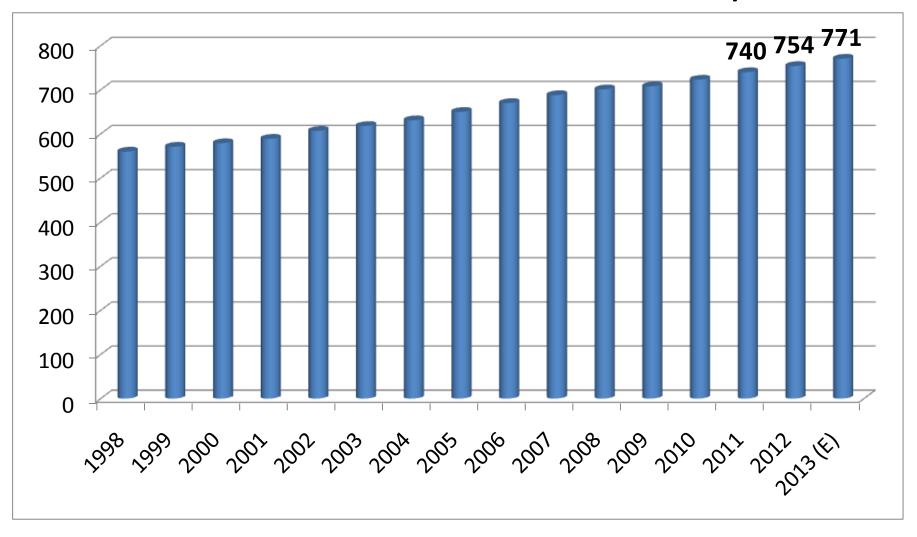
Garda Lake
29th May 2015



5th Clal Dairy Forum



World Milk Production: MMTs / Annum

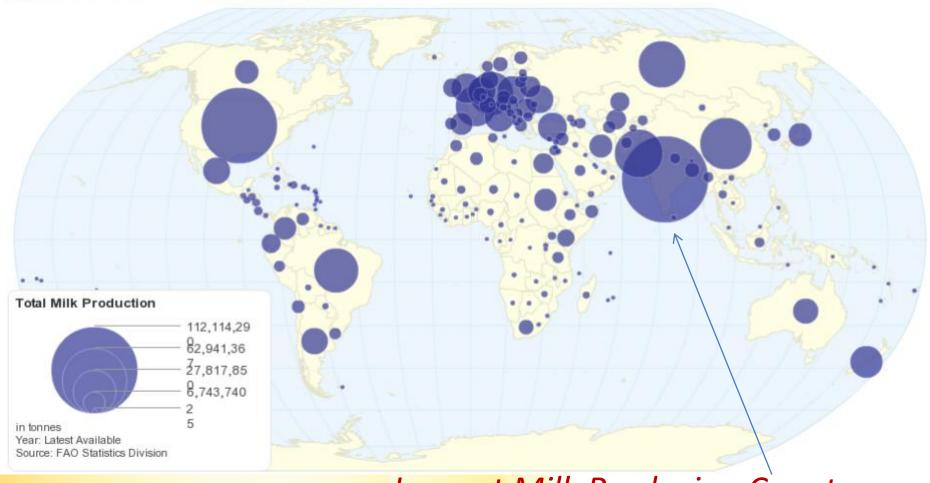


Source: FAO

CAGR: 2.2%

World-wide Milk Production

Current Worldwide Total Milk Production

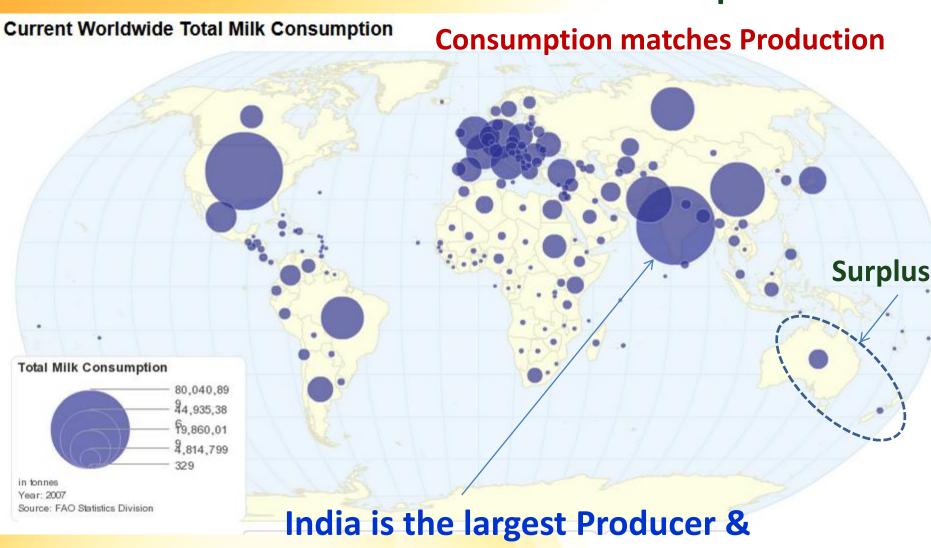


Largest Milk Producing Country

Source: FAO / Chartsbin

140 MMTs - 17% of Global Milk Production

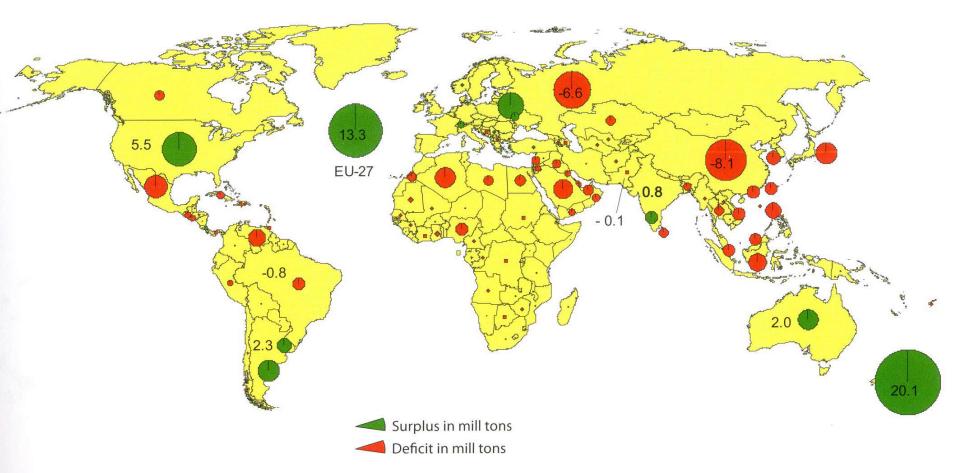
World-wide Milk Consumption



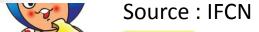
Consumer of Milk in the world

Source: FAO / Chartsbin / IFCN

Milk Surplus & Deficit Countries



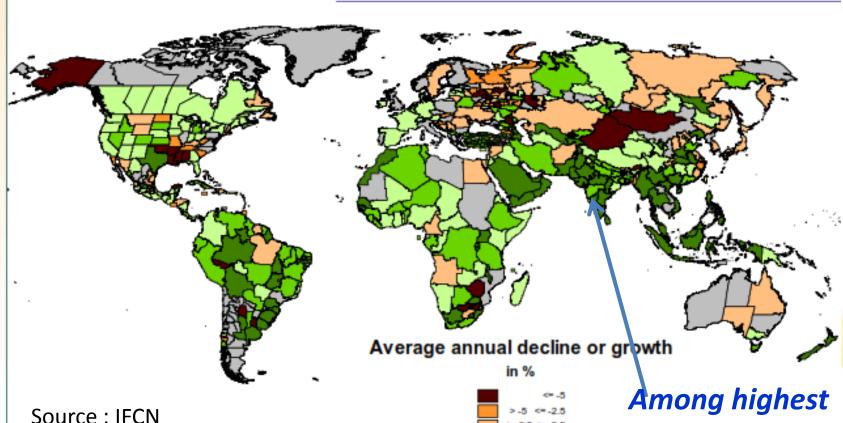
India is self-sufficient but surrounded by Milk deficient regions





Growth in Milk Production: Last 5 years

CAGR in %age per annum





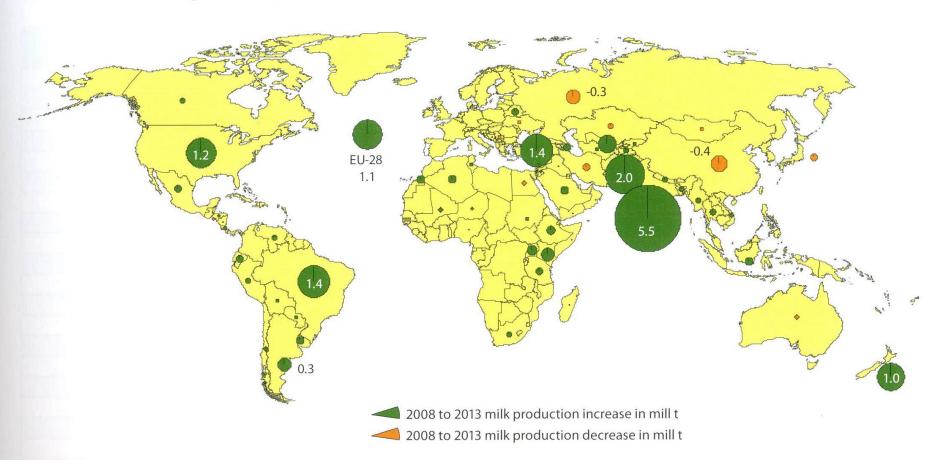
Data: 2012 and 2007 in ECM, regional data in natural fat and protein content. If not available, 2011 data was taken for CN, IN, / TR based on milk delivery 2012 to 2010 in natural fat and protein content. <=.5
>.5 <=.2.5
>.2.5 <=.0.5
>.0.5 <= 0.5
> 0.5 <= 2.5
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growth in Milk
Production

Absolute Growth in Milk Production: Last 5 years

In MMTs / annum (Absolute Quantity)

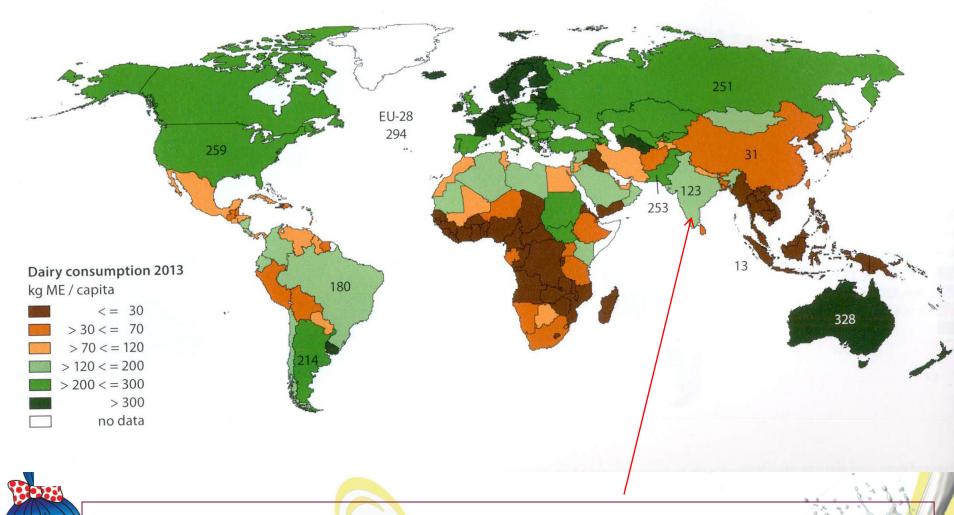
Annual absolute change of milk production volume 2008-2013



Even in terms of absolute quantity, Milk Production Growth in India is among the highest in the world

Source: IFCN

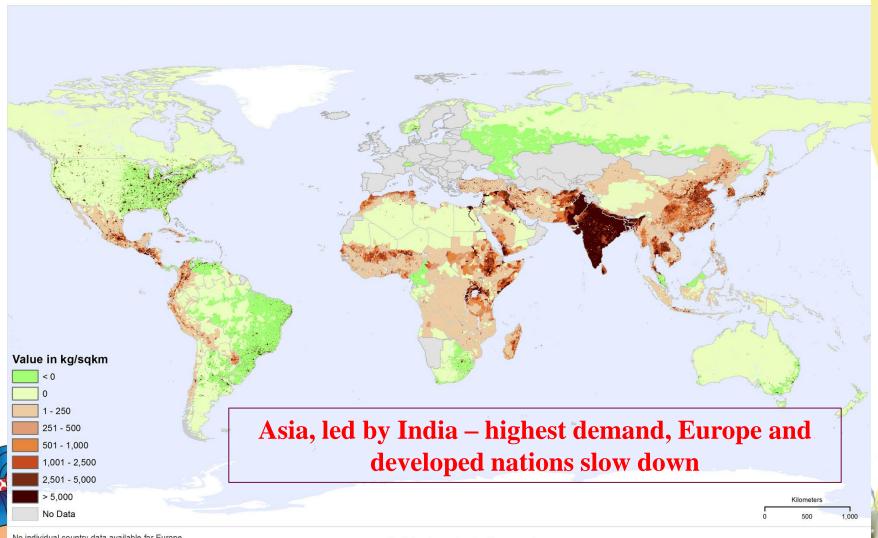
World Milk Consumption per Capita



India: Low Per Capita Consumption - But increasing rapidly due to rising income levels & better availability

Future Projected Growth in Milk Demand

Growth in Demand for Milk 2000 - 2030



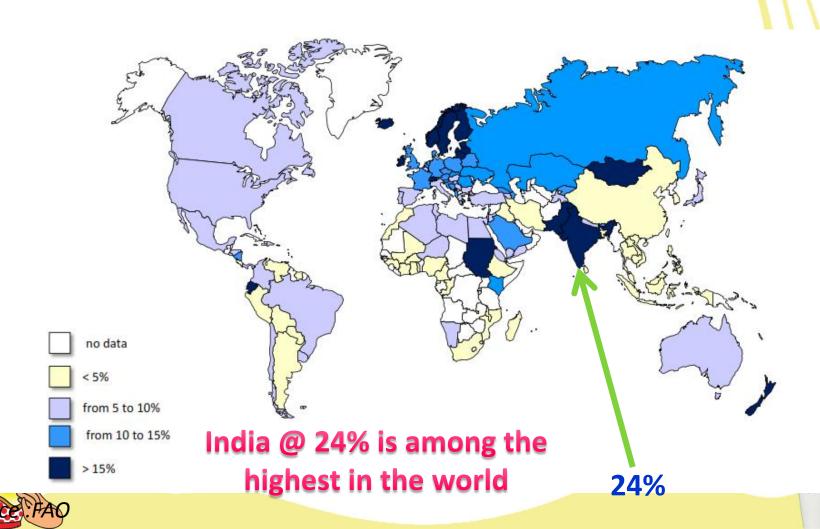
No individual country data available for Europe

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.

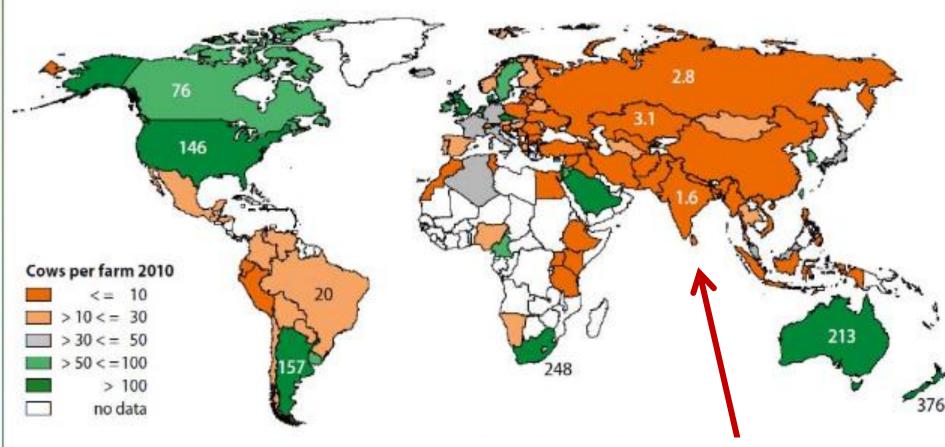
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS Animal Production and Health Division



% Share of Dairy sector in total Agricultural Production



No. of Cows per farm : Across the world World Average : 3 cows per farm

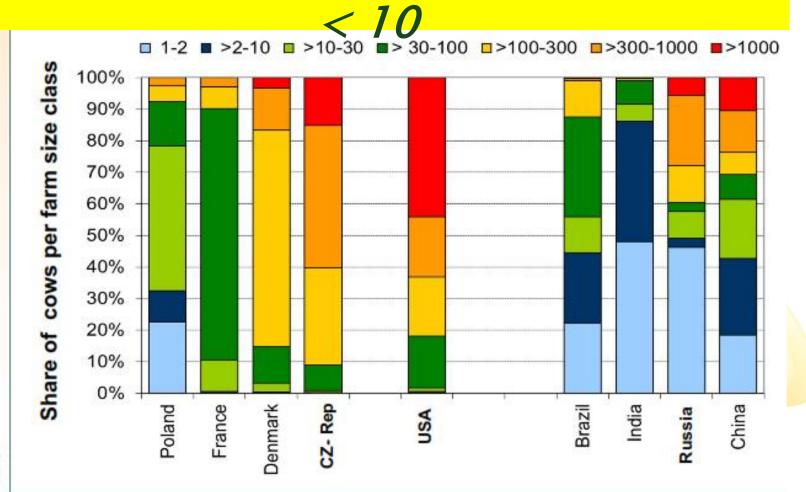


India has just 1 -2 Cows / Buffaloes per farm

Source: IFCN



Farm Size Segmentation: 10 countries *India: 48% have 1 –2 cows, 86% have*

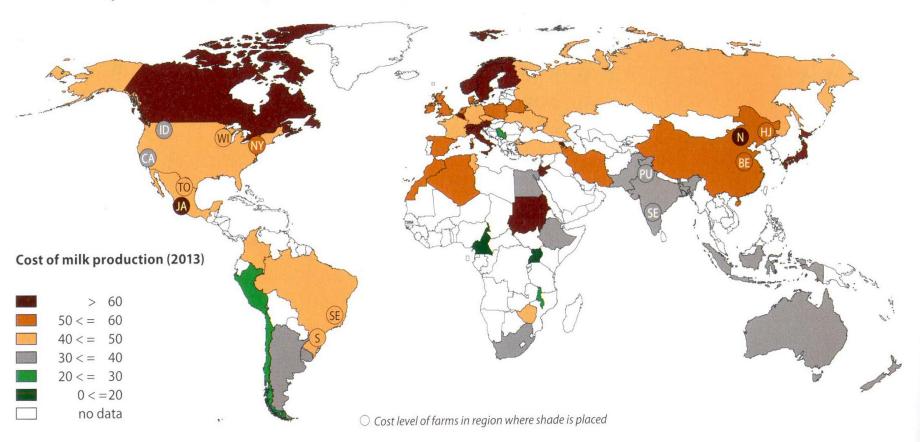




Source: IFCN

Cost of Milk Production

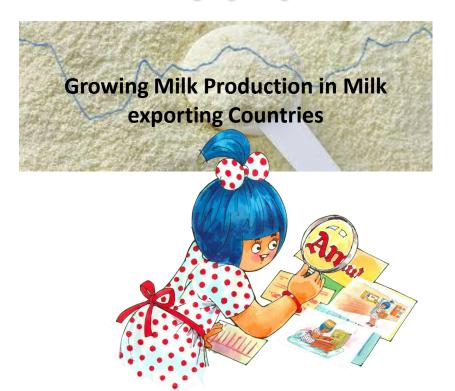
Cost of milk production in average sized farms in 2013



Indicator: Cost of milk production (excluding quota cost) of the "average sized" typical farms analysed in the countries.

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

Supply Side Scenario











Farmers continue to get Margins as feed price is low

World Farm-gate Prices

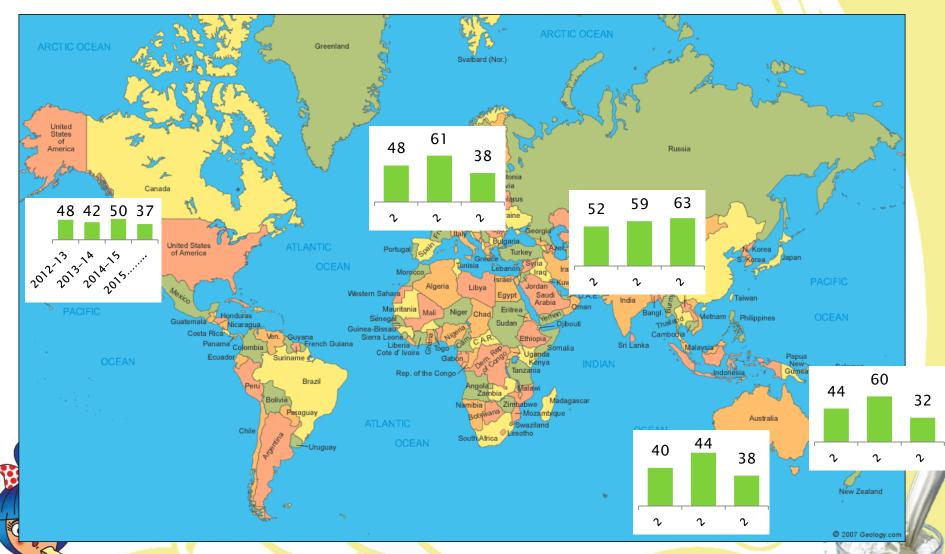
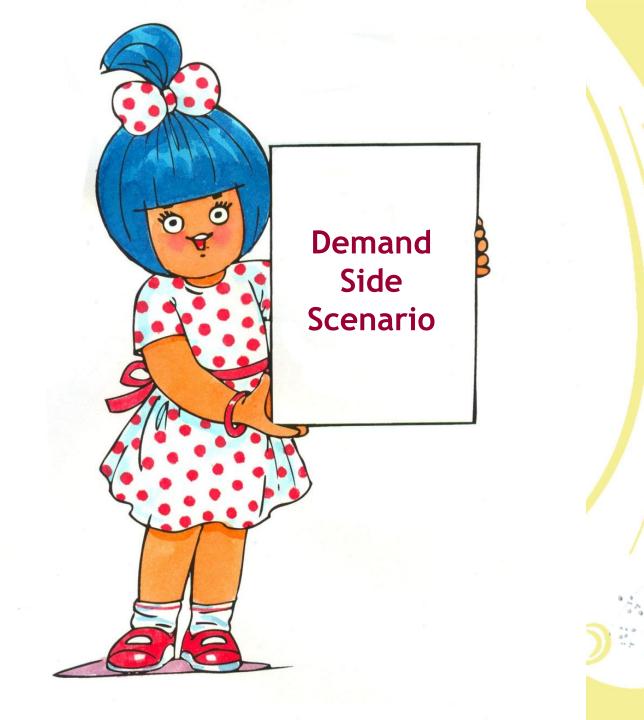


Fig in \$/100 Lit Milk



Demand Side Scenario

- Outside US, the global economy is struggling to improve and currencies are falling in emerging market making imports expensive
- Weak Chinese buying due to improved local supply, modest growth in demand and high inventory
- Import ban by Russia, the second largest dairy importer of 2013, has resulted in fall of overall global demand
- However, improved availability and low price has created strong gains in imports of South East Asia, Middle East and North Africa

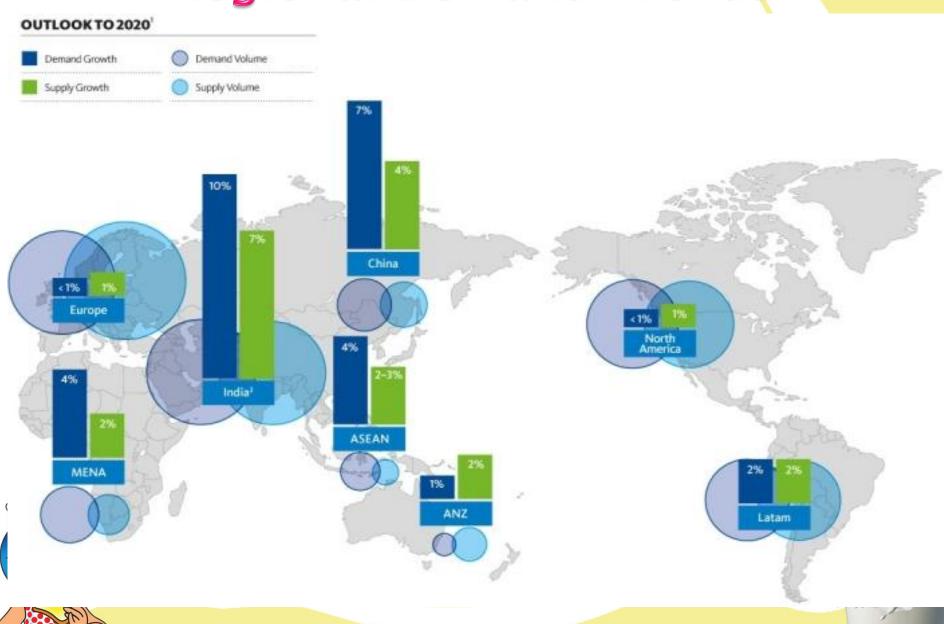
Currently, Asia alone accounts for close to 40% of Global Dairy import

Demand Side Scenario

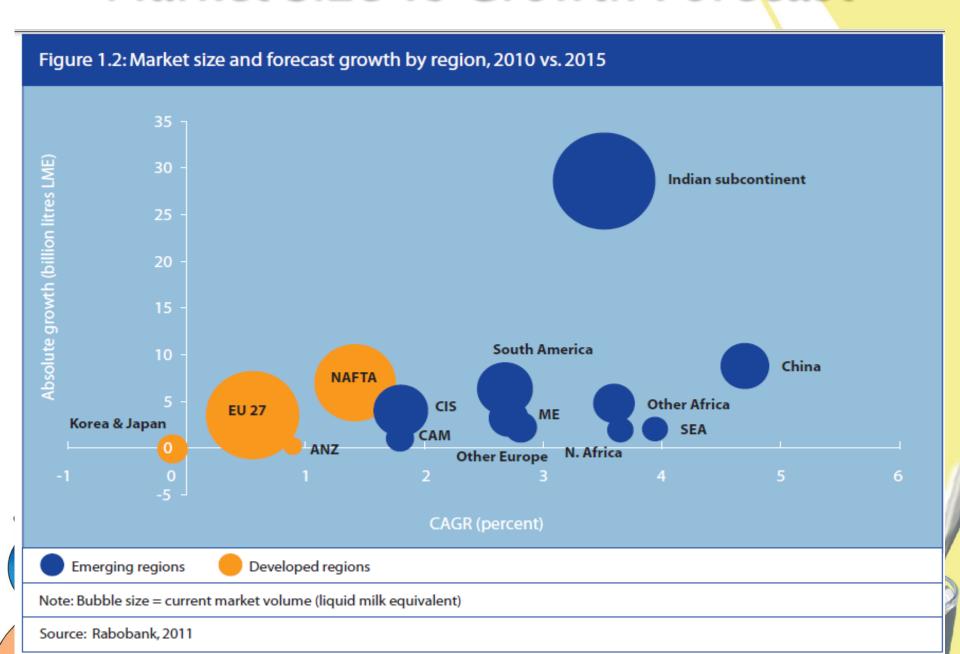
- Total milk consumption in developed countries stayed more or less constant over the last twenty years
- Demand is growing in the developing countries because of
 - Rising of per capita income
 - Emergence of an affluent middle-class in many low and middle income countries in Southeast Asia, Latin
 Developing Countries and Eastern Europe

"westernization" trends leading to increasing preferences for new value-added products

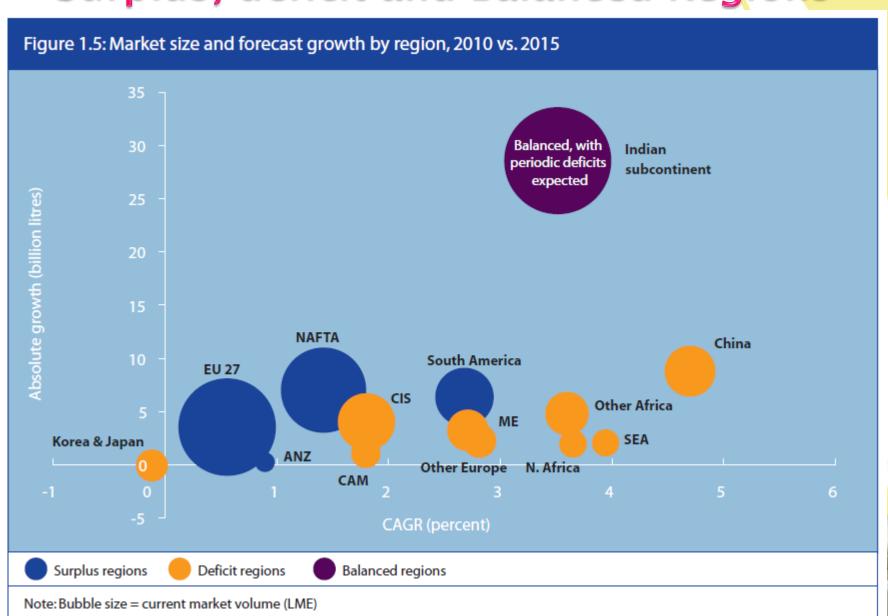
Regional Demand Trends



Market Size vs Growth Forecast



Market size and Gorwth Forecast for Surplus, deficit and Balanced Regions

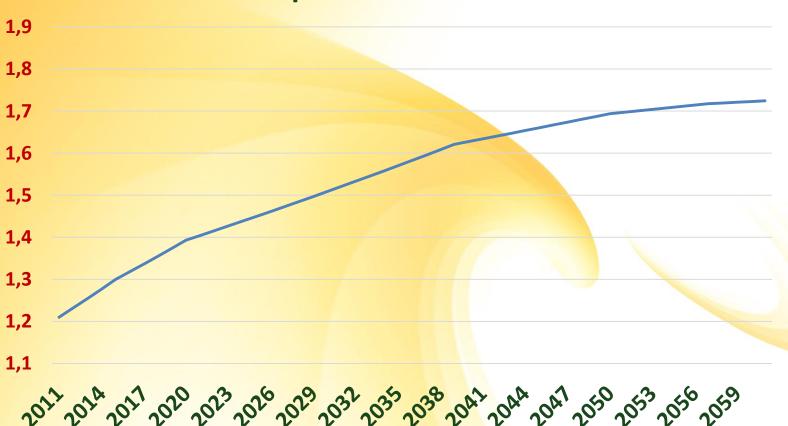






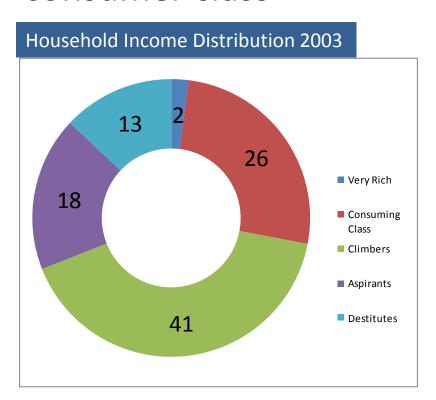
In the next 50 years, our population in India will definitely cross 1.7 Billion

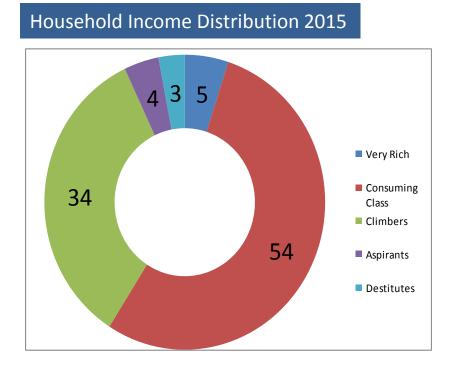




Changing Environment

Rising Urban & Rural Income Levels, growing consumer class

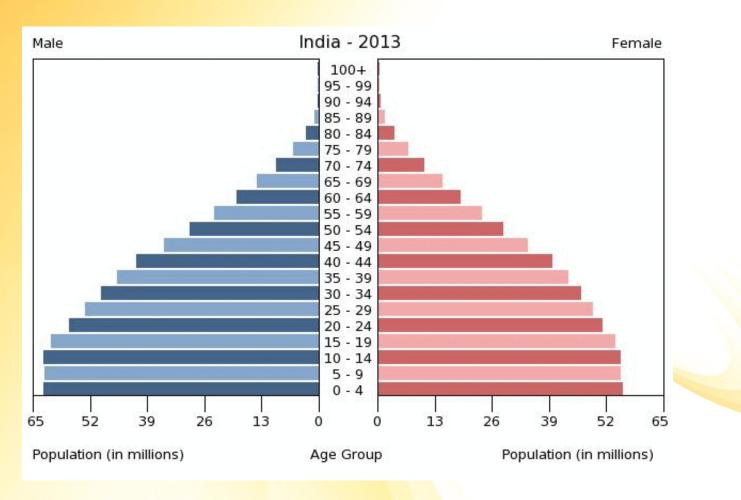




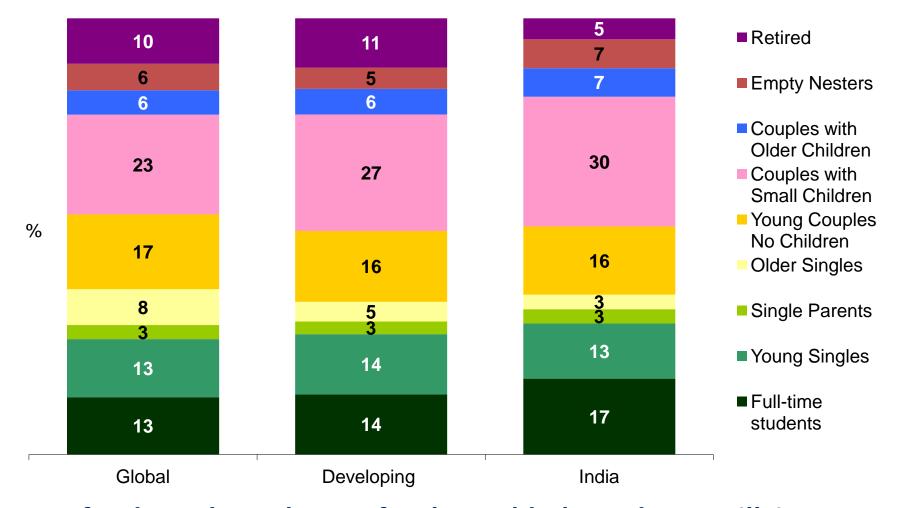
Changing Food Habits
Growing Need for Convenience Food

Source: HLL, NCAER

India: A relatively young country with a high proportion of working age population (47%) & another 47% youngsters below 24 years



Lifestage: Youngsters will help expand consuming class in coming years

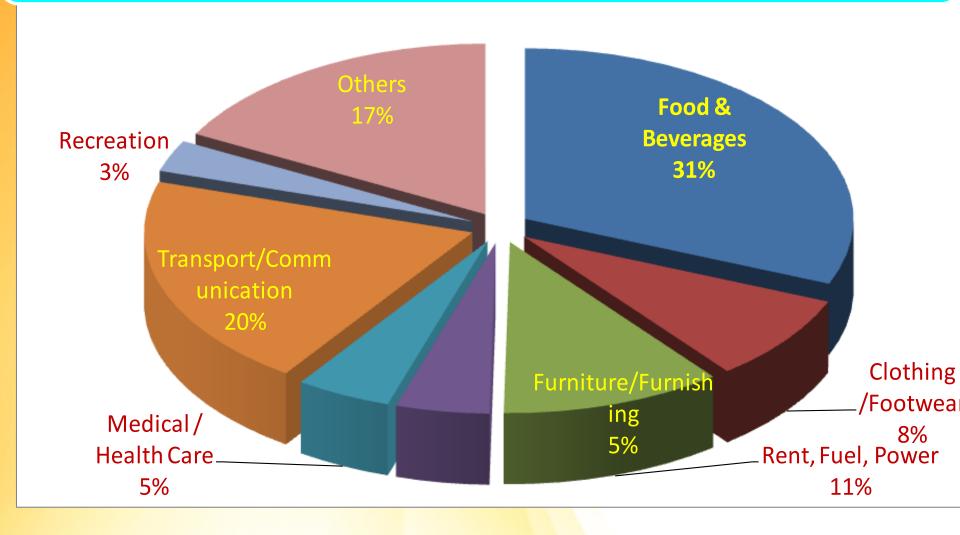


In food market, share of value added products will increase from 21% to 31% by 2019-20 as younger age group enters consuming class

Food: India Trends



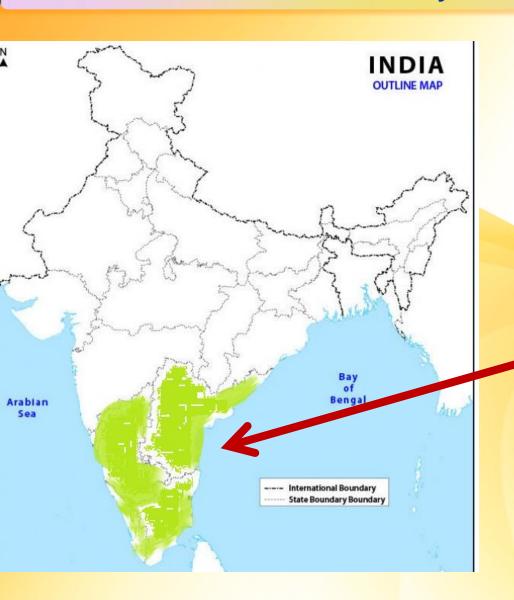
Food still accounts for highest share of Monthly Household Expenditure in India at 31%

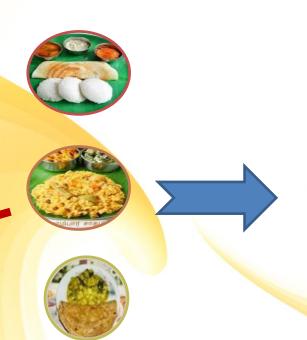


Highly diverse eating habits in different parts of India



Diverse manifestations of Dairy Products in South India











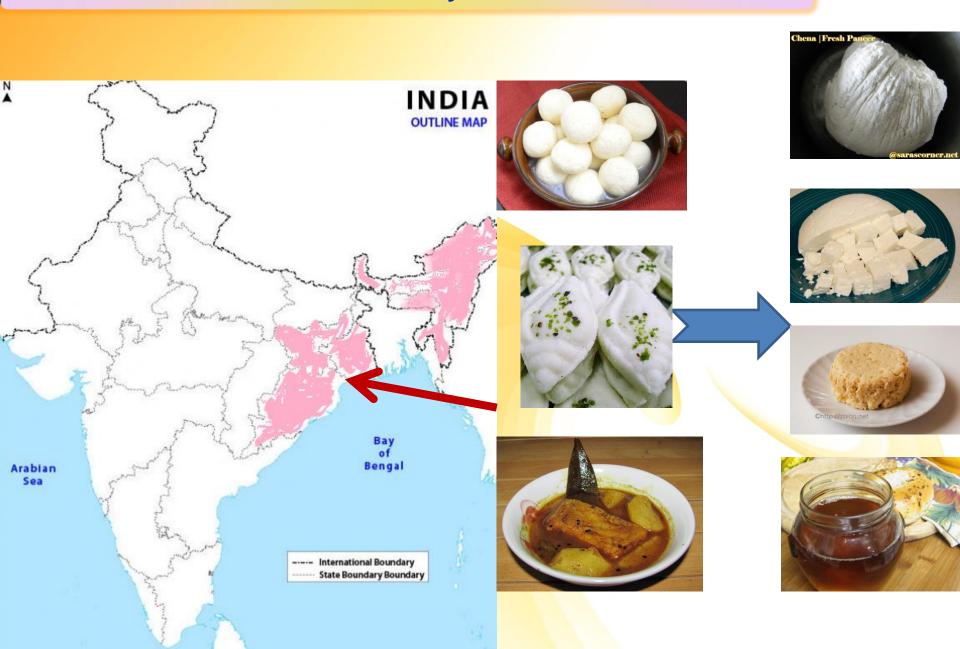




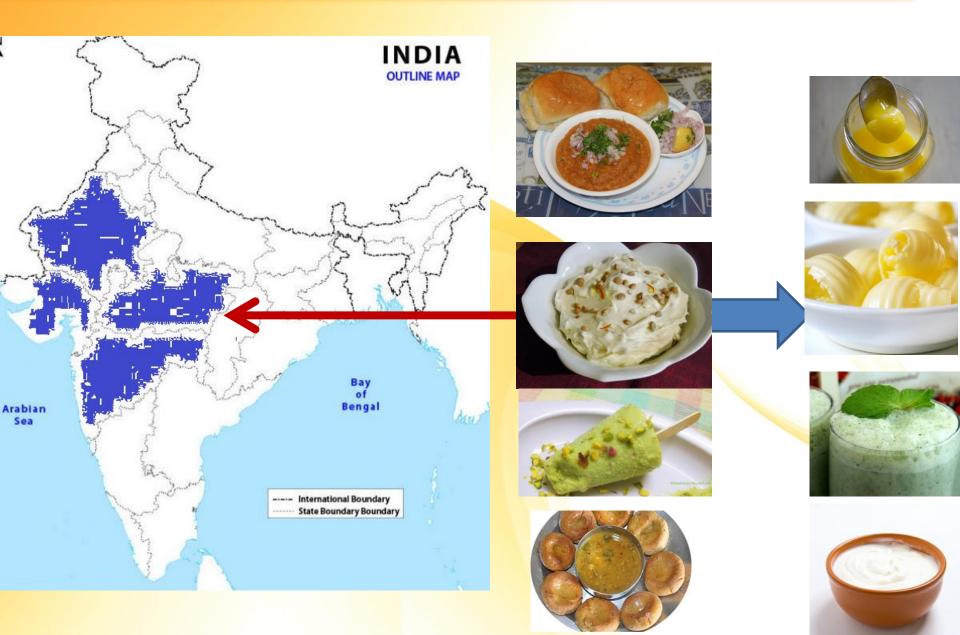
Diverse manifestations of Dairy Products in North India



Diverse manifestations of Dairy Products in East India



Diverse manifestations of Dairy Products in West / Central India



Buying products from 15 million scattered shops





Buying products from 15 million scattered shops



Buying products from 15 million scattered shops





Buying products from 15 million scattered shops





Shops selling Fresh Amul Milk in pouches



Shops selling Fresh Amul Milk in pouches





Organized Retailing in India: Started in India just 10 years ago







Modern Retail 7% of Business

Tradition Retail 93% of Business



India loves Milk

- Milk continues to remain an important part of Indian diet.
- Contribution of Milk as % of total expense on food

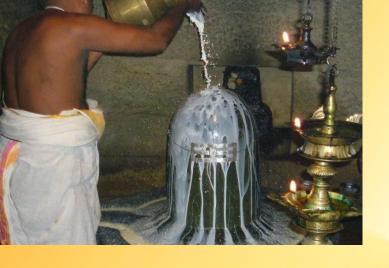
	1987-88	1993-94	1999-00	2004-05	2010-11
Rural	13%	15%	15%	15%	16%
Urban	17%	18%	18%	19%	19%

Source: NSSO 2012



India: The land of Milk & Honey since thousands of years....







Milk and Dairy Products have been part of Indian Culture & Tradition for centuries

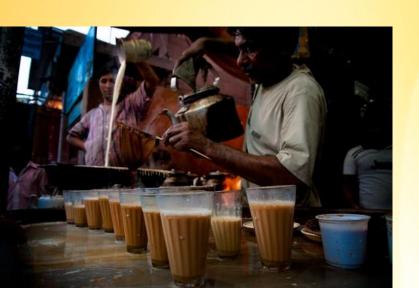




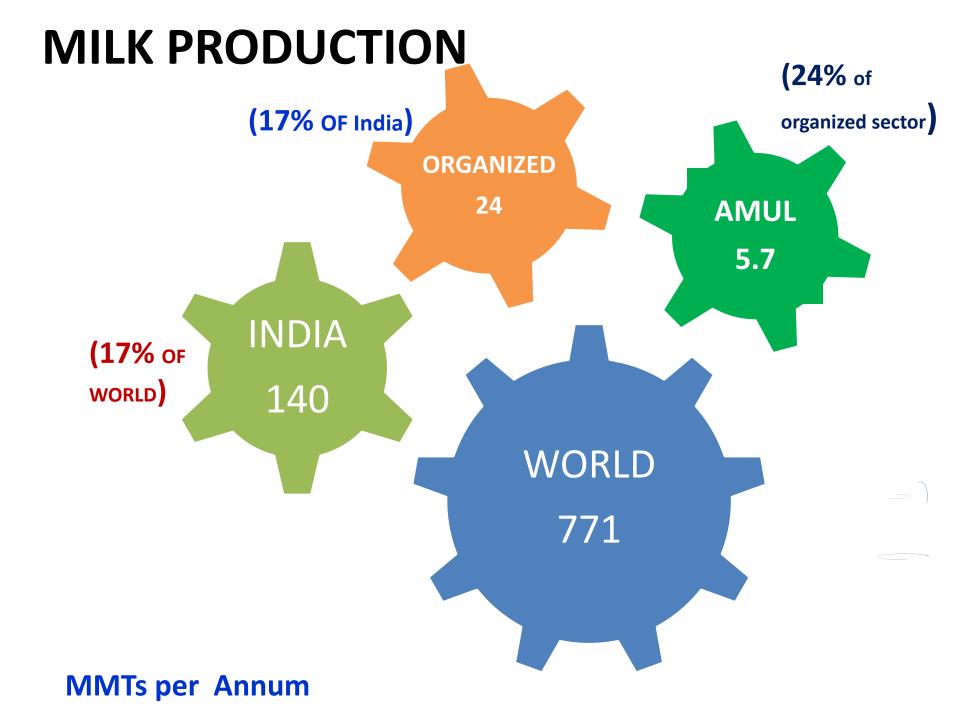


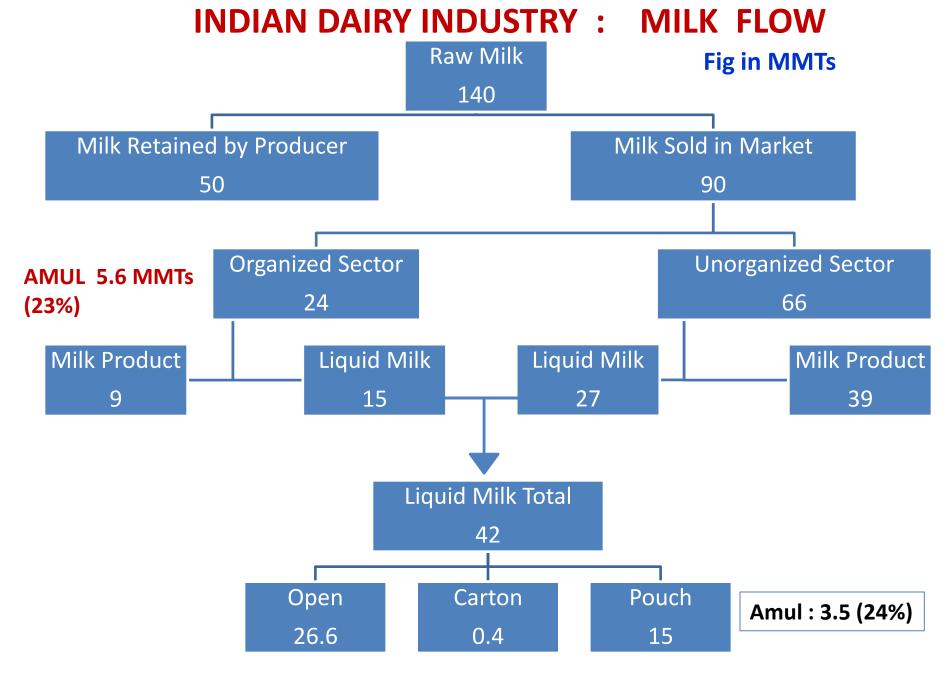


Apart from being consumed as food & beverages, Milk is also widely used in religious & traditional ceremonies









Source: Dairy India Year Book 2009

Milk is the largest Agricultural Crop in India in value terms

FARMGATE VALUE OF MAJOR CROPS IN INDIA

	Output	Price	Value of Output
	(Million MTs)	@ US\$/Kg	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

Source: Hindu Business Line, Dec, 2013

[@] Support Price except Milk

Largest Bovine Population in the world: 300 Million

55% of total milk production



100 Mn

45% of total milk production

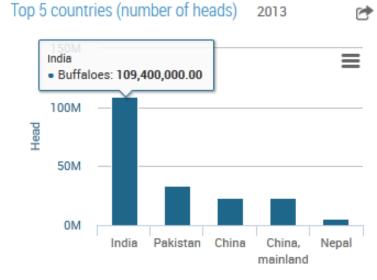


200 Mn



India has the highest no. of Buffaloes in the world :57% of world buffalo population

Source: FAO 2013



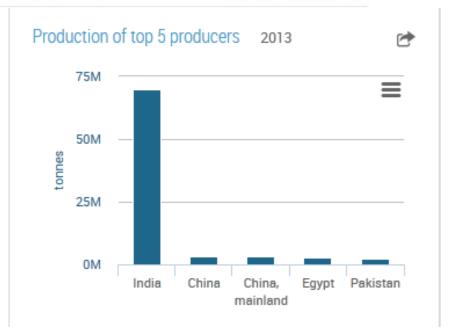
Buffaloes

M = Million, k = Thousand



India accounts for 87% of global production on Buffalo Milk (2013)

Source: FAO 2013

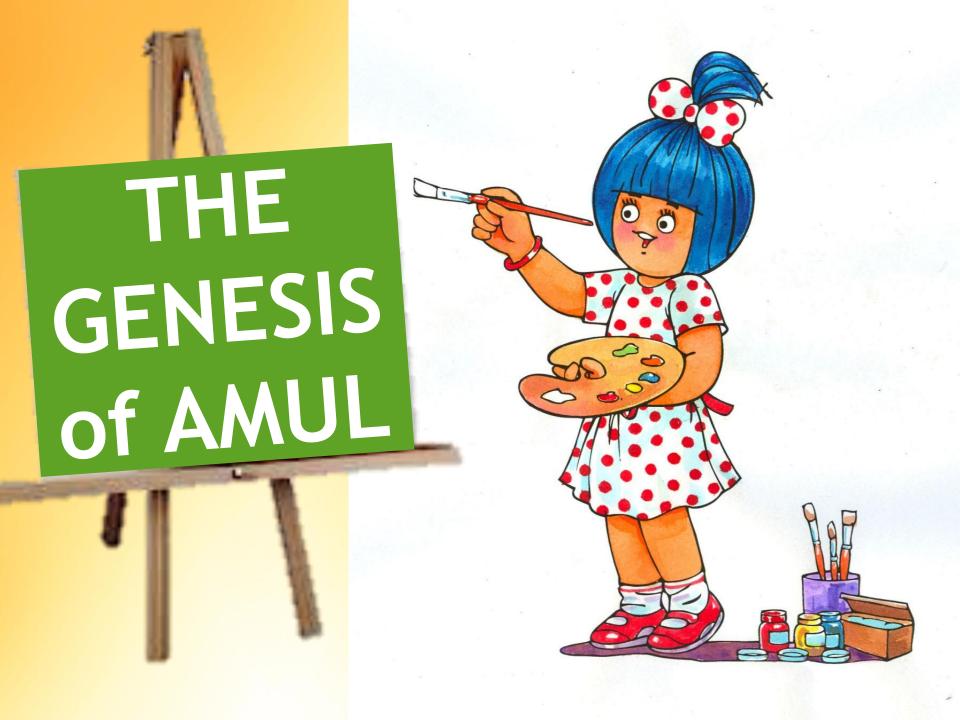


Top -15 States of India				
#	State-wise Milk Production in '000 MTs / annum	2013-14	%age of all India	
	All India	137685	100%	
1	Uttar Pradesh	24194	18%	
2	Rajasthan	14573	11%	
_	Andhra Pradesh*	13007	9%	
4	Gujarat	11112	8%	
	Punjab	10011	7%	
_	Madhya Pradesh	9599	7%	
	Maharashtra	9089	7%	
	Haryana	7442	5%	
	Bihar **	7197	5%	
	Tamil Nadu	7049	5%	
	Karnataka	5997	4%	
	West Bengal	4906	4%	
	Kerala	2655	2%	
	Orissa	1861	1%	
	J & K	1615	1%	

Major Dairy Products in Organized (branded) Dairy Market - India : US\$ 18 Billion per annum

	Branded/Organized Market Size (Value in	Amul's
Product Category	Million US\$/annum)	Share
Pouch Milk	9500	24%
Ghee (Clarified Butter)	3200	20%
SMP	1900	10%
Infant Milk Food	720	40%
Pouch Buttermilk	470	15%
Dairy Whiteners	330	4 1%
Ice-cream (KLT)	320	40%
UHT Milk	290	55%
Branded, Packaged Dahi	290	25%
Table Butter	240	92%
Cheese	120	70%
Condensed	90	30%
Beverages (Milk Based)	80	76%
Paneer (white cottage cheese)	60	43%
cream	40	96%



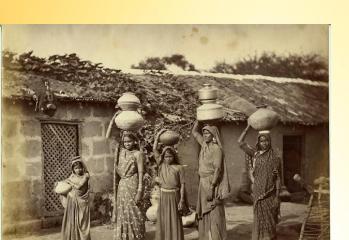


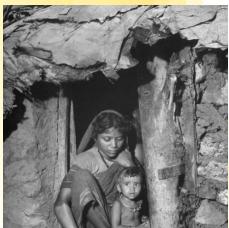
During the 1940's, Indian Dairy Industry was in dismal state....

Economic exploitation of dairy farmers by long chain of agents, middlemen & private dairies

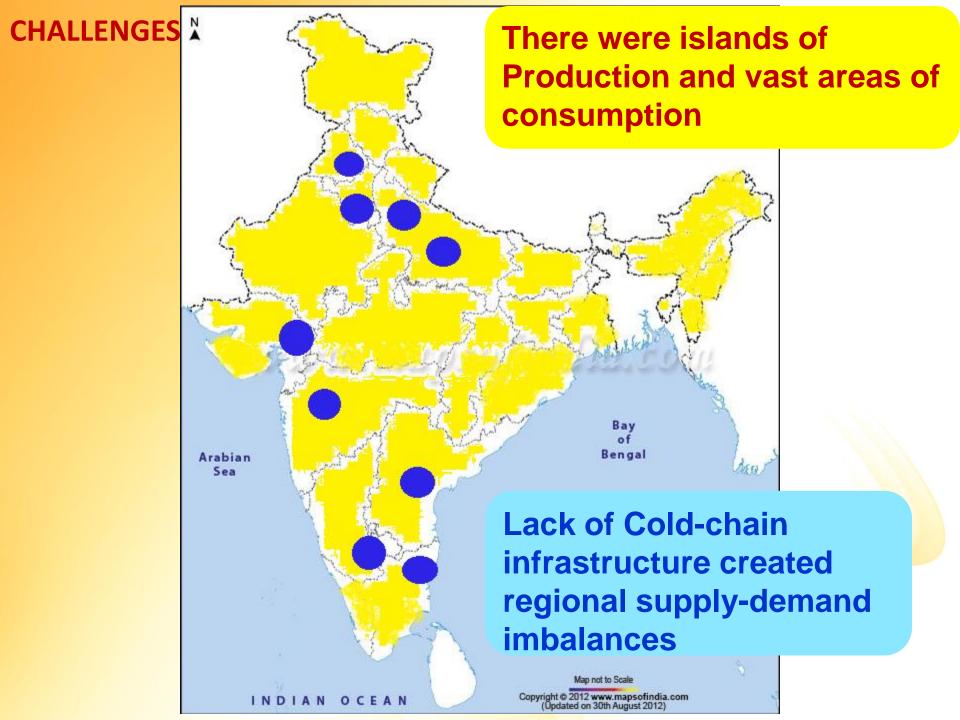
Heavy dependence on import of Dairy Commodities for our nutritional requirements

Severe milk scarcity and quality / Hygiene issues faced by consumers in urban India









Prominent national leaders guided the farmers to set up their own dairy cooperative



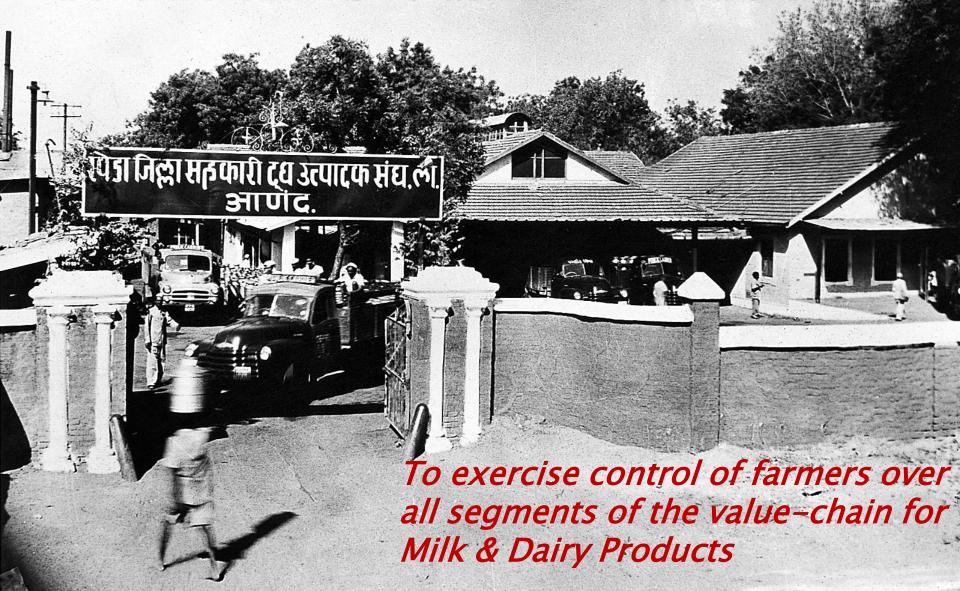
To protect themselves from exploitation.....Farmers must control the entire value chain: Procurement of Raw Material, Processing, Manufacturing & Marketing.....

Selfless, dedicated farmer-leaders travelled on foot from village to village to educate farmers on the benefits of cooperatives





Efforts of these visionary farmer-leaders bore fruit in 1946 as Amul was born



This is how we started in 1946:- collecting just 250 liters of milk per day from only 2 small villages



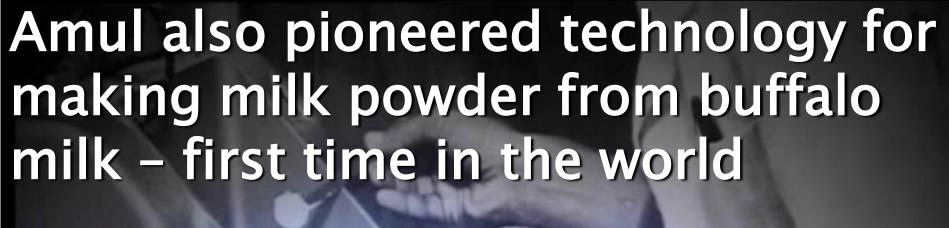






Since early years, Amul adopted technology for transporting Milk through Rail tankers







To access remote markets, Amul had to invest in technology for extended shelf life products





To access remote markets, Amul had to invest in technology for extended shelf life products





Our Product Portfolio also expanded with time...



Portfolio Architecture: Human Life Cycle Segmentation













Amulspray



































Today, the scenario is completely different...

Our dairy farmers....







Have created a US\$ 4.6 billion Organization



....turned a small dairy collecting 250 liters of milk per day



into a dairy giant handling 19 million liters of milk per day



& converted the most vulnerable section of our population...



...into independent & successful entrepreneurs



& our farmers became



...recipient of most prestigious awards in various fields







GREEN GLOBE AWARD

And transformed a tiny acronym....

AMUL

...into India's most powerful brand icons

















The Consumer



State Co-op. Milk Marketing Federation



District Milk Co-operative Union: 17



Village Dairy Co-operative societies: 18536



The Amul Model

Milk Producers: 3.6 Million



















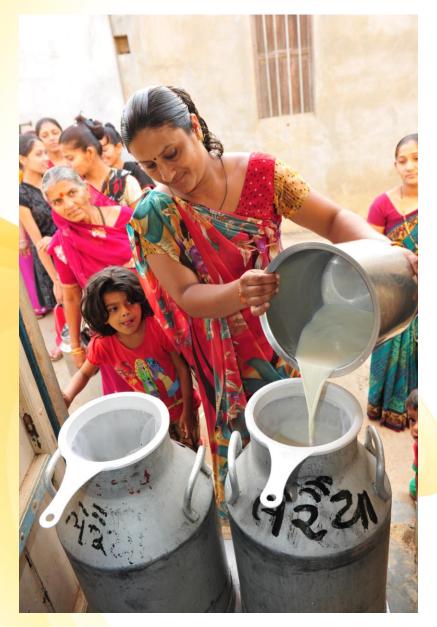


Milk collection @ Village Dairy Cooperative Society



Milk collection @ Village Dairy Cooperative Society





Milk collection @ Village Dairy Cooperative Society







How much does a farmer earn?

Income

- Milk Production Average 10 ltrs. Per day per cow (Cross-bred) for around 300 days.
- Milk Sale at around Rs. 27 per litre
- Total milk sale income of Rs. 81,000 per year i.e.
 1274 USD
- Other Income
 - Calf value around Rs. 2000 → 31 USD
- Total Income Rs. 83,000 → 1305 USD

Expenses....

- Balanced cattle feed
 - 4.3 kg. Per day for 300 days @ Rs. 14.0 per kg. Rs. 18060 → 284 USD
- Green Fodder *
 - 20 kg. Per day for 365 days @ Rs. 2.00 per kg. − Rs. 14600
 →230 USD
- Dry Fodder
 - 8 kg. Per day for 365 days @ Rs. 6.00 per kg. − Rs. 17520 → 276
 USD
- Other Feed Supplement
 - Mineral Mixture, Salt, etc. Rs. 1200 → 18.9 USD
- Veterinary & Insurance Expenses: Rs.2500 per year →39.3 USD
- Interest and loan repayment : Rs. 4500 → 71.0 USD
- Total Expenses: Rs. 58380 → 918 USD

Net Income per cow per year

− Total Income→1305 USD

− Total Expense → 918 USD

Net Income → 387 USD

More than ONE \$ PER DAY

AMUL - Manufacturing facilities

- Dairy Plants: 58
- Total Milk Handling Capacity: 24.00 MLPD
- Avg. Milk Procurement: 15.6 MLPD
- Plants with one MLPD Capacity: 6
- Milk Drying Capacity: 770 MTPD





Top Milk Processors of World

Rank	Company name	Orgin & main operation countries	Milk intake, in mill. t milk equivalants	Estimated turnover per kg milk, in US-\$	Market share in % of world milk production
1	Dairy Farmers of America	USA	27,8	0,5	3,7%
2	Fonterra Co-operative Group	New Zealand/ others	22,0	0,7	2,9%
3	Groupe Lactalis (incl. Parmalat)	France/others	15,0	1,3	2,0%
4	Nestlé	Switzerland/others	14-15*	1,25*	2,0%
5	Arla Foods	Denmark/Sweden/others	12,7	1,1	1,7%
6	FrieslandCampina	Netherlands / others	10,3	1,1	1,4%
7	Dean Foods	USA	10,1	0,9	1,4%
8	Danone	France/others	8-9*	1,9*	1,196
9	California Dairies	USA	8,1	0,7	1,1%
10	DMK Deuts ches Milchkontor	Germany	6,8	1,0	0,8%
11	Saputo	Canada/USA/others	6,0	1,1	0,8%
12	Glanbia Group	Ireland/USA/others	6,0	0,7	0,8%
13	Land O' Lakes	USA	5.4*	0,7*	0,7%
14	Groupe Sodiaal	France	52	1.0	0.7%
15	Amul (GCMMF)	India	4,8	0,5	0,6%
16	Yili Group	China	4,5 - 5*	1,6*	0,6%
17	Unternehmensgruppe Theo Müller	Germany/UK, others	4,4	1,5	0,6%
18	Mengniu Dairy Company	China	4 - 4.5*	1,6*	0,6%
19	Bongrain	France/others	4,2	1,4	0,6%
20	Darigold (Northwest Dairy Association)	USA	3,6	0,6	0,5%
	Sum of Top 20		184,2	1,0	25%

Amul has been the fastest growing dairy organization in last 2 years, rising from #20 to #15 within 2 years

Source: IFCN

Leadership through Shared Value Creation by protecting interests of both farmers as well as consumers

To serve the interests of milk producer





To provide quality products to consumers

Value for money



Leadership in creating socio-economic revolution in rural India

Thanks to AmulBenefits of Market
Access, Financial
linkages and Value
Addition – directly to
farmers



Leadership through inclusive growth

Through our 3.6 million farmer-members, we touch the lives of 18 million citizens in rural India



On daily basis, US\$ 12.5 million in cash flows back to our farmer-members



Social Infrastructure created by Amul helps to prevent migration from villages to cities









Empowering Women

Amul provides some measure of economic independence to rural women of India



Leadership in Value-chain control



3.6 Million Families, 18536 Villages



58 Dairy Plants across India

4 High Traffic Distribution Highways



FRESH



10,00,000 Retailers across India

Leadership in supply chain management

Federation

7.2 Million transactions per day for milk procurement

Transportation of 19 million litres of milk per day, from 18560 societies to 58 dairy plants through 1989 milk routes, twice every day

Input Services
Village

Village Societies

18560 Village milk societies with Bulk Milk Coolers and Automatic Milk Collection systems

17 Milk Unions, 58 dairy plants with processing capacity of 24 MLPD

Milk Unions

1800 transportation vehicles carry 450000 MTs of Cargo per annum (Ambient /Chilled) across 4 distribution highways

450 SKUs sold through 10000 Distributors & then through 1

Million retailers

Depots/ Warehouse

Distributor / ADA

60 Branches, 180 warehouses – Ambient, Chilled & Frozen

APO



Leadership in Supply Chain Efficiency We have ensured that Indian dairy Farmers get maximum share of Consumer's Rupee spent on Milk & Milk Products

Normally producer's shares in different commodity groups in India are as follows:

- Food grains 55 to 65%
- Milk 80 to 86%
- Fruits 30 to 40%
- Vegetables 40 to 50%

Source: www.indiaagronet.com

Amul ensures that 80% - 86% of consumer's rupee goes back to its dairy farmers

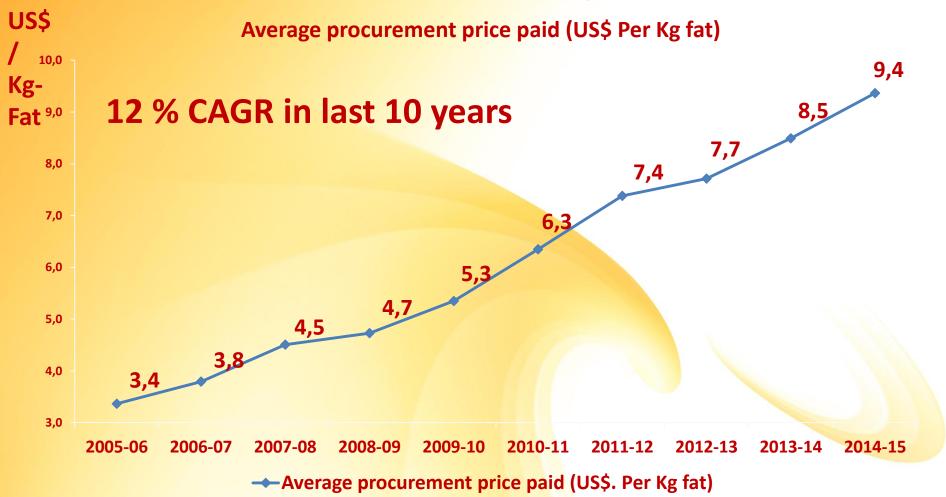
<u>India</u>

Indian dairy
 cooperatives ensure
 that their farmers get
 80% - 86% of
 Consumers Rupee
 spent on Milk & Milk
 Products

Other Countries

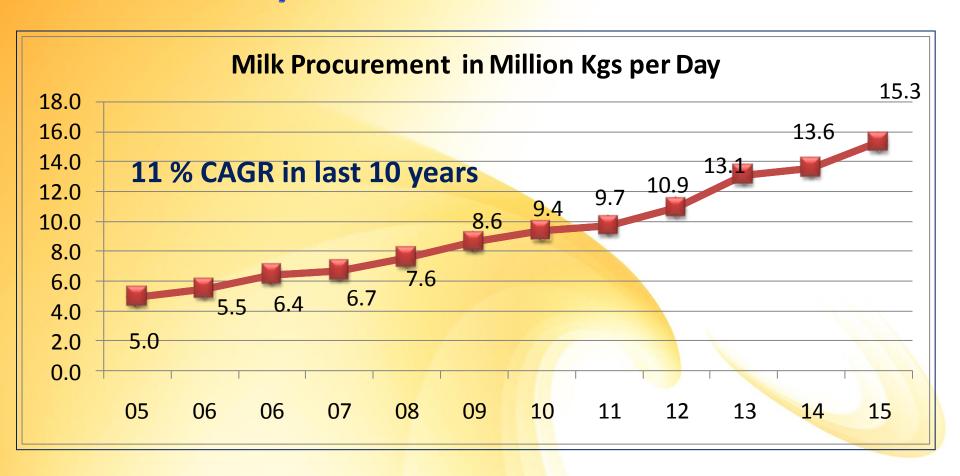
- In USA, producers get 38 % of consumers' money spent on milk.
- In UK, producers get only 36 %.

Leadership in paying most remunerative prices to maintain farmer's interest in dairy business



Average Milk Procurement rate paid to farmers (US\$ per Kg Fat)

You can easily see the impact on our milk procurement over the last 10 years



AMUL: Average Milk Procurement (Million Kg per day)

Leadership in replicating Amul model to create White Revolution



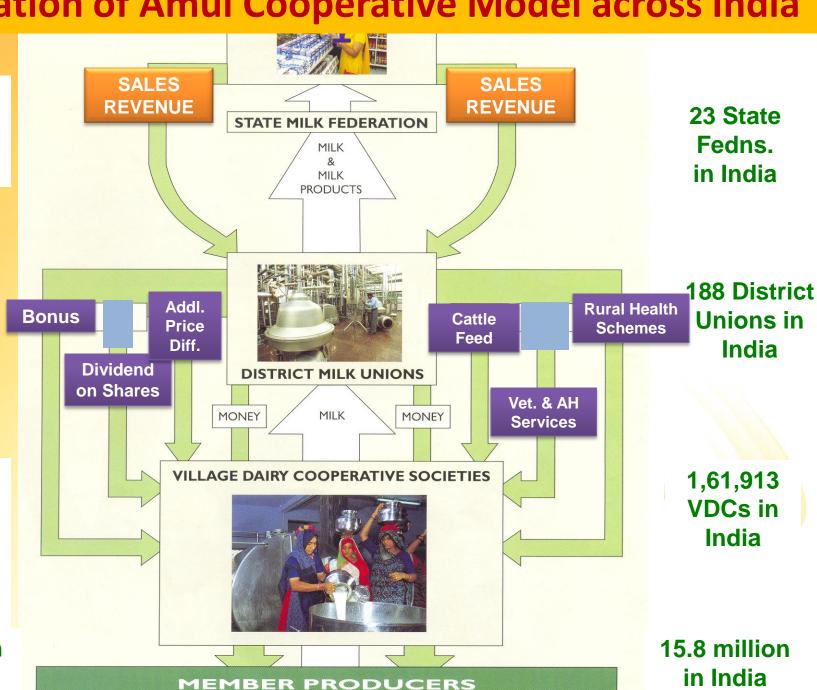
Replication of Amul Cooperative Model across India

AMUL (GCMMF) in Gujarat

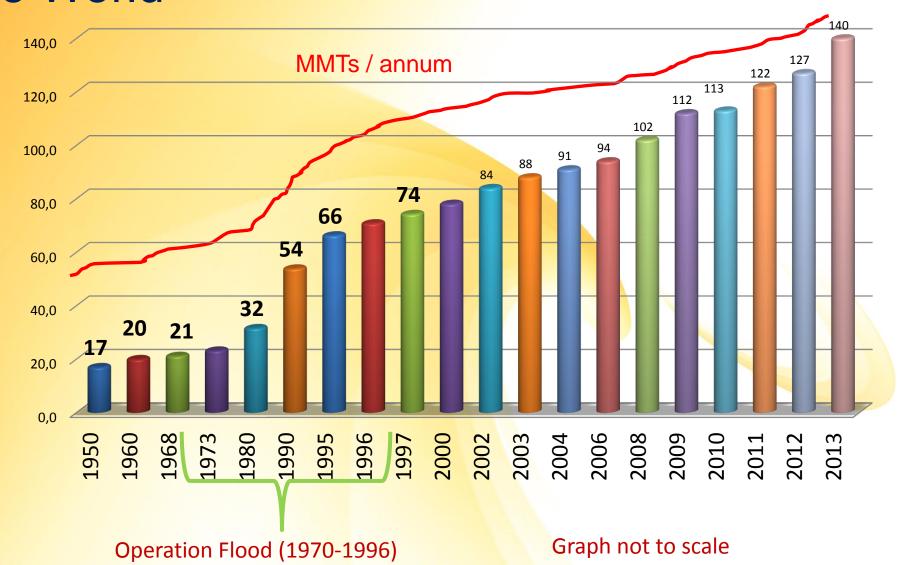
17 District **Unions in** Gujarat

18536 **VDCs** in **Gujarat**

3.6 million in Gujarat



Amul Cooperative Movement enabled India to become No 1 Milk Producing Nation in the World

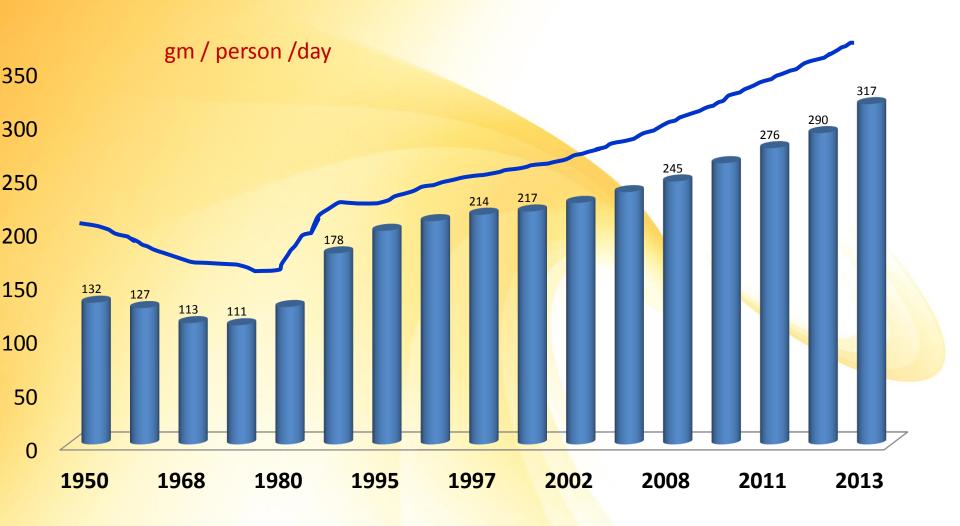


Just to compare Milk Production growth between India & US during last 60 years

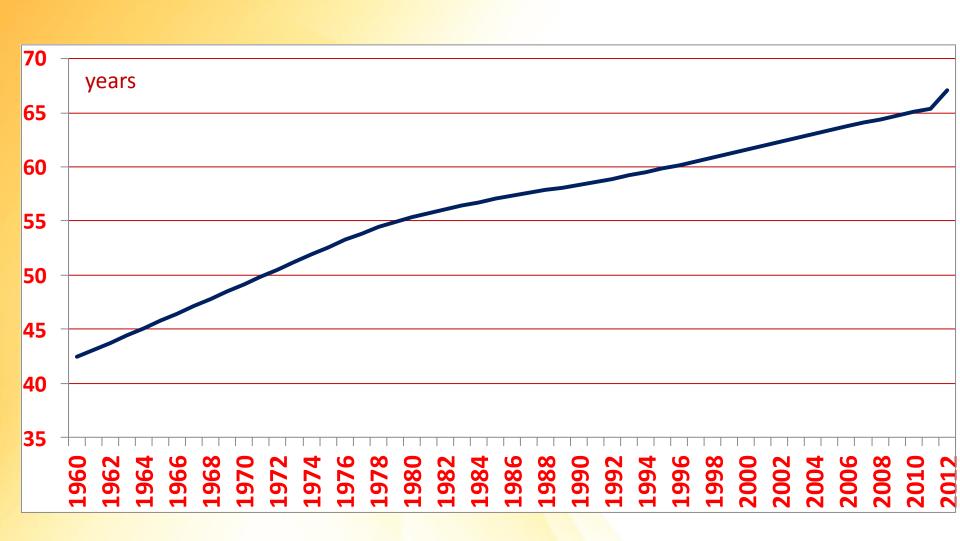
Milk Production (Million MTs)	1951	2013
U.S.A	53 MMTs	91 MMTs
INDIA	17 MMTs	140 MMTs

Source: Three Cheers for Indian Agriculture,
The Financial Express

Thanks to AMUL, Per Capita Milk Availability in India went above WHO standards to 275g per day, providing nutrition to the masses



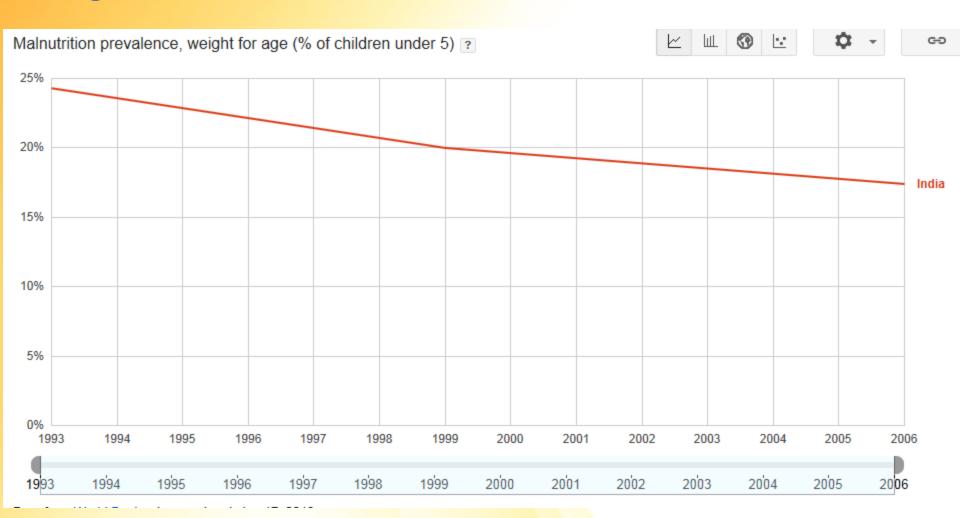
Thanks partly to higher milk availability, life expectancy of Indians has increased from just 32 years in 1947 to 67.1 years today



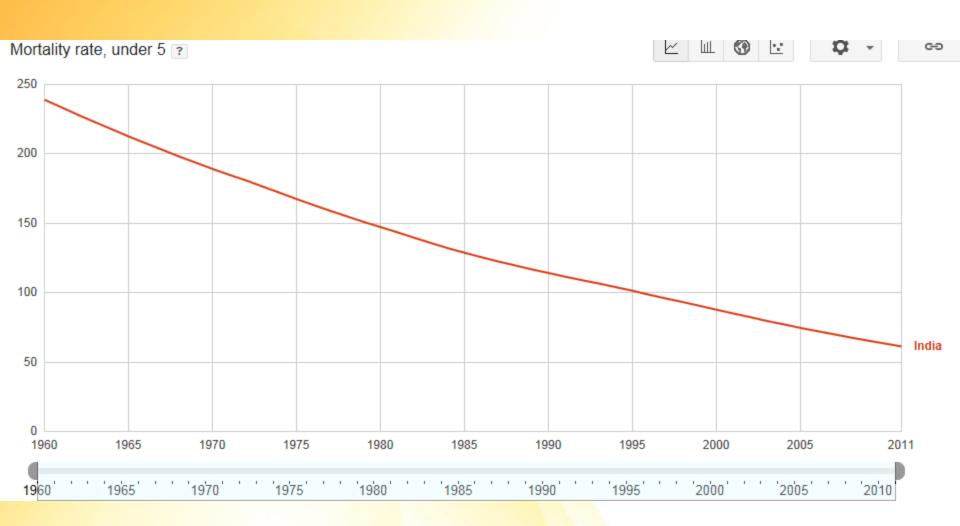
Death Rate has fallen drastically in the same period - Partly due to Better Nutrition from milk



Prevalence of Malnutrition in Children under the age 5 has also fallen



Mortality of Children under age 5 years, has also reduced drastically







Moving up the Value Chain: Plain Commodity to Value-added Products























Inclusivity.....

Targeting the entire Socio-economic spectrum

Converted popular ethnic Indian dairy products from commodities into branded, packaged products



Creating Innovative products to cater to emerging needs of society





With 8000+ exclusive Amul parlours – largest retail chain in India

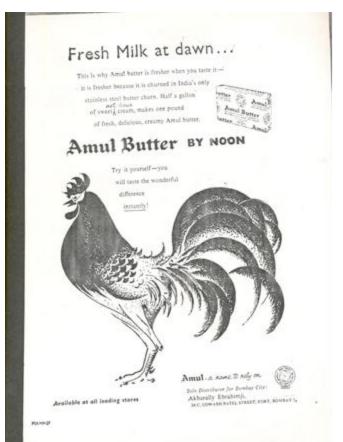








Genesis of Brand Amul- 1956

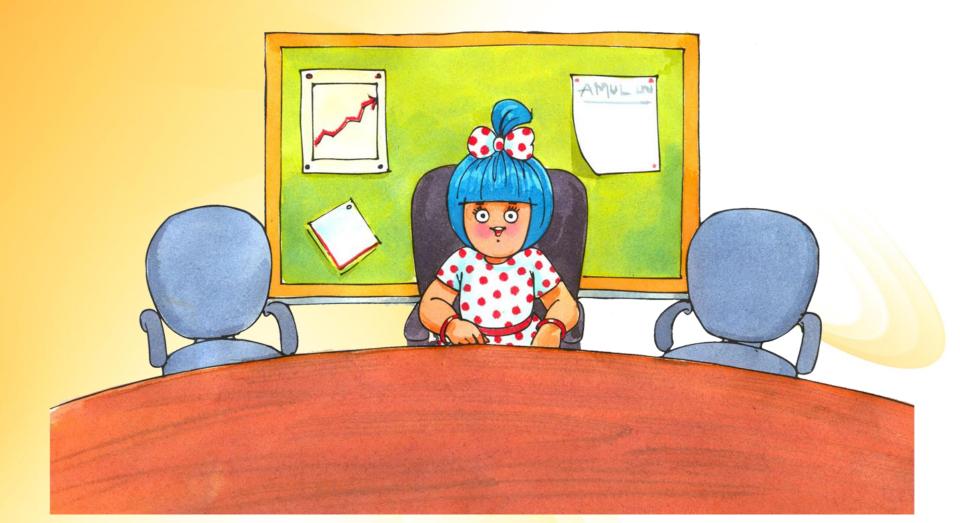


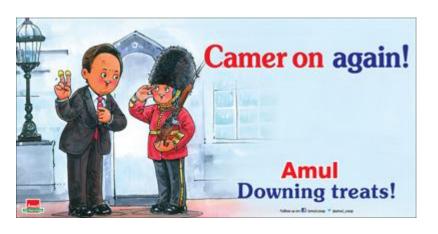


Appointed professional advertising & distribution agencies in 1950's



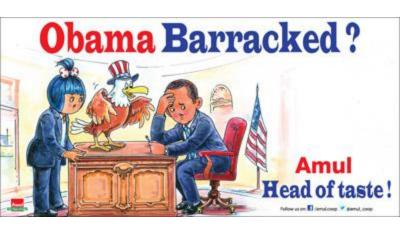
Consistency in strategising and execution







Longest Running Advertising Campaign in the World







Our topical campaign was scaled up from hoarding to 28 Dailies, several TV Channels and also Digital Media



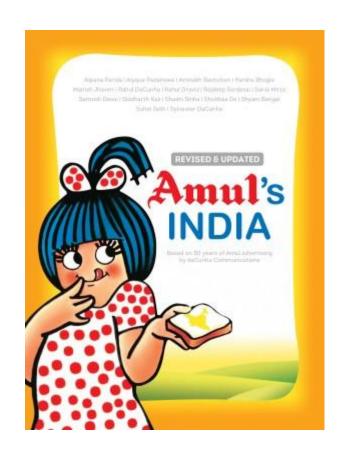


We retained our popular Brand Mascot for more than 50 years and she has helped us remain young vibrant and energetic for five decades



Two books on 50 years of this campaign

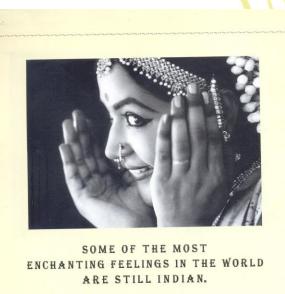






Taste of India- Campaign '90s





WE MAKE INDIA'S FINEST BUTTER.

CHOCOLATES, CHEESE SPREADS,

BROWN BEVERAGE (NUTRAMUL),

CHEESE, GHEE MILK, MILK POWDER,



BREAD SPREAD (AMUL LITE). DAIRY
WHITENER (AMULYA) AND SHRIKHAND.
AND WE ARE AMUL. INDIAN ALL THE
WAY, LIKE YOU AND YOUR PARENTS.





Gujarat Co-operative Milk Marketing Federation Ltd., Anand 388 001











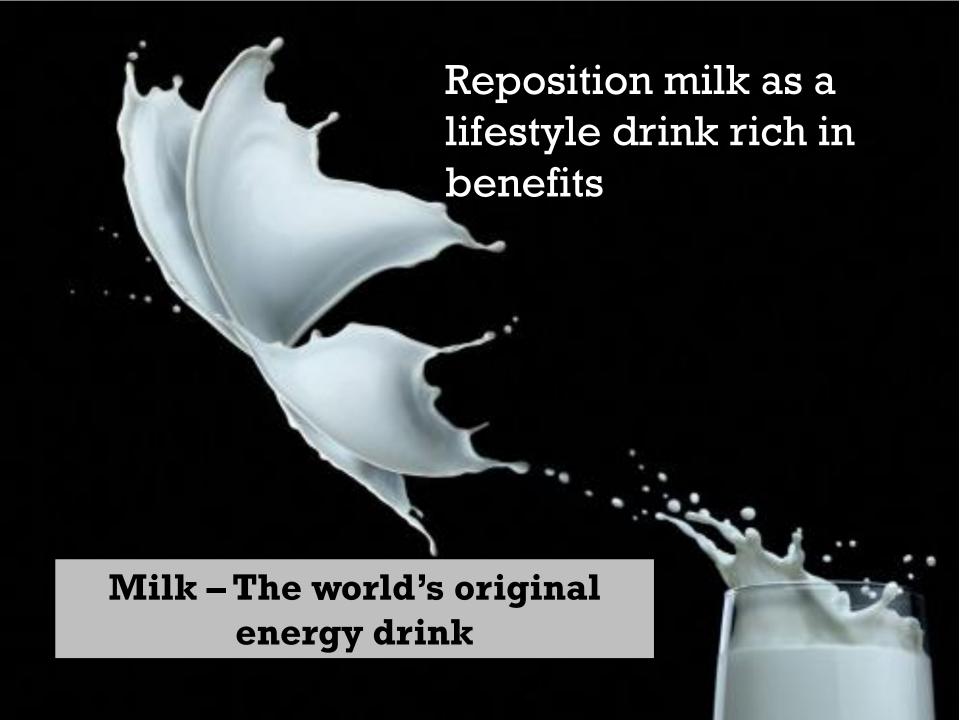
Launched
advertising
campaign based
'Amul - The Taste of
India' umbrella
brand positioning in
1994

The Taste of India

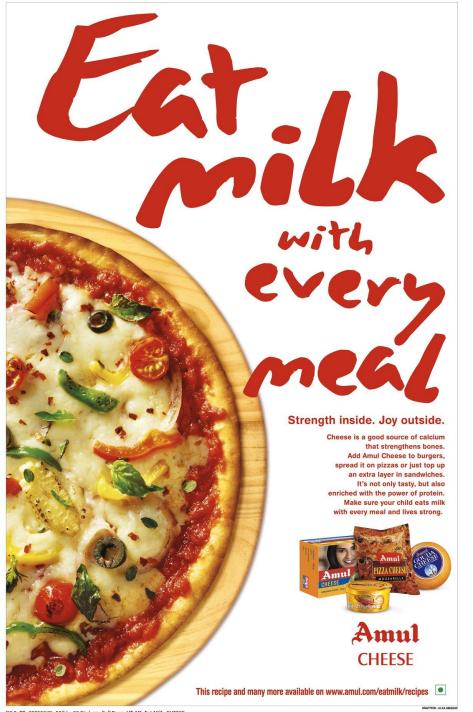
Six memorable TV campaigns have created over the last 19 years







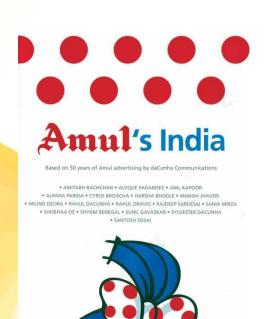




Targeting GenNext









Targeting GenNext





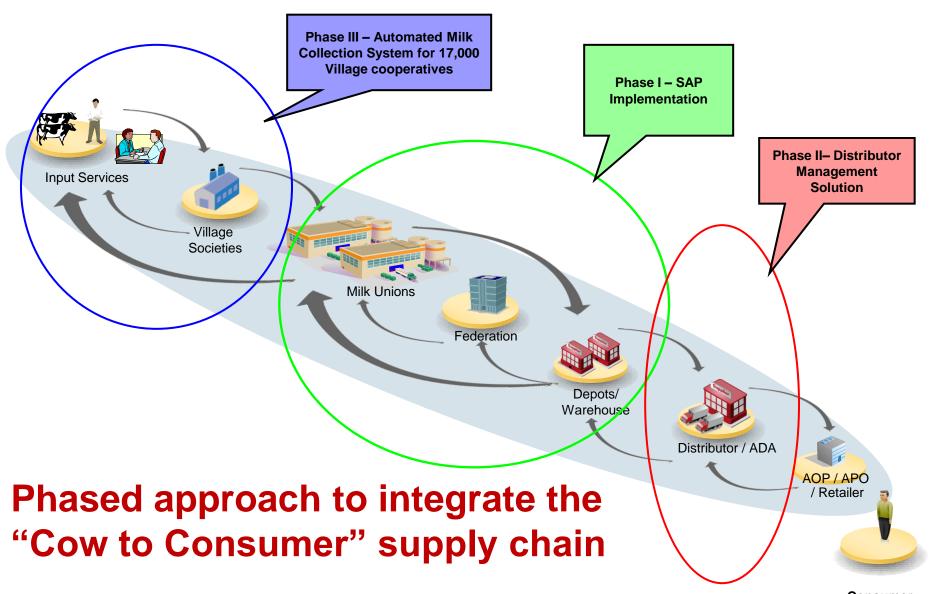


Leadership in digital marketing

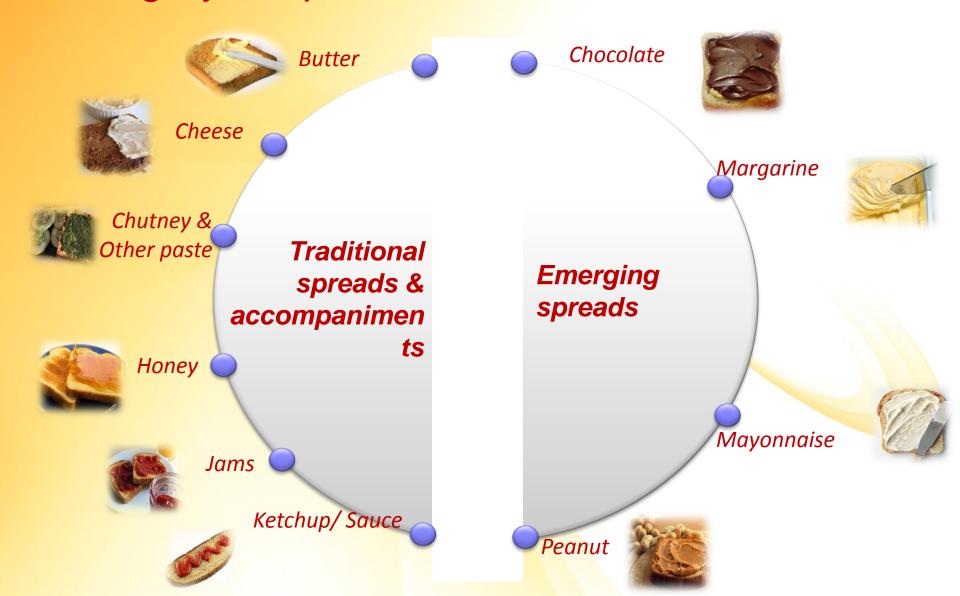




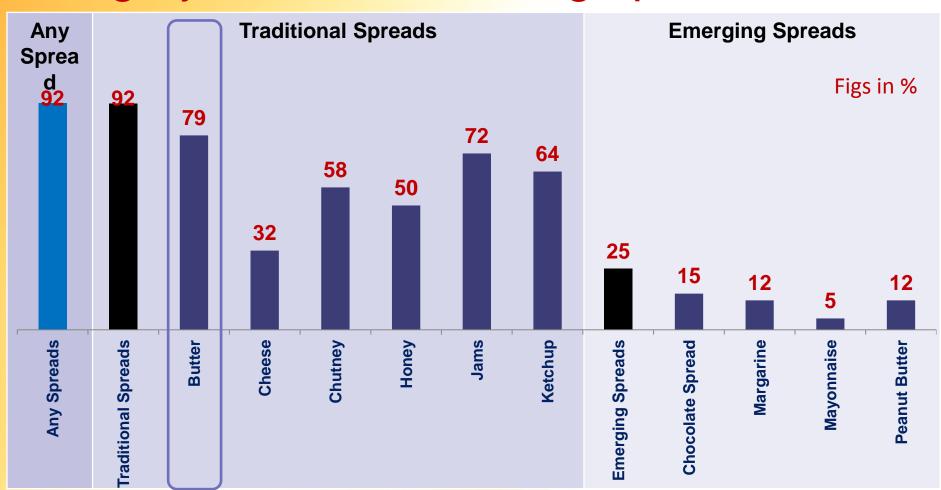
Leadership in application of Information Technology



India, Table Butter is a part of larger generic category of spreads



Among the branded, packaged spreads category – Butter has a high penetration



Butter consumers are largely located in major cities - But now demanding is gradually increasing from smaller towns

Town-Class	Distribution of consumer base	Expansion in consumer base: last 2 years
METROs – 4 Million+	40%	1%
500,000 – 4 Million	22%	2%
100,000 - 500,000	18%	3%
Less than 100,000	20%	21%

Greater Household Penetration of Butter in higher socio-economic strata

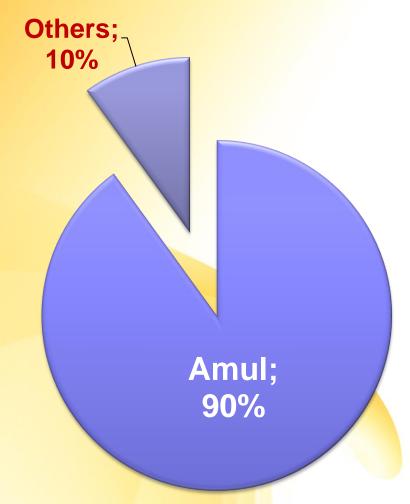
SEC Classification	Distribution: Urban Indian Population	Distribution: Butter Consumers in 2013	Penetration %	Expansion in Consumer Base between 2013 & 2008
SEC A	20%	25%	63%	11%
SEC B	35%	35%	56%	12%
SEC C	45%	40%	51%	16%

In India – Butter is mostly consumed in morning with breakfast

	ALL	
Before	11	
Breakfast	11	
Breakfast	88	
After breakfast	8	
before lunch	0	
Lunch(net)	28	
Evening snacks	23	
Dinner(net)	22	

Apart from breads - use of Butter with traditional Indian food has now gradually started

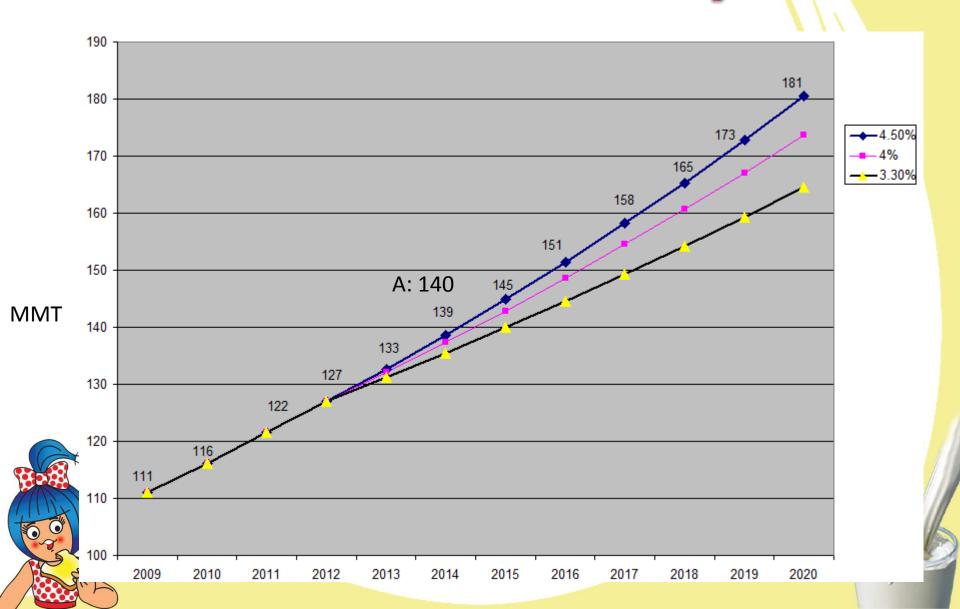
	ALL
Bread and Bun	94
Roti/Paratha Chapathi/ Kulcha/ Poori	58
Dosa / Uttappam/ Appam/Idli	18



AMUL dominates Indian Table Butter Market with more than 90% Share

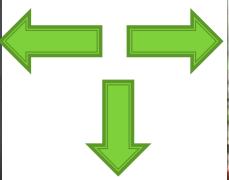


India: Milk Production Projection



Stakeholders of Indian Dairy







Millions of small producers



Low to Middle income customers



Millions of poor farmers as dairying is integral part of Indian farming system

Dairy Trade of India - Current Situation

Example of Edible Oil – Our dependence on imports gone up over the years



Non Tariff Barriers
put by EU to deny
access to the Indian
dairies

Lobbying to access Indian market through WTO/ FTA



Huge Agriculture Subsidy by the developed nations

Implication on India

- ·Low international price
- Greater milk procurement in India

Additional Milk flow in Indian market

Sufficient inventory for the lean season

- Dairy commodity price falling in Indian market
- Higher inventory at the year end

- Increase in per capita income and rapid urbanization to create additional demand
- Enough milk production to cater the same in foreseeable future

Self Sufficient
Situation



Implication on India

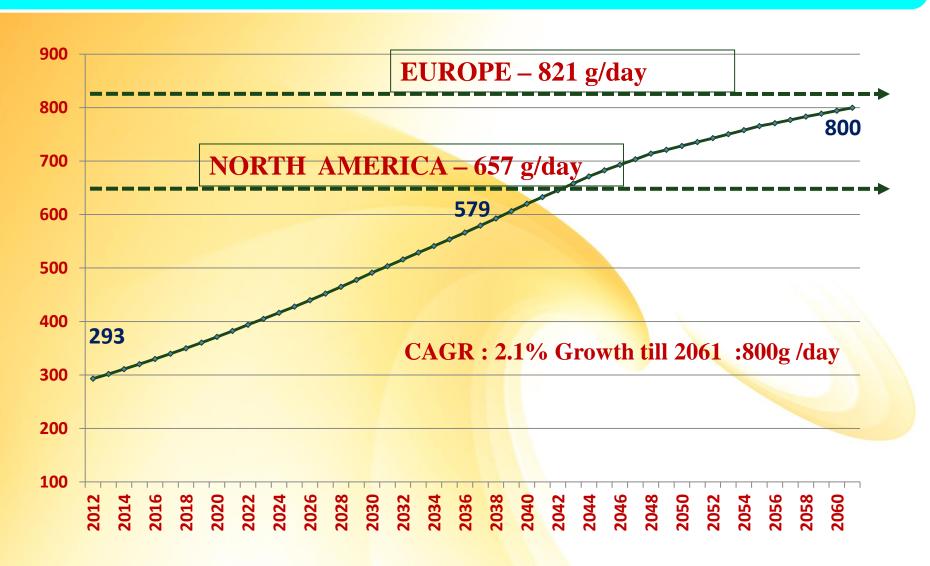
Falling Demand in China Higher production in Oceania and lifting of Quota in EU

Import ban by Russia

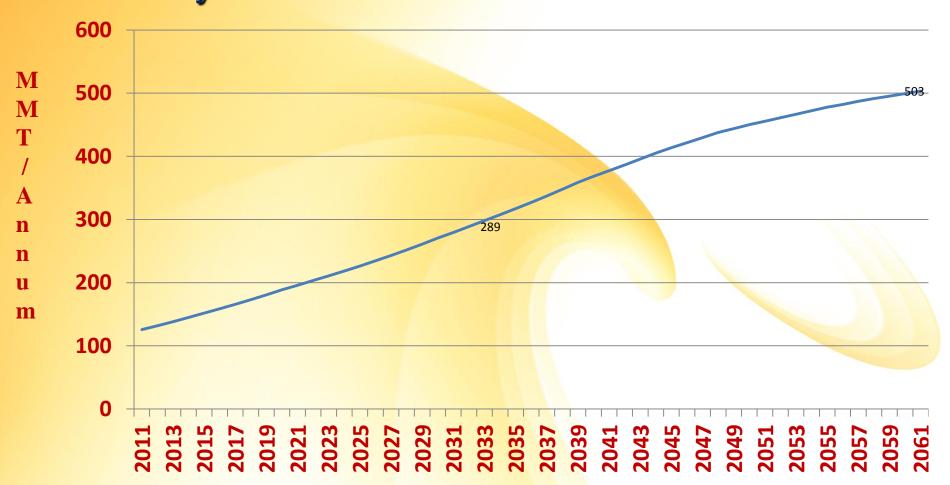


Lobbying for accessing Indian market through FTA etc

Projected Growth in Per Capita Consumption of Milk in India – NEXT 50 YEARS (gm/day)



This implies that Milk Production will have to grow @ CAGR 2.8% for next 50 years, for Milk Production to reach 503 MMT/annum or 800 g per day – Per Capita Availability





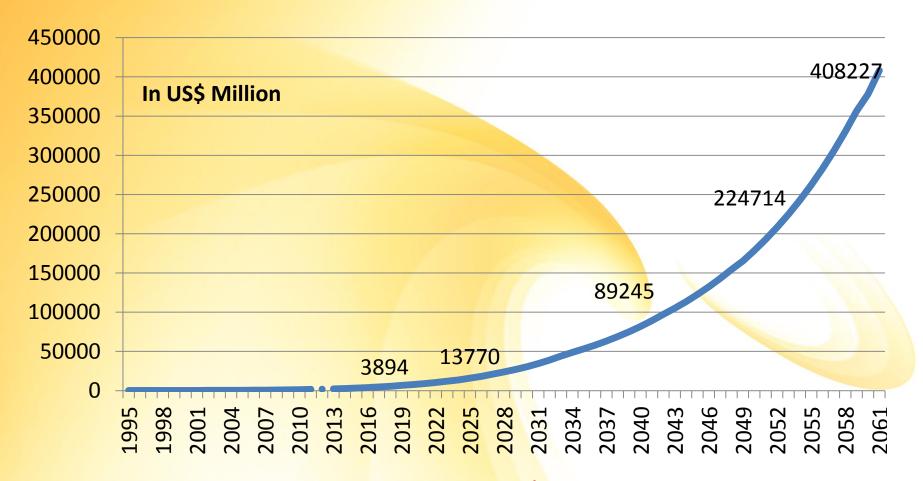


Value-chain innovations will drive productivity





For the next 50 years, turnover of Amul will continue to grow @ 11.3% CAGR to reach US\$ 408 Billion



@ current Exchange rates

Challenges before us

- Productivity Enhancement
- Motivating next generation of farmers to remain in the dairy business
- Will future leaders of farmer's cooperatives be as selfless, dedicated & visionary as the founding fathers?

& finally...



"We have traversed a path that few have dared to.

We are continuing on a path that still fewer have
the courage to follow. We must pursue a path that
even fewer can dream to pursue.

Yet, we must, we hold in trust the aims and aspirations of millions of our countrymen."

- Dr V. Kurien

