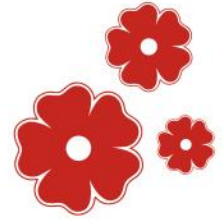


**Make in India**



# **Opportunities for Investment in the Dairy Sector for Cold Chain**



## **Dairy Industry in India**

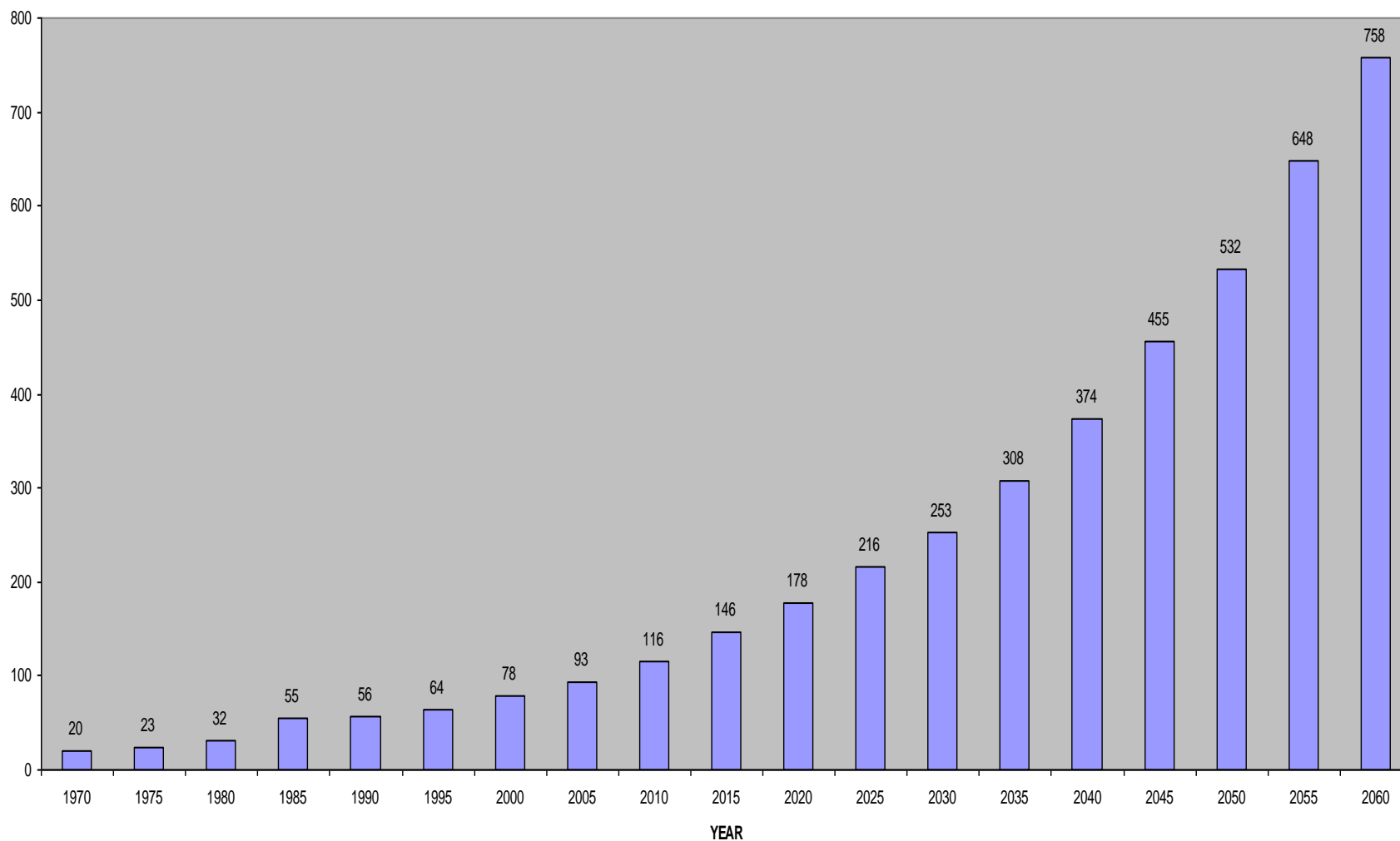
- ☐ Largest milk producer; 146 MMT (16% of the world's milk production)
- ☐ Total Market Value of Milk produced: Rs.4,00,000 Crores annually.
- ☐ India's total milk production is projected to grow to 180 million tones by end of 2020.
- ☐ Accounts for 18% of agricultural production in India. (Higher than Wheat or Sugarcane)
- ☐ Largest bovine population - 276 Mn
- ☐ CAGR: 4.3% Per annum
- ☐ Only 24% of milk is processed in Organised sector (factories) for liquid milk & milk products (49% of marketable surplus).

# Dairy Industry in India– Past, Present and Boom ahead

Year	Population (millions)	Production(Million MTs) Gr. by 4%	Yearly milk consumption (kgs)	Per capita milk consumption (gms/day)
1970	550	20	36	113
1975	610	23	38	111
1980	690	32	46	128
1985	770	55	71	178
1990	860	56	65	207
1995	900	64	71	216
2000	990	78	79	219
2005	1090	93	85	232
2010	1220	116	95	260
2015	1310	146	111	304
2020	1380	178	129	313
2025	1450	216	149	408
2030	1520	253	166	454
2035	1570	308	196	536
2040	1620	374	231	632
2045	1660	455	274	750
2050	1680	532	317	868
2055	1700	648	381	1043
2060	1730	758	438	1200



## MILK PRODUCTION in INDIA (MMT)



# STATE WISE MILK PRODUCTION



(000 tonnes)				
State	2011-2012popcol	CAGR (%)	Equiv. LKgPD	% of Total
All India	127904	4.30%	3504	
Uttar Pradesh	22556	4.40%	618	18%
Rajasthan	13512	5.90%	370	11%
Andhra Pradesh	12088	7.60%	331	9%
Gujarat	9817	5.40%	269	8%
Punjab	9551	1.90%	262	7%
Maharashtra	8469	3.30%	232	7%
Madhya Pradesh	8149	4.50%	223	6%
Tamil Nadu	6968	3.60%	191	5%
Haryana	6661	3.00%	182	5%
Bihar **	6648	10.20%	182	5%
Karnataka	5447	1.50%	149	4%
West Bengal	4672	2.90%	128	4%
Kerala	2716	0.20%	74	2%
Jharkhand	1745	6.90%	48	1%
Orissa	1721	6.70%	47	1%
J & K	1614	1.80%	44	1%
Uttaranchal	1417	3.00%	39	1%



(000 tonnes)				
State	2011-2012	CAGR (%)	Equiv. LKgPD	% of Total
Himachal Pradesh	1120	4.20%	31	1%
Chhattisgarh	1119	3.50%	31	1%
Assam	796	1.60%	22	1%
Delhi	502	6.70%	14	0%
Tripura	111	2.30%	3	0%
Meghalaya	80	1.90%	2	0%
Manipur	79	1.50%	2	0%
Nagaland	78	4.80%	2	0%
Goa	60	3.10%	2	0%
Sikkim	45	2.30%	1	0%
Chandigarh	45	0.50%	1	0%
Pondicherry	45	2.00%	1	0%
A&N Islands	26	1.70%	1	0%
Arunachal Pradesh	22	-3.90%	1	0%
Mizoram	14	1.20%	0	0%
D&N Haveli	11	8.50%	0	0%
Lakshadweep	2	5.00%	0	0%
Daman & Diu	1	0.00%	0	0%

Source: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI

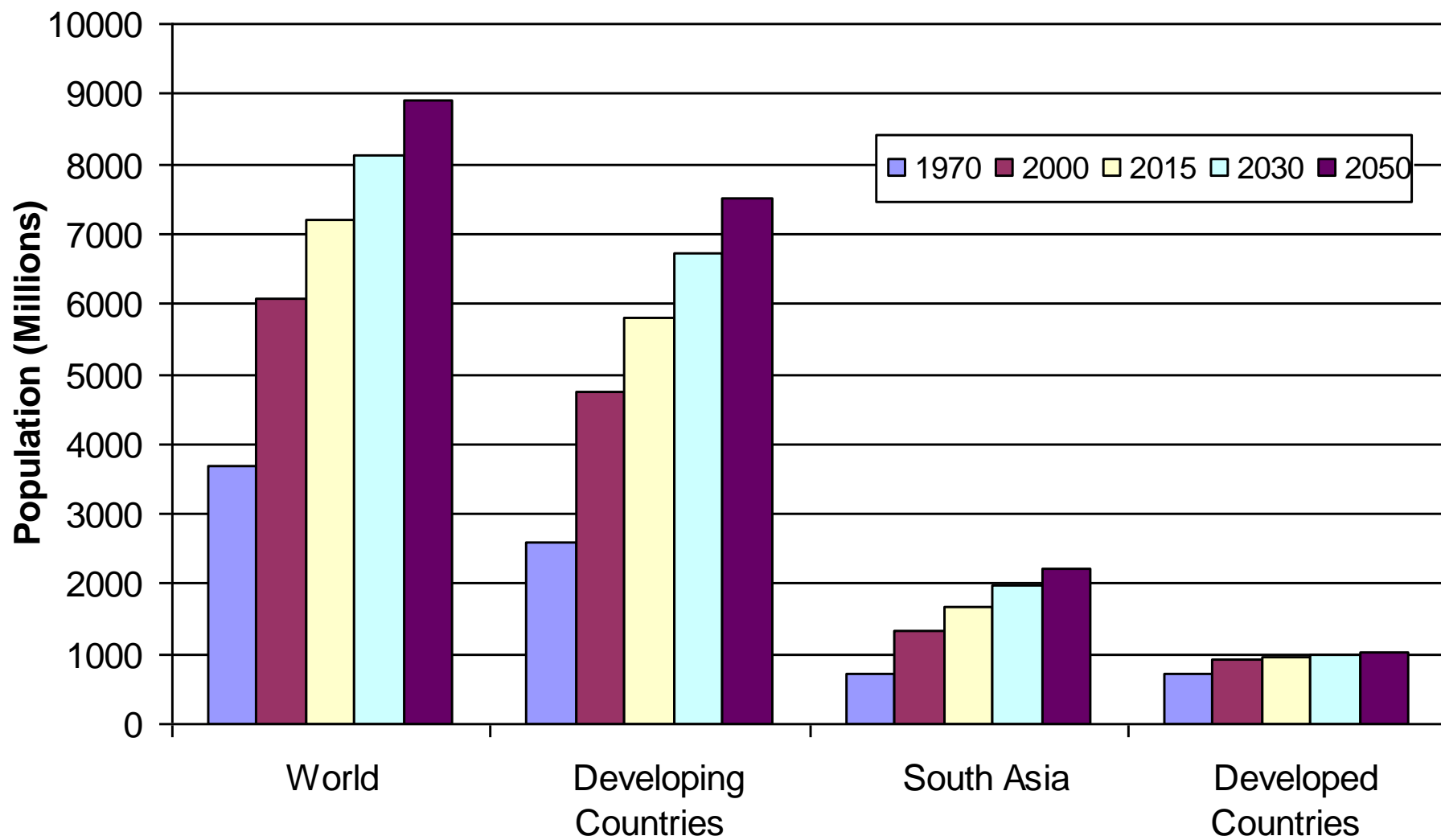


## **Population Trend**

- ☐ **Global Population is slated to increase steadily till the year 2050.**
- ☐ **Bulk of the Population Increase is going to come from Developing Countries of Asia & Africa and particularly, South Asia.**
- ☐ **However, with increasing living standards in developed countries of Europe & North America, the population in these countries would stagnate.**
- ☐ **The population growth has consequences for the rate at which further pressures on land and water resources and the wider environment will be building up.**



## World Population Projections

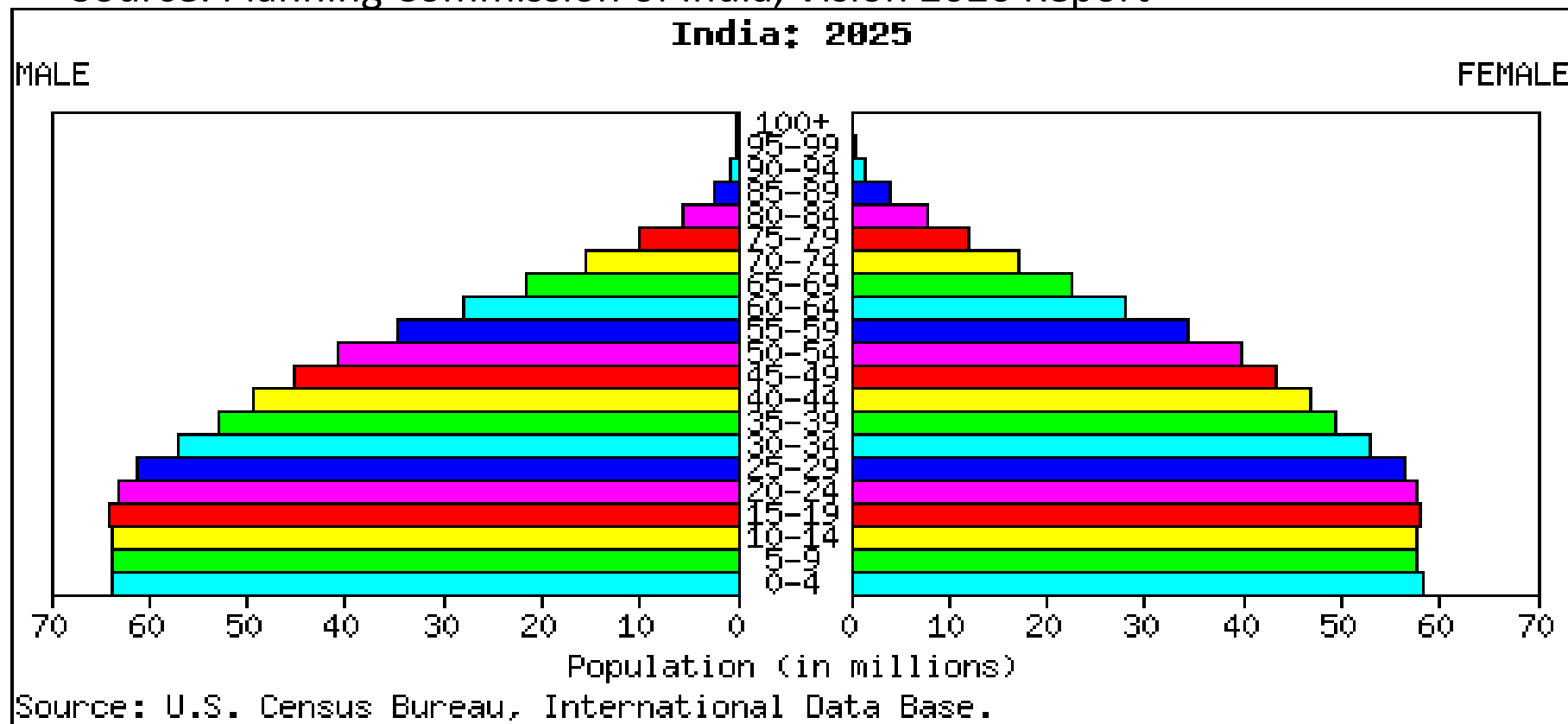




# INDIA : POPULATION TREND

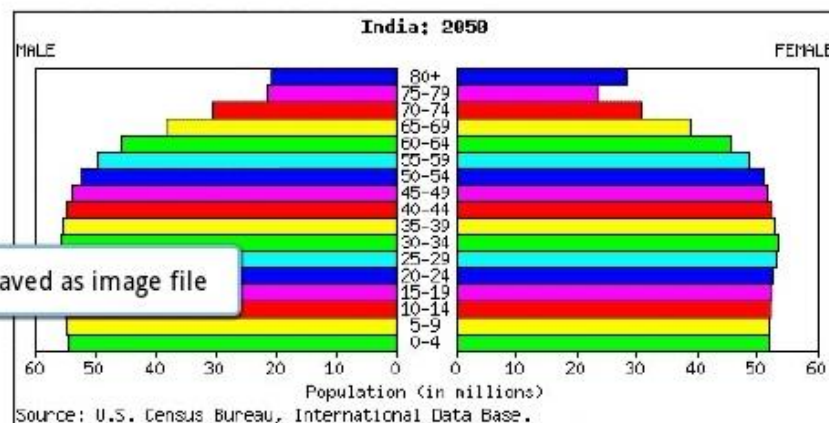
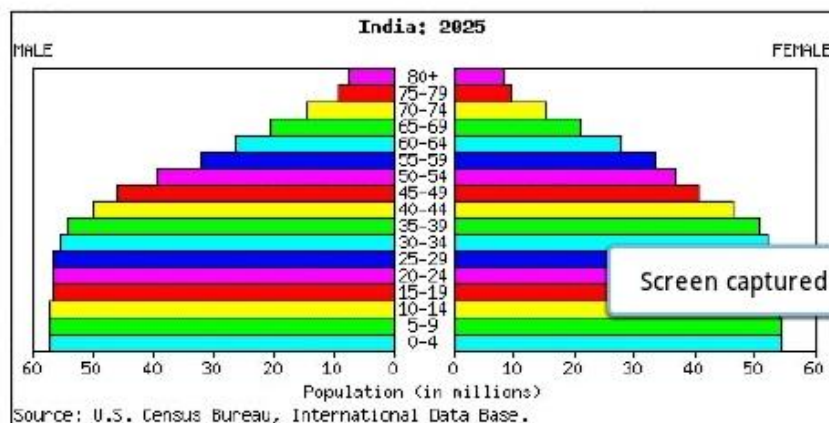
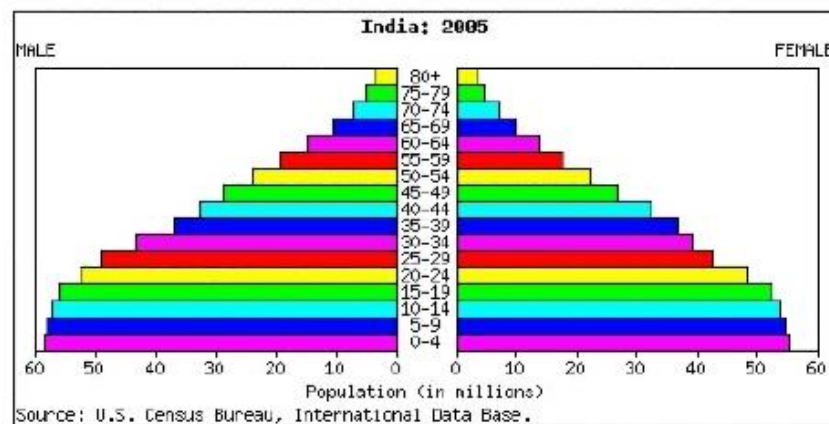
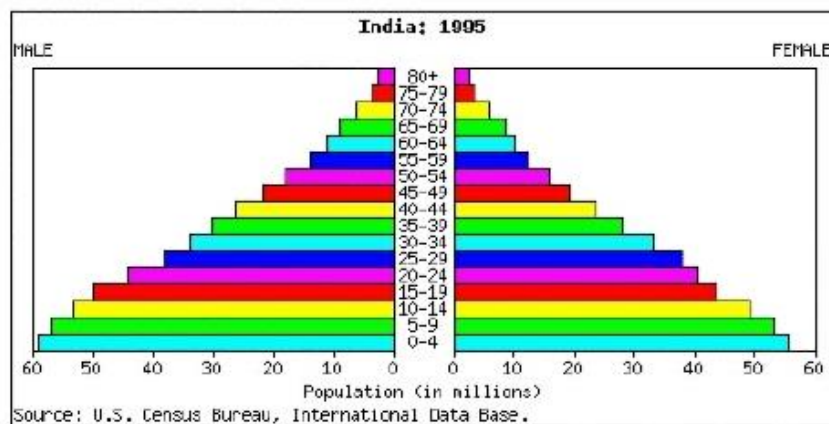
Population Projection (millions)					
Year	2000	2005	2010	2015	2020
Total	1010	1093	1175	1256	1331
Under 15	361	368	370	372	373
15-64	604	673	747	819	882
65+	45	51	58	65	76

- Source: Planning Commission of India, Vision 2020 Report



# INDIA : POPULATION TREND

**Figure 6: Population pyramids in India (1995 – 2050)**



Screen captured. Saved as image file



## **Change in Food Habits**

- ☐ **The Food Habits of the consumers are expected to undergo change with improvement in living standards and resultant Consumer Awareness coupled with Health Consciousness.**
- ☐ **It is evident that as in case of Population, Income growth also would be highest in Developing and particularly in South Asia as compared to Developed Countries.**
- ☐ **Per capita food consumption would rise faster in Developing Countries.**
- ☐ **Therefore, the aggregate demand for Food would increase with increasing population particularly in countries of Asia & Africa.**



## Change in Food Habits. Cont....

**Changes in Commodity Composition of Food (kcal/person/day)**

Commodity	World			South Asia		
	1999/01	2030	2050	1999/01 1	2030	2050
Cereals, food	165.4	165.0	162.0	157.1	167.0	169.0
Cereals, all uses	308.7	331.0	339.0			
Roots & Tubers	69.4	75.0	75.0	23.5	31.0	36.0
Sugar (raw sugar equiv.)	23.6	26.0	27.0	25.6	30.0	32.0
Pulses, Dry	5.9	6.0	6.0	10.1	8.0	7.0
Edible Oils	12.0	16.0	17.0	9.7	15.0	18.0
Meat (carcass weight)	37.4	47.0	52.0	5.5	12.0	18.0
Milk & Dairy prod.	78.3	92.0	100.0	67.6	106.0	129.0
Other Food	289.0	325.0	340.0	141.0	180.0	200.0
Total Food	2789	3040	3130	2392	2790	2980

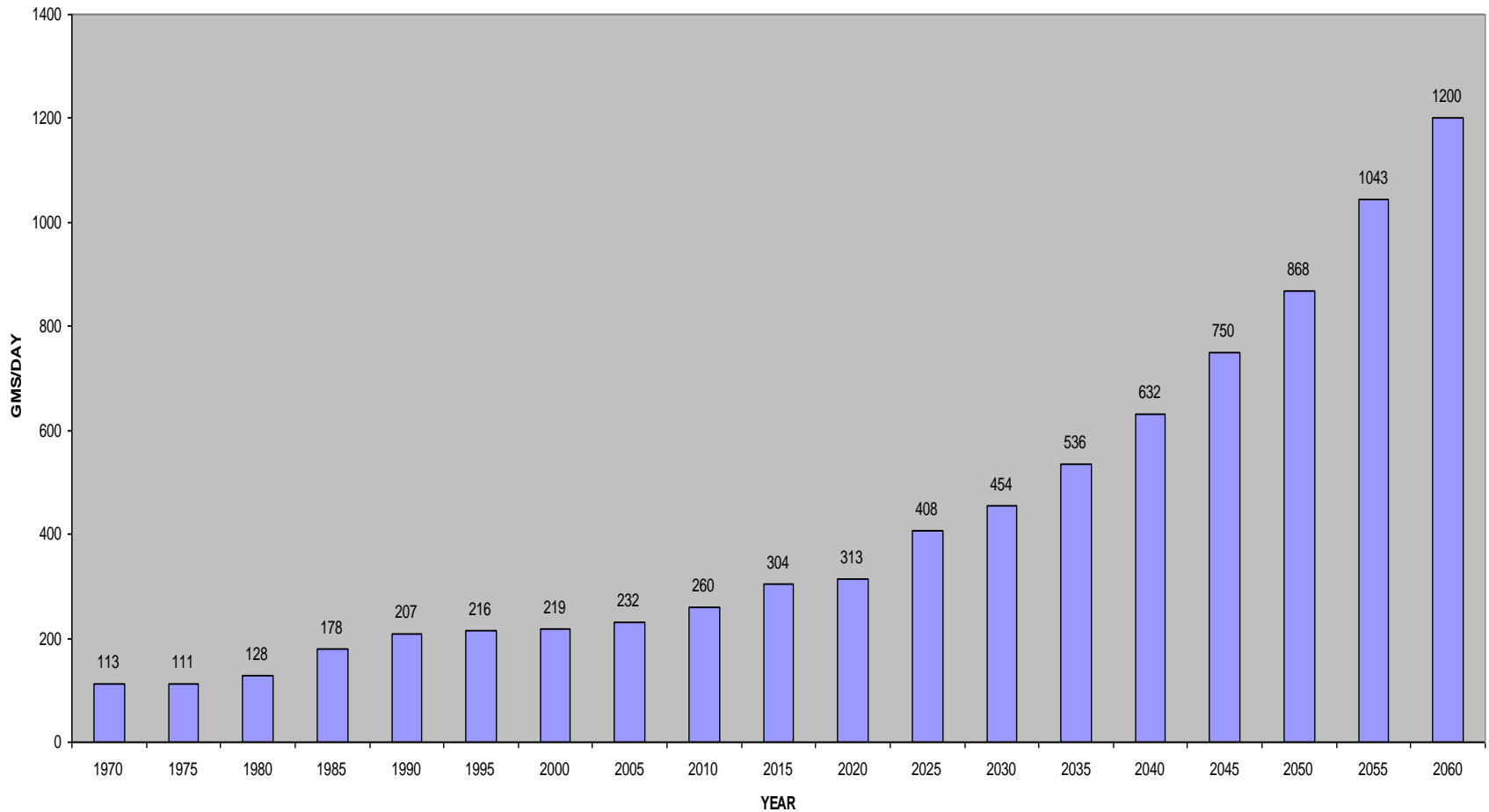


## **Change in Food Habits. Cont....**

- ☐ Demand of Cereals and Pulses for Food purpose in terms of per Capita Consumption would remain stagnant at current levels,
- ☐ While per capita demand for other Food commodities like Meat, Milk & Dairy Products and Other Food would increase considerably till the year 2050.
- ☐ This demonstrates the shift in Food consumption towards those with more Value-Addition and providing higher Nutrition.
- ☐ Milk & Dairy Products are of particular relevance to our Industry.

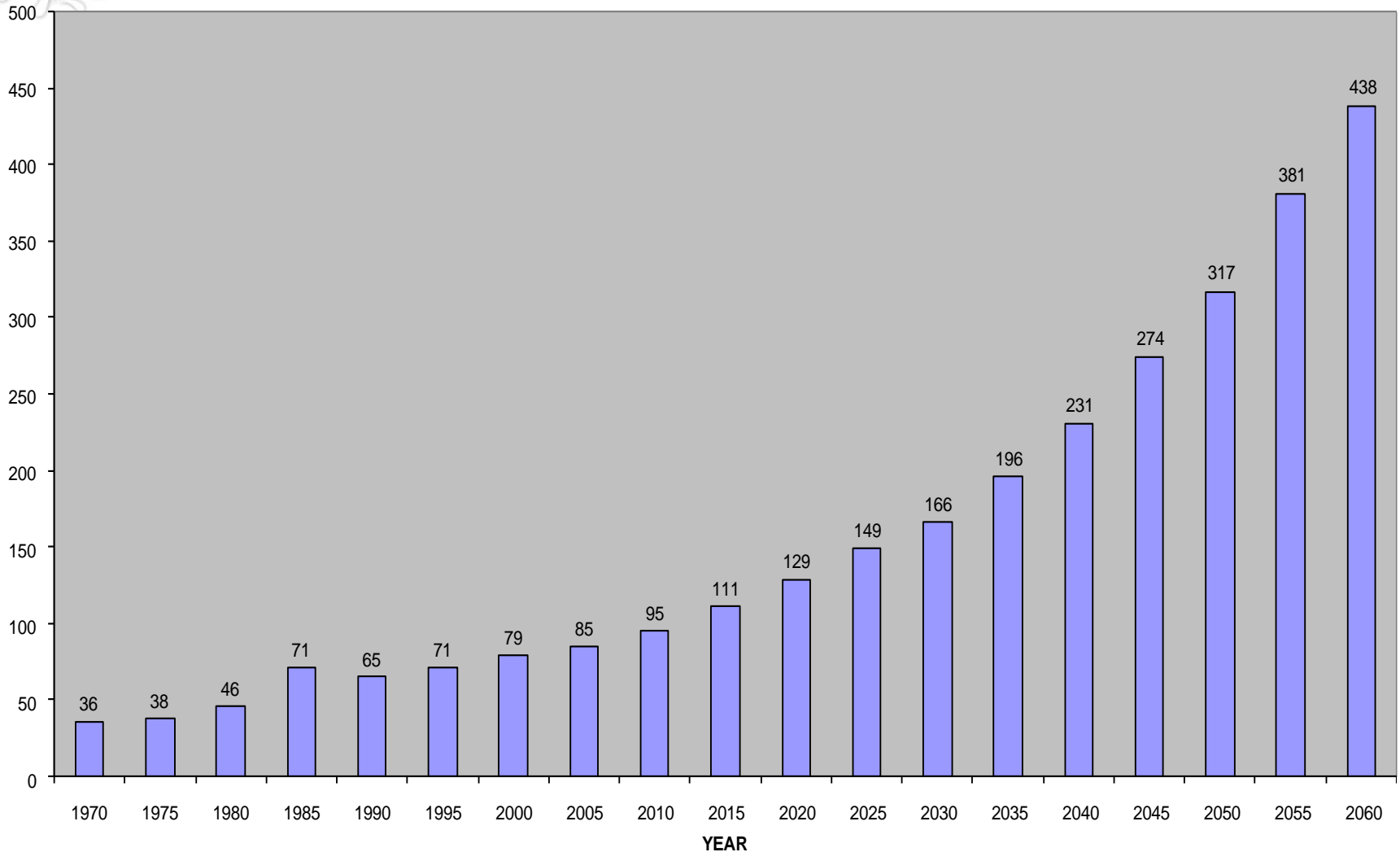


## PER CAPITA MILK CONSUMPTION (GM/DAY)





## YEARLY MILK CONSUMPTION (KGS)





# INDIA : INCOME GROWTH

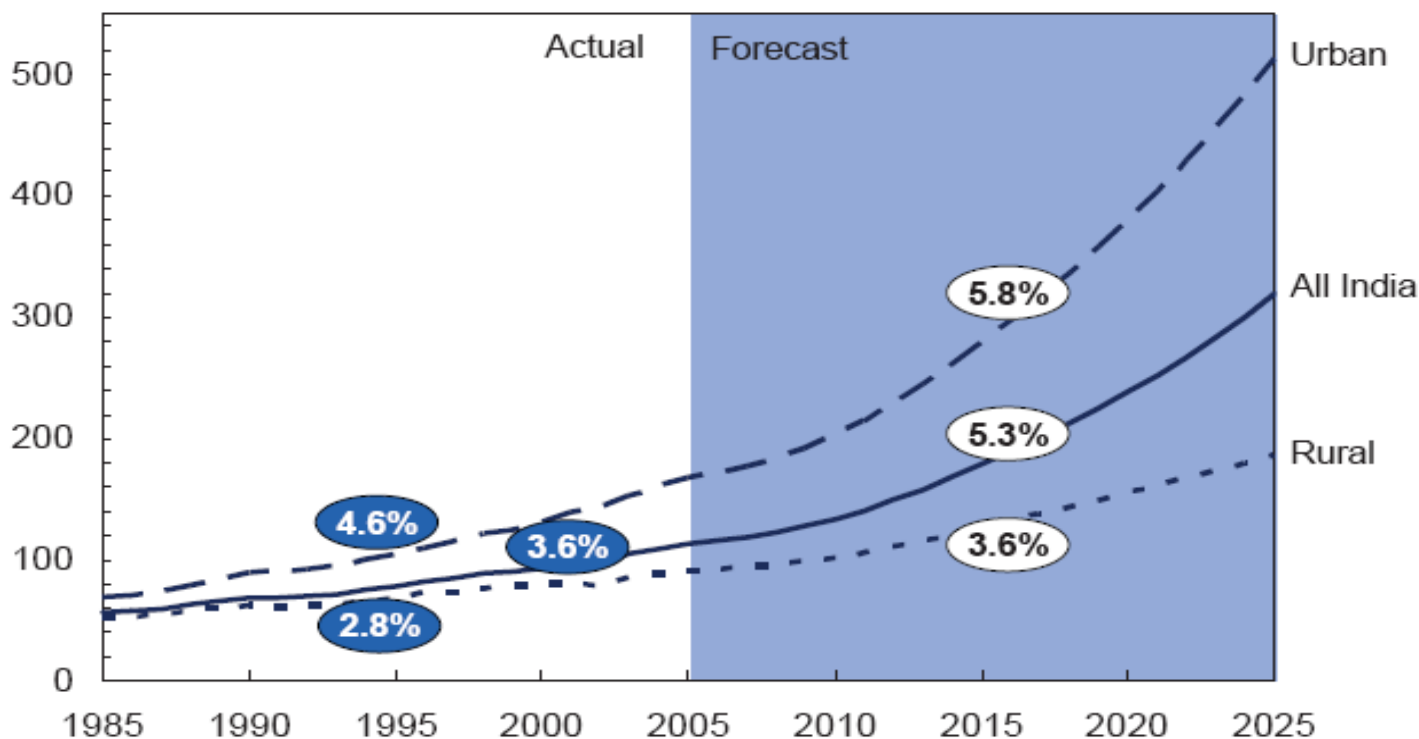
## HOUSEHOLD INCOME GROWTH WILL ACCELERATE ACROSS INDIA

**Average household disposable income**  
thousand, Indian rupees, 2000

Compound annual growth rates

1985–2005

2005–2025







## **Flourishing Dairy Sector - A Golden Opportunity**

- ☐ **India's population will expected to grow to about 1550 million by 2050 and 1700 million by 2100. Such a young nation is an ideal market to build demand of liquid milk alone. In my view, up to year 2050, the market for liquid milk is going to grow continuously driven by the population growth and the increased consumption per capita.**
  
- ☐ **Consider this, in 1970 per capita consumption of milk was about 100g per day which has now reached 300g per day. Our per capita consumption is now close to 110kg per year which is inching towards the world average.**



## **Flourishing Dairy Sector - A Golden Opportunity**

- ☐ The consumption of milk in the nation is growing and that is being driven by several factors, such as growth in disposable incomes, generational shifts to convenience and the affordability of milk. The issue therefore is not the demand potential for Milk in this country but rather, how to make it affordable to all through a safe and sound supply chain.
  
- ☐ The point I make here is that India is going to remain an ever expanding market for liquid milk and milk products till 2050. The condition is that we continue to make milk and milk products available, affordable, invest in expanding the cold chain and ensure convenient access and delivery of milk for the consumers.



## **Scope of investment in Cold Chain**

**To minimize wastage and to make milk more marketable we have to control its all possible perishability, which attacks to focus on backward linkages, insulated milk tankers (to uplift milk from bulk milk coolers to production units), cold stores at process plants, refrigerated vans for transporting milk / products to the marketable areas, chest coolers at retailers' point as forward linkages.**

**For backward linkages, it should be done in two ways,**

- A- By installing Automated milk weighing and testing systems in our villages and**
- B- By installing 200000 bulk milk coolers at village level.**



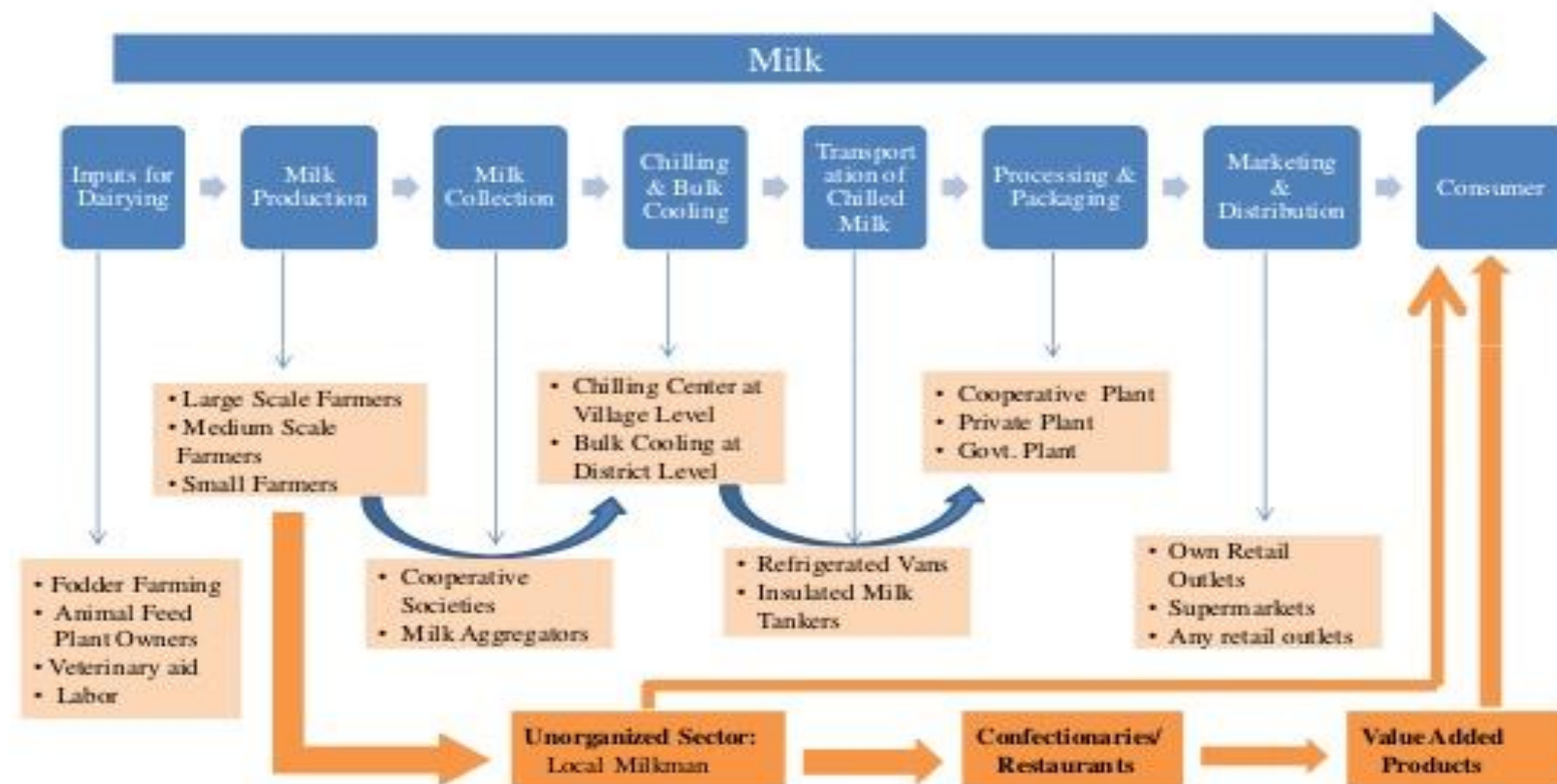
## **Scope of investment in Cold Chain**

**For Forward linkages it should be done in following ways**

- A- By installing 500000 chest coolers at retailers' point**
- B- By installing milk vending booths.**

**All expenditure incurred for such infrastructure may be part of a visionary central scheme, as it is critical to ensure quality milk, boost productivity and generate employment.**

## Supply Chain of Indian Dairy Industry





## **Opportunity is knocking.... Grab it!**

- ☐ It is important to recognise that this opportunity will not be here forever. It is worth acknowledging that a huge number of villages got electrified, road connectivity improved, communications connectivity has improved which have all contributed in building a robust cold supply chain with lower wastage and therefore a better price realization. These helped increase milk production consistently year after year reflecting the determination and ingenuity of Indian farmers to rise to challenges.



## **Opportunity is knocking.... Grab it!**

- ❑ **In conclusion I would like to say the opportunity is vast but the right and timely investment is essential if India is to capitalise on this unique opportunity. The need for investment in dairy industry, especially to boost animal productivity, and milk processing capacities is urgent and essential. Today there is a huge population that is used to drinking millions of tonnes of milk, at the threshold of development and on the supply side a huge number of proven breeds of milch animals along with millions of skilled rural folk to employ. Such timing is rare and this part of history will not repeat.**



## **Opportunity is knocking.... Grab it!**

- ❑ **This is the onset of golden period of Indian Dairy Industry. Let us seize this opportunity of the real white revolution with all enlightenment and excellence to make this country the land of milk and honey again.**



**Make in India**



**Ananda**

**Pure Happiness**

**Gopaljee Dairy Foods Pvt. Ltd.**