

A starter's guide to
Milk Processing & Packaging

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Introduction:

The changing dietary pattern has been instrumental in increasing the consumption of milk in the state of Jammu and Kashmir during the past two decades. The agro-climatic conditions of the state are diverse and as such favour livestock rearing.

There is a great demand for establishing milk processing units in Jammu and Kashmir because the state is still miles away from attaining self-sufficiency in milk and milk products.

Jammu and Kashmir Milk Producers Cooperative Limited (JKMPCL) is the oldest organization with two milk plants, one each at Srinagar and Jammu, and is the state level federation of 186 and 130 dairy cooperative societies, respectively. The pasteurization capacity of these two plants is 30000 litres / day (LPD) each and presently, 10000 -12000 LPD and 7000-8000 LPD are sold from Srinagar and Jammu, respectively as pasteurized liquid milk under the brand name, 'Snowcap' with the financial and technical assistance from Gujarat Cooperative Milk Marketing Federation Limited. Recently, JKMPCL has started marketing of curd and flavoured milk also.

Market Snapshot:

The current milk production in the state is 697.5 thousand tonnes and 732.91 thousand tonnes with marketed surplus of 235.06 thousand tonnes and 246.98 thousand tonnes in the divisions of Kashmir and Jammu, respectively. Though Jammu division has more marketable surplus but milk shed is scattered on hilly tracts at longer distances from the main consumption centres.

The nutritional demand of Srinagar and Jammu cities dependent on marketed surplus based on 2001 Census (calculated @250g/day/capita minimum requirement) worked out to be 81.98 thousand tonnes and 33.76 thousand tonnes and that of other towns as 112.90 thousand tonnes and 23.26 thousand tonnes in the Kashmir and Jammu divisions, respectively. On the other hand, these estimates based on current per capita per day availability of 360g of milk in the state are 30.55% higher than nutritional demand. Organized sector supplies 24.82 thousand tonnes and 9.31 thousand tonnes of milk in Srinagar and Jammu and thus meets 30.27% and 27.57% nutritional requirements of these two major cities and only 12.76 per cent and 16.32 per cent if towns of Kashmir and Jammu divisions are also included.

Presently, state is receiving per day 11000 litres of processed milk ('Verka' brand) and 51000 litres of raw milk from Punjab.

Available Supply Sources:

- i. *Local Brands:* Snowcap, Khyber, Zum Zum, Haleeb, Safa Sheer, Surya
- ii. *National Brands:* Amul, Gowardhan, Verka,

Production Capacity/Sales of Existing Players:

#	Name of Brand	Name of Manufacturer	Pasteurisation Capacity (LPD)	Sales (LPD)
1	Snowcap (Srinagar)	JK Milk Producers Cooperative Ltd.	30000	10000-12000
2	Snowcap (Jammu)		30000	7000-8000
3	Khyber	Khyber Agro Farms, Ltd.	100000	50000-60000
4	Zum Zum	Zum Zum Dairy Products	10000	5000-6000
5	Surya	JK Dairy Cooperative Processing	60000	Army: 45000
				Local: 7000
6	Verka (Jammu only)	Punjab State Coop. Milk Producers Federation	N.A.	11000

Economics:

Capital Cost	₹ 54.00 Lakhs
a) Land	Owned/Leased
b) Building	₹ 10.00 Lakhs
c) Machinery (including installation and Commissioning)	₹ 32.00 Lakhs
d) Milk Collection Van	₹ 12.00 Lakhs
Operating Cost per day (4000 LPD)	₹ 1.50 Lakhs
Total Cost	₹ 55.50 Lakhs*

* The above calculations are based on the following plant specifications:

- Processing capacity : 500 LPH
- Operational hours : 8 Hours/day

Operating Cost:

A	Procurement price of raw milk	₹ 27.00 PL
B	Processing including transportation charges	₹ 4.00 PL
Total Operating Cost: (A+B)		₹ 31.00 PL

Profitability

A	Sales price	₹ 35.00 PL
B	Distributor Commission	₹ 0.80 PL
C	Retailer Commission	₹ 1.20 PL
D	Operating Cost	₹ 31.00 PL
Net Profit : A- (B+C+D)		₹ 2.00 PL*

*Profitability can be improved by minimizing the marketing channels like distributors.

Dos & Don'ts:

Do

1. Select the location where availability of clean water, power input and market access is ensured.
2. Survey markets before jumping into this venture as huge investments are involved.
3. Make sure to obtain NOC from PCB before starting the venture.
4. Ensure Quality Control as per BIS requirements.
5. Ensure natural ventilation in production premises to avoid use of electricity during day hours.

Don't

1. Start the plant without BIS (Bureau of Indian Standards) Certification.
2. Start the plant without PFA (Prevention of Food Adulteration Act 1954) Certification.
3. Start the plant without NOC from PCB.

Opportunities & Challenges:

Opportunities:

1. Huge Gap between demand & Supply at all major cities and towns.
2. Huge market at disposal.
3. Sufficient pure milk is not available everywhere in the State.
4. Increased living standards have increased the sales of packaged milk in recent years.

Challenges:

1. Tough competition from Local & National players.
2. Huge investments are involved.

Check List:

1. Land

- *Area:* One Kanal (owned/leased)
- *Nature:* Non-residential area preferably Industrial estate.

2. Building

- Total area requirement : 5000 sq ft.
- Processing plant : 2000 sq ft.
- Misc. installations, parking etc. : 3000 sq ft.

3. Machinery & Equipment

- Horizontal milk storage tank
- Milk pasteurizer plant
- Chiller
- Homogenizer
- Dump tank cap.
- Cream separator
- Multipurpose vat for Ghee
- Fill pack machine
- Refrigeration section
- Cold room
- Bulk Milk Locomotive(BML)
- Milk Collection Van
- RO plant
- Miscellaneous installations

4. Money

- Check various financial schemes at JKEDI.

5. Suppliers

- Machinery (from registered dealers outside the state preferably turnkey suppliers)

6. Buyers

- Local Hotels, Restaurants, Coffee Shops
- Government and private office establishments.
- Tourists (domestic and foreign).
- Local Households.
- Child development centres.

Relevant government departments:

- Bureau of Indian Standards (BIS) - *For ISI Certification*
- Prevention of Food Adulteration (PFA)- *For NOC*
- J&K State Pollution Control Board (JKSPCB)- *For NOC*
- J&K SIDCO- *For Land Allotment.*
- J&K Power Development Deptt.(PDD)- *For Electricity Connection*
- J&K Public Health Engineering Deptt.(PHE)- *For Water Connection*
- Concerned District Industries Centre(DIC)- *For SSI Registration*

Disclaimer: Users of this document should not solely rely on the information contained here and are advised to consult domain experts prior to the start of their venture based on the identified market opportunity.