

Origin and history of development of cheese manufacture, status and scope in India and abroad



Cheese is one of the oldest foods of mankind that evolved in the Fertile Crescent between the rivers Tigris and Euphrates in Iraq some 8000 years ago.

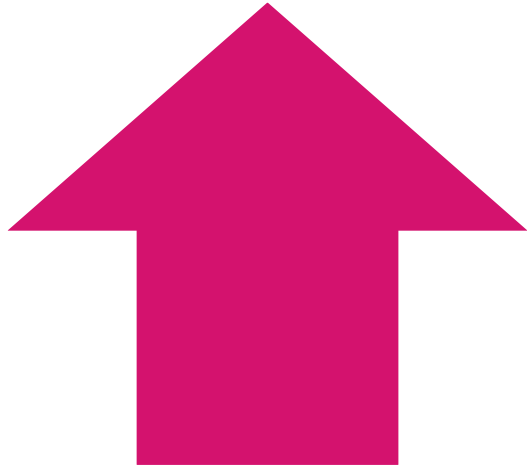
Assumption: Cheese was evolved from fermented milks

Crude fermentation

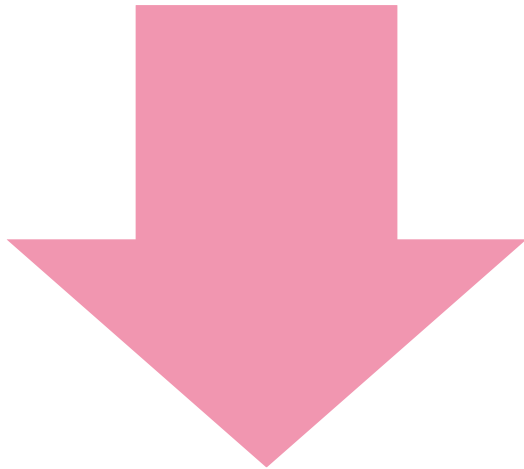
- Production of liquid fermented milks (dahi, yoghurt, laban, kumiss and kefir).

Processing

- Drainage of whey through a cloth or perforated bowls, to leave solid curds which when salted became cheese.



Development in cheese making became an “Art with Science”



In 18th century, cheese making was essentially a farmhouse industry

Developments in Cheese Industry.....

Synthetic chymotrypsin derivative is used with molds and plants extracts

Mechanization and automation

Accelerated ripening of cheese

Low fat and salt cheese

World Market of Cheese

1. Top three world cheese producers are:

- ✓ United States of America with 5.10 million tons (30% of world production)
- ✓ Germany with 2.08 million tons
- ✓ France with 1.90 million tons

2. Versatile food in the world: 2000 types.

3. High amount of protein, calcium, minerals and vitamins: art of cheese making now evolved into a lucrative business.

4. Innovation and product diversification are most prominent market strategies for manufacturers and suppliers in the post recession period.

- ✓ Traditional types of cheeses to new cheeses in China and India.
- ✓ Growing demand for healthier cheese products (lactose free goat cheese products, and half-fat and reduced fat cheeses).



Europe and US lead the global cheese market.

Focus of the global cheese industry now shifts towards emerging markets (Asia-Pacific and Latin America).

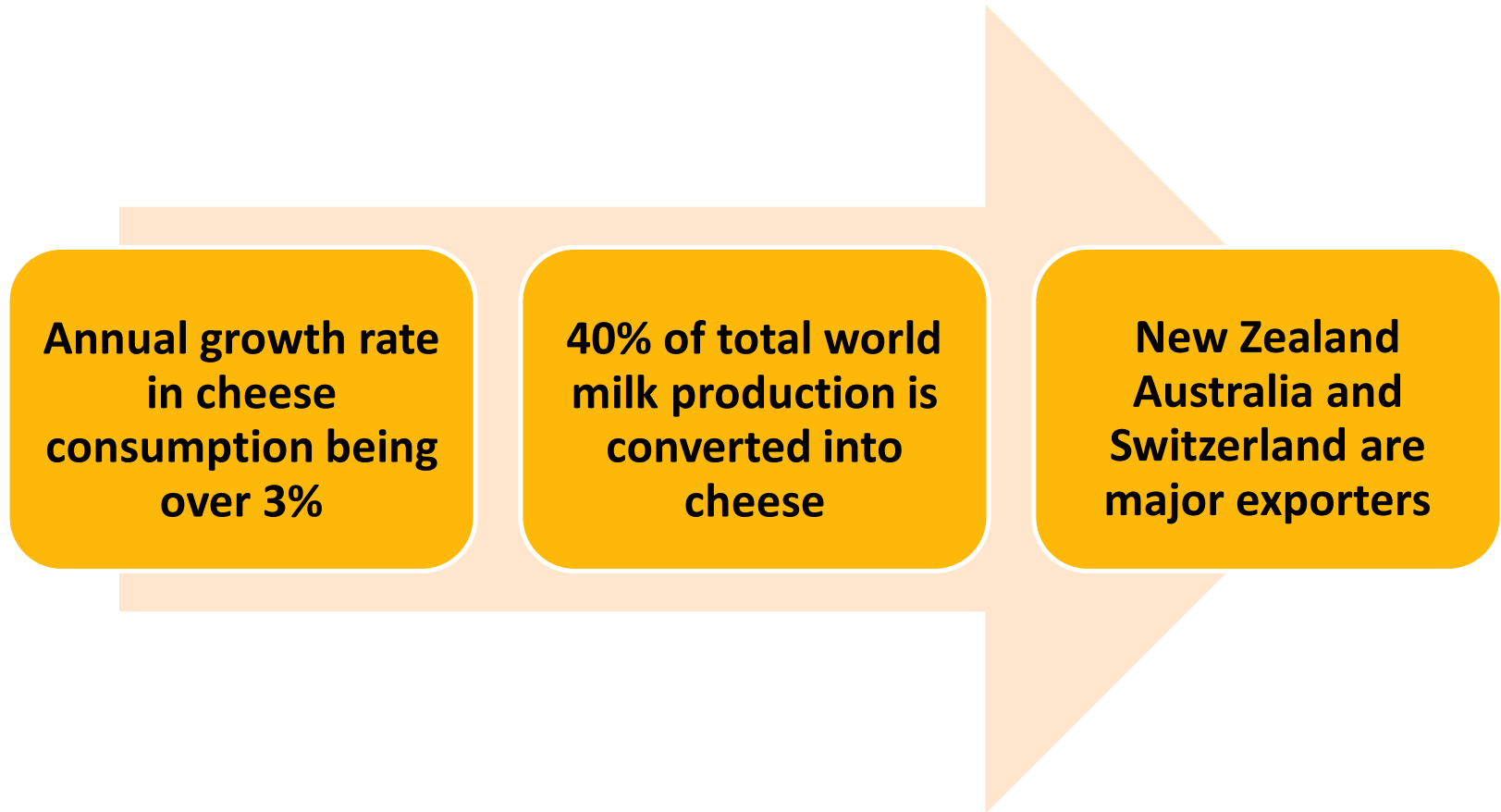
Cheese consumption in developed economies will be filled with challenges (matured market profile, limited growth in population and fast aging population) accounting for lesser per capita consumption than younger generation.

Developing markets (Asia, Latin America and the combined market of Middle East & Africa) are projected to display superior growth rates over the analysis period (2006-2015). Large population and rising incomes in these nations will be the major driving factors for exceptional growth in dairy consumption.

Key Players in Cheese.....

- **Arla Foods, Amba**
- **Belgioioso Cheese, Inc.**
- **Crystal Farms Cabot Creamery Cooperative, Inc.**
- **Groupe Danone, S.A.**
- **Great Lakes Cheese Company, Inc.**
- **Kraft Foods, Inc.**
- **Wisconsin Cheese Group Inc.**

Cheese Production and Consumption in India and Abroad :

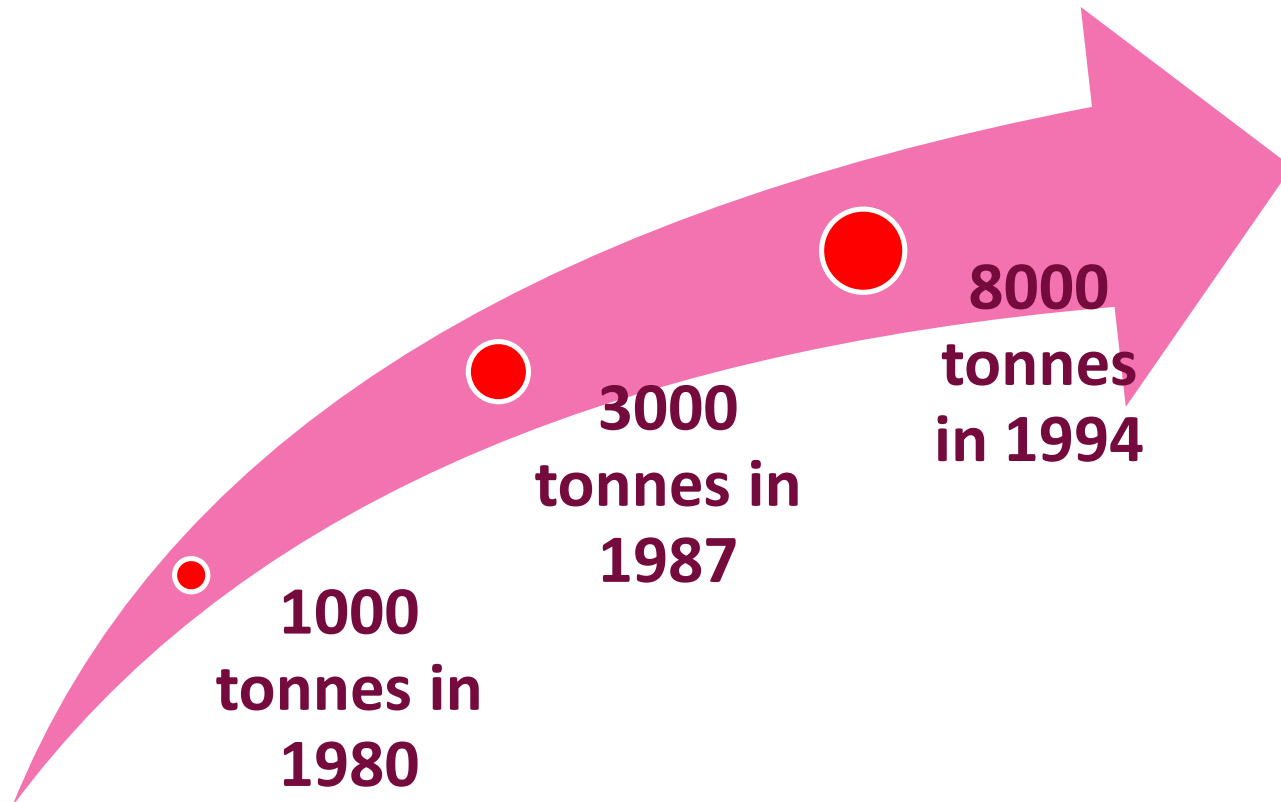


Major cheese production has centered in Western countries.

Scenario in India.....

The scenario of cheese production in India is quite bright because of recent economic reforms based on globalization and liberalization in the marketing arena that enhanced the Indian dairy industry to penetrate the large international cheese market.

Growth Pattern of Cheese Production in India



Cheese production in top cheese producing countries

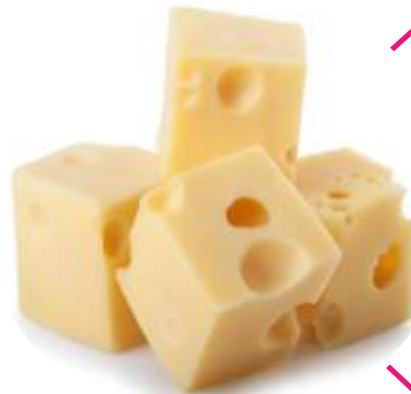
Countries	2005	2006	2007	2008	2009	2010
United States of America	4.51	4.67	4.75	4.85	4.92	5.09
Germany	1.90	1.97	1.99	1.99	2.03	2.08
France	1.80	1.83	1.87	1.86	1.83	1.90
Italy	1.14	1.12	1.14	1.15	1.18	1.17
Egypt	0.63	0.73	0.94	1.04	0.94	0.94
Netherlands	0.67	0.71	0.73	0.72	0.71	0.74
Poland	0.61	0.58	0.59	0.59	0.63	0.66
Argentina	0.36	0.35	0.46	0.49	0.51	0.58
Australia	0.39	0.37	0.36	0.36	0.34	0.35
Brazil	0.04	0.04	0.04	0.04	0.04	0.04

Mode of Utilization of Cheese.....

1. Highly diversified, ranges in flavour from extremely mild to very sharp and in texture from semi-solid to almost stone hard, varying degrees in nutritive value, appearance, flavour, texture and cooking properties.
2. Usage levels (% of total cheese consumed): Natural 39%; Dry 28%; Processed 13% and Low-fat 20%.

Utilization of cheese in different food products

Food Product	Usage (as % of total usage)
Pizza	26
Snack Foods	17
Soups/Sauces/Dressings	15
Frozen Entrees	14
Baked Goods	11
Appetizers	7
Pet Foods	6
Rice/Noodle mixes	3
Shelf Stable Entrees	1



Natural

- Eaten as such or on bread, biscuits, etc as slices
- Cooking or as ready-to-eat snacks as dips or toppings

Cheese cracker

- Popular in Western countries

Dried

- Bakery products, soups, sauces, snacks, pasta products, ready meals, biscuits, fillings, cheese substitutes etc.

❑ Process cheese spread and slices are ideal bread-mates.

❑ Butter avoided by people due to its high fat content and jam and jelly are avoided due to high calorific value.

❑ Introduction of pizza in India has added new fillip for enhanced consumption of Mozzarella cheese.