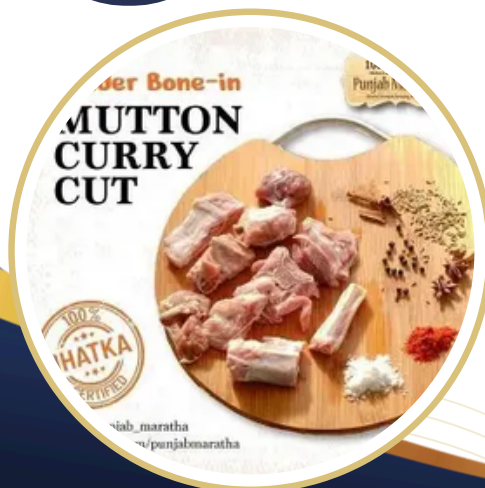




PROJECT PROFILE

FROZEN MUTTON

AND CHICKEN



Packaged Frozen Meat and Chicken Enterprise in Ladakh

1. INTRODUCTION

Ladakh, the high-altitude Union Territory nestled in the trans-Himalayan region of northern India, is undergoing a rapid socio-economic transformation. With its unique geography—marked by rugged terrain, extreme temperatures, and limited growing seasons—Ladakh faces structural challenges in achieving year-round food security, particularly in the meat and poultry sector.

Over the past decade, Ladakh has witnessed a surge in **tourism, urban migration, and hospitality development**, significantly increasing the region's demand for high-quality, hygienically processed food. In 2023 alone, Ladakh welcomed more than **600,000 tourists**, along with a growing presence of hotels, guesthouses, army personnel, and institutional consumers. These developments have outpaced the capacity of local meat supply chains, which remain fragmented, informal, and seasonally constrained due to limited infrastructure and harsh winters.

Currently, a large proportion of meat and chicken consumed in Ladakh is either transported from the plains of Punjab and Himachal Pradesh or sourced from unregulated local suppliers, often lacking standard hygiene and cold chain practices. This creates **critical challenges**:

- **Seasonal shortages and price volatility**, especially during winter months.
- **Quality inconsistencies and food safety risks** due to poor slaughter and handling practices.
- **Increased carbon footprint** and logistics costs from long-distance transportation.

This project proposes the establishment of a **state-of-the-art Packaged Frozen Meat and Chicken Processing Unit** strategically located near Leh, the commercial and logistic hub of Ladakh. The enterprise will integrate modern technologies such as **blast freezing (-40°C)**, **vacuum packaging**, and **-18°C cold storage**, supported by **FSSAI and HACCP-compliant processing protocols**. Products will include:

- Fresh frozen chicken and mutton (whole and cut portions),
- Ready-to-cook marinated and seasoned meat products, and
- Vacuum-sealed value-added items for the retail and institutional market.

The venture will leverage Ladakh's **natural cold climate** to enhance energy efficiency, reduce operational costs, and lower environmental impact. It aligns strategically with the following national and regional frameworks:

- **"One District One Product" (ODOP)** scheme by the Ministry of Food Processing Industries, positioning meat products as a signature offering from the Leh district.
- **"Carbon Neutral Ladakh" Vision** by the UT Administration, utilizing renewable energy and eco-friendly cold-chain systems.
- **Vocal for Local and Make in India** initiatives to foster local value addition and employment.

By building a **resilient, hygienic, and efficient meat processing ecosystem**, the project addresses not only the nutritional needs of Ladakh's population and tourists but also contributes to economic diversification, rural employment, and sustainable agri-business

development. Through backward integration with poultry and livestock suppliers in the plains and forward linkages with hotels, retailers, and defence institutions, the proposed unit aims to become a benchmark model for high-altitude food processing in India.

2. PRODUCT & APPLICATIONS

Primary Products:

- Frozen Chicken: Whole birds, breast, drumsticks, wings
- Frozen Mutton: Bone-in cuts, boneless cubes
- Value-Added Products: Marinated kebabs, meatballs, minced meat, sausages

Target Applications:

- **Retail:** Local households, grocery outlets
- **HORECA:** Hotels, restaurants, cafes
- **Institutions:** Army camps, schools, hospitals
- **E-commerce:** Online orders and subscription meat boxes

Unique Selling Proposition (USP):

- **-18°C vacuum-sealed storage** ensuring long shelf life and nutritional retention
- Guaranteed hygiene, traceability, and consistency
- Energy savings through synergy with Ladakh's cold ambient temperatures

3. DESIRED QUALIFICATION FOR PROMOTER

- **Educational Background:** Food Technology, Agribusiness, or Veterinary Sciences (preferred)
- **Experience:** Cold chain logistics, meat processing, or food retail
- **Skills:** Regulatory compliance (FSSAI, APEDA), logistics optimization, B2B/B2C partnerships
- **Networks:** Access to supplier farms, cold storage solution providers, and institutional buyers

4. INDUSTRY OUTLOOK & TRENDS

- **Global Market:** The frozen meat sector is expected to reach **USD 115 billion by 2030**, growing at **6.5% CAGR**, driven by urban lifestyles and rising protein consumption.
- **National Trend:** India's organized meat sector is growing with the entry of brands like Licious, Zappfresh, and FreshToHome.
- **Local Dynamics:** Tourism, army establishments, and migrant workers increase protein demand; current supply is fragmented and largely informal.
- **Emerging Opportunities:**
 - Clean-label, chemical-free marinated meats
 - Value-added Himalayan-style meat delicacies
 - Traceable supply chains using QR codes

5. MARKET POTENTIAL & CHALLENGES

Market Potential:

- Estimated demand in Ladakh: **1,500–2,000 MT/year**
- Over **150 hotels/restaurants** in Leh alone
- High-value institutional buyers: Indian Army, ITBP, healthcare centres
- Potential for niche products (e.g., yak meat, traditional Ladakhi recipes)

Challenges:

- **Logistics & Supply:** High inbound transport costs from Punjab/Himachal
- **Consumer Mindset:** Perception bias toward fresh over frozen meat
- **Cold Chain Gaps:** Limited refrigerated transportation in Ladakh
- **Regulatory Compliance:** Complex licensing and inspection cycles

6. RAW MATERIAL REQUIREMENTS

Material	Source
Chicken, Mutton	Approved farms in Punjab, Himachal, or Srinagar
Spices & Marinades	Local cooperatives or national FMCG suppliers
Packaging Materials	Vacuum-sealed pouches, zip-lock bags, labels
Consumables	Gloves, trays, cartons, ice gel packs

7. MANUFACTURING PROCESS FLOW

1. **Sourcing:** Procure meat from certified slaughterhouses or farms (preferably ISO/HACCP compliant)
2. **Inspection & QC:** Visual/mechanical checks, trimming
3. **Processing:** Cutting, deboning, washing with RO/UV-sterilized water
4. **Marination:** For value-added items; vacuum tumbler/massager used
5. **Blast Freezing:** -40°C to quickly reduce core temperature
6. **Packaging:** Vacuum-sealing, nitrogen flushing if needed
7. **Cold Storage:** Maintain at -18°C for optimal shelf life
8. **Distribution:** In refrigerated vans or insulated containers

8. MANPOWER REQUIREMENT

Role	No. of Staff
Skilled (Butchers, QA)	8

Role	No. of Staff
Semi-Skilled (Packaging)	12
Unskilled (Cleaning, loading)	5
Managerial/Admin	2
Logistics/Drivers	2
Total	29

9. IMPLEMENTATION SCHEDULE

Phase	Duration
Project Feasibility & DPR	2 months
Land & Regulatory Approvals	4 months
Cold Storage Infrastructure	6 months
Equipment Procurement & Setup	2 months
Trial Run & Certifications	2 months
Commercial Launch	1 month
Total Duration	17 months

10. PROJECT COST ESTIMATE (INR)

Component	Cost
Cold Storage Unit	₹1,20,00,000
Machinery & Equipment	₹50,00,000
Vehicles (Refrigerated)	₹20,00,000
Working Capital	₹30,00,000
Contingency	₹10,00,000
Total	₹2,30,00,000

11. MEANS OF FINANCE (INR)

Source	Amount
Promoter Equity	₹92,00,000 (40%)
Bank Term Loan	₹1,15,00,000 (50%)
Government Subsidy (PMFME/NABARD)	₹23,00,000 (10%)
Total	₹2,30,00,000

12. LIST OF MACHINERY & EQUIPMENT

Equipment	Qty	Est. Cost (INR)
Blast Freezer (-40°C)	2	₹25,00,000
Vacuum Packaging Machines	2	₹12,00,000
Meat Cutting Saws	3	₹10,00,000
Cold Storage Room (-18°C)	1	₹70,00,000
Marination Tumbler	1	₹6,00,000
RO Water Plant + UV System	1	₹3,00,000
Weighing, Sealing Machines	3	₹4,00,000

13. PROFITABILITY PROJECTIONS (YEAR 1)

Metric	INR
Gross Sales Revenue	₹1,50,00,000
Cost of Goods Sold	₹90,00,000
Gross Profit	₹60,00,000
Operating Expenses	₹30,00,000
Net Profit	₹30,00,000
Net Margin	20%

14. BREAKEVEN ANALYSIS

Parameter	Value
Fixed Costs	₹1,00,00,000
Variable Cost/Unit	₹150
Selling Price/Unit	₹250
Breakeven Volume	1,00,000 units/year

15. STATUTORY & GOVERNMENT APPROVALS

To ensure compliance with food safety, export, and religious dietary standards, the millet processing unit in Ladakh must obtain the following statutory registrations and certifications:

- FSSAI License (Food Safety and Standards Authority of India)**
 - Mandatory for food processing units.
 - Ensures compliance with hygiene, labeling, and quality standards.
- Organic Certification (NPOP – National Programme for Organic Production)**
 - Required for labeling products as “organic.”
 - Critical for tapping into the premium health food and export markets.
- APEDA Registration (Agricultural and Processed Food Products Export Development Authority)**
 - Essential for exporting millet and value-added products to international markets.
 - Facilitates access to global certifications and export incentives.
- GST Registration**
 - For tax compliance and inter-state/international trade.
- HALAL Certification (From a Recognized Halal Certifying Body) ✓**
 - **Purpose:** Certifies that products are prepared, processed, and packaged according to Islamic dietary laws.
 - **Relevance:**
 - **Local:** Ladakh has a sizeable Muslim population, especially in Kargil and parts of Leh, where Halal-certified foods are preferred.
 - **Export:** Expands market potential to Gulf countries, Southeast Asia, and Muslim-majority regions globally.
 - **Institutional Supply:** Enables sales to religious and educational institutions requiring Halal-certified food.
- MSME / Udyam Registration**
 - Facilitates access to government subsidies, incentives, and schemes tailored for small enterprises.
- Pollution Control Board Consent (if required)**
 - For installation of processing machinery, especially if any emissions or effluents are generated.
- Trademark Registration**

- To protect the brand identity of “Ladakhi Organic Millet” or similar names and logos.
9. **Food Export Certification (if applicable)**
- For countries requiring specific phytosanitary or quality assurance certifications.

16. INTEGRATION STRATEGIES

Backward Integration:

- MoUs with farms in Punjab, Himachal, or Srinagar
- Explore options for **local poultry farming cooperatives** in Ladakh

Forward Integration:

- E-commerce platforms (own website, ONDC, Meesho, Amazon)
- Direct supply to hotels and institutional buyers
- Local retail counters and franchise outlets in tourist zones

17. TRAINING & CAPACITY BUILDING

Institution	Training Programs
NIFTEM (Kundli)	Meat processing, food safety, packaging
NCDC / NCCD	Cold chain and refrigerated logistics
Ladakh Skill Development Mission	Local recruitment and food hygiene modules
FSSAI e-learning portal (FoSTaC)	Online certifications for food handlers

18. SUPPLIERS

For establishing a **Packaged Frozen Meat and Chicken Enterprise in Ladakh**, sourcing reliable and efficient machinery is crucial. Below is a curated list of reputable Indian suppliers offering essential equipment tailored for meat processing and cold storage operations:

Blast Freezers & Cold Storage Units

1. **Singhsons Refrigeration (Mumbai)**
 - **Products:** Blast Freezers with capacities ranging from 0.5 to 100 tons/day, operating at temperatures as low as -40°C.
 - **Features:** Utilizes refrigerants like Ammonia, R404A, R22; constructed with SS/Aluminium; suitable for rapid freezing to preserve meat quality.
 - **Contact:** Singhsons Refrigeration
2. **Blue Cold Refrigeration Pvt. Ltd.**

- **Products:** Customized Blast Freezers, Cold Rooms, and Cold Storage Plants designed for meat and poultry processing.
- **Features:** Offers air-cooled and water-cooled condensing units; tailored solutions for various perishable goods.
- **Contact:** [Blue Cold Refrigeration](#)
- 3. **Ice Make Refrigeration Ltd. (Ahmedabad)**
 - **Products:** Blast Freezers and Chillers with capacities from 50 kg to 2000 kg, suitable for meat, chicken, and ready-to-eat products.
 - **Features:** Temperature ranges from -25°C to -38°C; designed for efficient blast freezing.
 - **Contact:** Ice Make Refrigeration
- 4. **Shivay Cooling Solution (Agra)**
 - **Products:** Meat Blast Freezers operating between -22°C to -45°C.
 - **Features:** Specialized in meat processing facilities; ensures rapid freezing to maintain product integrity.
 - **Contact:** Shivay Cooling Solution
- 5. **Arctic Refrigeration Pvt. Ltd. (Gurgaon)**
 - **Products:** Chiller Rooms and Cold Storage solutions for meat processing.
 - **Features:** Provides comprehensive cold chain solutions including modular cold rooms and blast freezers.
 - **Contact:** Arctic Refrigeration

Meat Cutting & Bone Saw Machines

1. **Dr. Froeb India Pvt. Ltd.**
 - **Products:** Commercial Meat Bandsaws, Bone Cutter Saws, and Industrial Meat Bandsaws.
 - **Features:** Designed for precise cutting of meat and bones; suitable for high-volume operations.
 - **Contact:** Dr. Froeb India
2. **Hytek Food Equipments (Ambala)**
 - **Products:** Bone Saw Meat Cutting Machines with 1 HP power, cutting thickness up to 100 mm.
 - **Features:** Compact design; suitable for small to medium-scale operations.
 - **Contact:** Hytek Food Equipments
3. **Shubh Labs (Ambala)**
 - **Products:** Meat Cutting Bone Saw Machines.
 - **Features:** Robust construction; designed for efficient meat and bone cutting.
 - **Contact:** Shubh Labs
4. **Diamond Enterprises (New Delhi)**
 - **Products:** Meat Cutting Bone Saw Machines with 1 HP motor power.
 - **Features:** Semi-automatic operation; suitable for mutton and other meats.
 - **Contact:** Diamond Enterprises

Vacuum Packaging Machines

1. **Rema Engineers**
 - **Products:** Double Chamber Vacuum Packaging Machines, ideal for meat products.
 - **Features:** Heavy-duty construction; ensures extended shelf life of packaged meats.
 - **Contact:** Rema Engineers
2. **Allespack Systems Pvt. Ltd.**
 - **Products:** Vacuum Packaging Machines suitable for meat and seafood.
 - **Features:** Offers both single and double chamber machines; enhances product shelf life.

- **Contact:** Allespack Systems
- 3. **Unipack Packaging Solutions (Delhi)**
 - **Products:** Single and Double Chamber Vacuum Packaging Machines.
 - **Features:** Stainless steel construction; user-friendly interface.
 - **Contact:** Unipack Packaging Solutions
- 4. **Winner Vacuum Packing Pvt. Ltd. (Mumbai)**
 - **Products:** Vacuum Packing Machines tailored for meat products.
 - **Features:** Ensures airtight sealing; prolongs freshness and prevents contamination.
 - **Contact:** Winner Vacuum Packing

Cold Storage Construction & Solutions

1. **EPACK Prefab**
 - **Products:** Cold Storage and Cold Room solutions with energy-efficient designs.
 - **Features:** Quick installation; customizable sizes; suitable for meat storage.
 - **Contact:** EPACK Prefab
2. **Natural Storage Solutions Pvt. Ltd. (Gandhinagar)**
 - **Products:** Meat Cold Storage facilities with capacities starting from 1000 tons.
 - **Features:** Heat-insulated, artificially refrigerated, and well-ventilated structures.
 - **Contact:** Natural Storage Solutions
3. **Bombay Ammonia Refrigeration Company (New Delhi)**
 - **Products:** Ready-to-Eat Food Processing Refrigeration Plants and Blast Freezers.
 - **Features:** Specializes in ammonia-based refrigeration systems; suitable for large-scale operations.
 - **Contact:** Bombay Ammonia Refrigeration

18. CONCLUSION

This project is well-positioned to **bridge Ladakh's meat supply gap** while ensuring year-round availability of **hygienic, high-quality protein products**. With efficient cold-chain integration, clean-label innovation, and smart retail strategies, the unit can serve as a model for **cold desert agri-processing ventures**. It also offers significant socio-economic benefits through **employment, entrepreneurship, and nutritional security**, aligning with **Atmanirbhar Bharat** and **sustainable mountain development** goals.
