Investment in Dairy Inputs & Processed Dairy Products in Pakistan

MINISTRY OF NATIONAL FOOD SECURITY & RESEARCH

GOVERNMENT OF PAKISTAN

Strategic Rationale for Investment in Dairy Sector of Pakistan

Massive Production Capacity

Pakistan produces **72.34 million tonnes of milk (PBS 2024-25)**, making it one of the world's largest milk producers, with a substantial surplus of unprocessed raw milk available for industrial processing and value-added products.

Enabling Investment Environment

The bilateral relationship and mutual SPS harmonization provides the stable, secure, and long-term investment environment for exports to China.

Value Chain Potential

The sector offers strong potential for integrated dairy value chains, from farm modernization to processes and can meet China's import requirements.

Whey Powder – Pakistan exports **0 tons / USD 0**, while China imports **645,497 tons / USD 780M**

Milk & Cream – Pakistan exports **2,006 tons / USD 6.53M**, while China imports **657,130 tons / USD 2.36B (ITC, 2024)**

GOVERNMENT OF PAKISTAN

Pakistan Dairy Sector Snapshot

Key Production & Industry Metrics (FY 2025)

ANNUAL PRODUCTION

72.34

Million Tonnes

FY 2025 Projection

SECTOR GROWTH

3.2%

Annual Rate

Consistent YOY Expansion

INFRASTRUCTURE

30+

Operational Plants

Private Dairy Processing Units

KEY SOURCES

Buffalo & Cow

Dominant Milk Types

Primary raw material base

Additional: Camel Milk

The Processing Gap

Huge potential for value addition

Processed	5-10%
Raw / Informal	90-95%

Current processed output is only 3.4–6.8 million tonnes annually, leaving massive room for industrial expansion.

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Supply Strength & Processing Gap

Production capabilities versus market potential

Supply Strengths

Robust Production Foundation

Year-Round Availability

Consistent raw milk supply throughout all seasons

Herd Growth

Sustained increase in dairy animal population

Farming Expansion

Rapid growth in commercial and peri-urban farming

Logistics Systems

Processing Gap

Investment Opportunities

90%+

Traded in Raw/Informal Markets

MARKET GAP

Massive Untapped Potential

HIGH-POTENTIAL SEGMENTS

- UHT Milk
- Cheese
- Butter
- Yogurt
- Milk Powder
- Value Addition

Import Substitution & Export Access

Domestic opportunities and international gateways

Import Substitution

Capturing Domestic Value

Gap in Domestic Supply for Value added Products

Pakistan currently imports significant volumes of milk powder despite having strong domestic raw milk availability.

Access to China

Strategic Trade Partnership

2023

PROTOCOL SIGNED

MILESTONE

Dairy Export Protocol

GACC Registration

Pakistani companies registered

-Gourmet Foods
-Fauji Foods
-Friesland Campina Engro
-Haleeb Foods
-Millac Foods

SPS Systems

Harmonization of VHCs for dairy products export

✔ Milk powder
✔ Whey powder & whey protein
✔ Bovine colostrum powder
✔ Cheese & processed cheese
✔ Cream, thin cream, butter/anhydrous cream

Demand, Geography, and Cost Advantages

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Expanding Consumption

Rising demand for cheese, yogurt, and fortified products; per capita intake still below global benchmarks.

Strategic Geography

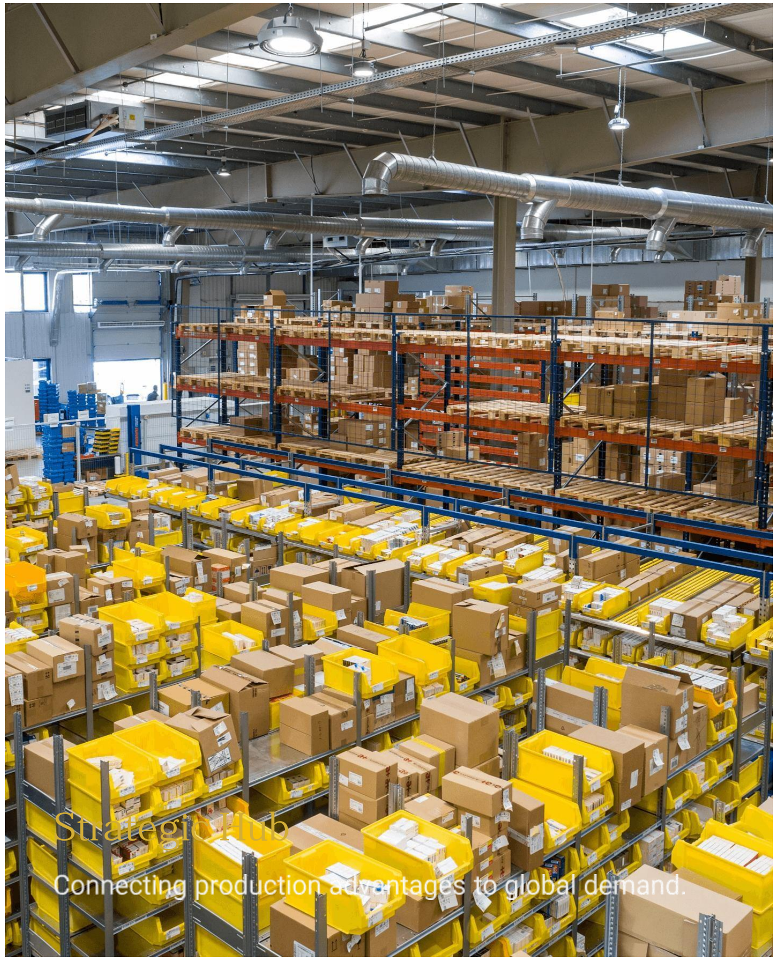
Direct, cost-efficient access to high-demand markets in China, Middle East, and Central Asia.

Logistics Advantage

Competitive transit times and freight costs create an edge for time-sensitive dairy exports.

Production Efficiency

Abundant fodder, low raw milk prices, and affordable labor significantly reduce production costs.



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Market Size & Strategic Opportunity

Value, Growth Projections & Investor Incentives

MARKET VALUATION

USD 10-12

Billion

Total Dairy Market Size

PROJECTED GROWTH

6-7%

Annual Rate

Sustained Sector Expansion

PAKISTAN CHINA SYNERGY

Pakistan: Scale & Resources

China: Technology & Capital

Creating globally competitive value chains

KEY OPPORTUNITIES

- Processing & Value Addition
- Cold Chain Infrastructure
- Commercial Scale Farming

Pakistan & China

Trade Data (ITC, 2024)

Whey Powder
•Pakistan Imports: USD 15,987k | 9,515 tons
•Pakistan Exports: USD 0 | 0 tons
•China Imports: USD 780 Million | 645,497 tons
•China Exports: USD 149k | 71 tons

-Cheese (including whey cheese)
•Pakistan Imports: USD 1,180k | 373 tons
•Pakistan Exports: USD 146k | 29 tons
•China Imports: USD 361,026k | 75,671 tons
•China Exports: USD 29k | 5 tons

-Butter
•Pakistan Imports: USD 344k | 89 tons
•Pakistan Exports: USD 1,512k | 346 tons
•China Imports: USD 737,431k | 104,980 tons
•China Exports: USD 12,174k | 3,576 tons

-Milk Cream
•Pakistan Imports: USD 34,563k | 12,182 tons
•Pakistan Exports: USD 6,526k | 2,006 tons
•China Imports: USD 2,356,486k | 657,130 tons
•China Exports: USD 72,649k | 24,666 tons

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BUSINESS PROPOSAL

ELC Biotechnology Pvt Ltd for Camel Milk

- Supply whole or skimmed camel milk powder (700-1,000 tons) to GCC countries and China as a subsidiary of Sawani KSA (PIF 2030 initiative).
- Production costs in Pakistan are lower, allowing for competitive pricing. Sawan icurrently imports camel milk powder due to high local production costs.
- Plans to establish a state-of-the-art dairy powder production plant near camel population. This area may also include the slaughterhouse for exporting camel meat to the GCC.

ELC BIOTECHNOLOGY
PRIVATE LIMITED

ELC BIOTECHNOLOGY
PRIVATE LIMITED

info@elcbiotech.com

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THANKS

MINISTRY OF NATIONAL FOOD SECURITY & RESEARCH

We look forward to partnering with you

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Annextures

PAK-CHINA INVEST

Dairy Inputs & Processed Products

PAK-CHINA AGRI INVESTMENT CONFERENCE

Advancing investment, technology transfer, and export growth across the dairy value chain.

Market Scope

Global • China • Pakistan

Focus Areas

Milk Processing • Cattle Farms • Cheese & Butter

JANUARY 2026 • EXECUTIVE BRIEFING

Executive Summary

Market Overview (2025)

Global Market: Valued at ~$1.0–1.24 Trillion with milk production reaching ~965M tons. Growing at 4.8–6.1% CAGR.

China: ~$182B market size; 2nd largest globally. Domestic production ~41M tons with rising farm consolidation.

Pakistan: ~$6.45B retail market; 3rd/4th largest producer (~65M tons). 97% informal supply chain.

Key Segments: Liquid Milk, Milk Powders (WMP/SMP), Cheese, Butter, and Cattle Farming.

Trade Dynamics & Structure

Top Exporters: New Zealand, EU, and USA dominate global dairy trade flows.

Top Importers: China remains the #1 importer (rebounding +13% in Q1 2025), followed by Russia and Saudi Arabia.

Pakistan Structure: Massive volume but low value-add; only 5% formally processed. Heavily reliant on imported genetics/inputs.

Growth Drivers & Challenges

Drivers: Rising middle-class demand in Asia for protein-rich dairy; shift towards UHT and value-added cheese/butter.

Challenges: Cold chain infrastructure gaps in Pakistan; global feed price volatility; stringent quality standards for exports.

Strategic Collaboration Opportunities

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Global Market Overview

Production, Value & Trade Dynamics (2025 Estimates)

Segment	Global Production & Value	Global Exports	Growth
Fluid Milk	~$630.0 Billion	$32.5 Billion	4.5%
Cheese	~$160.0 Billion	$38.2 Billion	5.2%
Butter & Fats	~$85.0 Billion	$16.5 Billion	3.8%

Key Insight: Production Value

Milk production serves as the foundational raw material, with value addition significantly amplified in processed segments. The global market value is heavily weighted towards fluid milk due to massive volume, but profitability margins are higher in cheese and fats.

Key Insight: Trade Intensity

While fluid milk is largely consumed domestically, cheese and butter are intensively traded commodities. The export markets are dominated by the EU, New Zealand, and USA, catering to rising demand in Asia and the Middle East.

Note: Values represent 2025 estimated global revenues and trade flows. "Fluid Milk" category includes fresh and processed liquid milk. Trade values include intra-EU trade. CAGR forecast period: 2025-2030.

Data Sources: OECD-FAO Agricultural Outlook 2025-2034, Statista, World Bank WITS, IMARC Group, Fortune Business Insights.

China Market: Value and Trade

Domestic Scale vs. Strategic Import Reliance (2025 Estimates)

¥ Domestic Market Size

Segment	Value / Vol	YoY
Market Value	$182.1 B	▲ 6.2%
Milk Output	41.2 M Tons	▲ 2.0%
Farm Scale	68% >1k Head	▲ Consolidation

Insight: Rapid modernization has shifted production; 68% of milk now comes from large-scale farms (>1,000 cows), ensuring higher quality and yield stability.

Import / Export Dynamics

Category	Trend (2025)	Major Partners	Status
Total Imports	▲ +13% (Q1)	NZ, EU, Australia	▼ Net Importer
Key Products	High Demand	WMP, Infant Formula	● Critical Gap
Exports	Flat / Low	Regional Asia	● Negligible

TRADE REBOUND

After a slump, imports rebounded strongly (+13%) in Q1 2025, driven by stockpiling and recovery in food service demand.

STRATEGIC GAP

Domestic production falls short of total consumption (approx. 58M tons), creating a structural deficit filled by imports.

Massive Consolidation

The "10,000-cow farm" model is dominant. Smallholders have largely exited. This improves cold chain integrity but increases dependency on imported feed (alfalfa/soy).

Consumption Shifts

Demand is shifting from liquid milk to high-value processed products like cheese, butter, and bakery fats, where domestic processing capacity is still catching up.

Food Security

Government policy prioritizes self-sufficiency in liquid milk (~70% target) while accepting reliance on imported powders and dry dairy ingredients for industry use.

Sources: USDA FAS, China National Bureau of Statistics, Statista Market Forecast 2025, NIQ China Dairy Report.

Pakistan Market: Value and Trade

Production Giant vs. Processing & Infrastructure Gaps (2025 Estimates)

Domestic Market Size

Segment	Value / Vol	YoY
Market Value	$6.45 B	▲ 6.3%
Milk Output	65-72 M Tons	▲ 2.2%
Global Rank	3rd / 4th	● Stable

Critical Gap: Despite massive production volume, only ~5% enters the formal processed market (UHT/Pasteurized), leaving 95% in the informal "gawala" system.

Import / Export Dynamics

Category	Status	Key Products	Trend
Processed Dairy	▼ Net Importer	Cheese, Butter, Whey	▲ Rising Deficit
Inputs	High Reliance	Genetics, Pharma, Equip	● Critical Need
Exports	Limited	Some UHT Milk to region	● Minimal

IMPORT RELIANCE

Heavy reliance on imported value-added products (cheese, butter) due to lack of domestic processing quality and cold chain infrastructure.

EXPORT POTENTIAL

Significant potential to export to China and Middle East if SPS (Sanitary and Phytosanitary) standards and Foot & Mouth Disease control improve.

Informal Dominance

97% of milk flows through informal channels. Lack of chillers at farm gate causes high spoilage (~15-20%) and quality loss, preventing value addition.

Infrastructure Challenge

Critical shortage of cold chain logistics and modern processing facilities. Investment is urgently needed in village chilling centers and refrigerated transport.

Yield Gap

Low milk yield per animal compared to global standards. Opportunity for genetic improvement (semen imports) and better fodder management technology.

Sources: IFCN Dairy Report 2025, Statista Pakistan Dairy Forecast, Economic Survey of Pakistan, USDA FAS.

Top 5 Dairy Players by Market

Leading Companies: Global Giants, China Market Leaders, and Pakistan Processors

Global Giants

1. **Lactalis**
   France • $31.9B
2. **Nestlé**
   Switzerland • $23.9B
3. **Dairy Farmers of America**
   USA • Co-op
4. **Danone**
   France • Fresh Dairy
5. **Yili Group**
   China • Asian Leader

China Leaders

1. **Yili Group**
   Inner Mongolia • Market Leader
2. **Mengniu Dairy**
   Inner Mongolia • COFCO backed
3. **Bright Dairy**
   Shanghai • Fresh Milk Focus
4. **Feihe International**
   Heilongjiang • Infant Formula
5. **Junlebao Dairy**
   Hebei • Yogurt & Milk

Pakistan Processors

1. **Nestlé Pakistan**
   Lahore • Industry Leader
2. **FrieslandCampina Engro**
   Karachi • Olper's Brand
3. **Haleeb Foods**
   Lahore • Pioneer Brand
4. **Fauji Foods**
   Lahore • Nurpur Brand
5. **Shakarganj Food**
   Lahore • Good Milk Brand

Sources: Rabobank Global Dairy Top 20 (2025), Company Annual Reports 2024, PACRA Dairy Sector Study.

Note: Rankings based on latest available annual revenue data. Currency converted to USD for comparison.

Top 5 Global Dairy Countries

Leading Nations in Production, Exports, and Imports (2024-2025 Estimates)

Top Producers

1. **India** — 22% Global Share — 227M Tons
2. **European Union** — Major Key Player — 150M Tons
3. **United States** — High Yield Focus — 102M Tons
4. **Pakistan** — Fast Growing Market — 65M Tons
5. **China** — Consolidating Farms — 41M Tons

Top Exporters

1. **New Zealand** — Global Dairy Powerhouse
2. **European Union** — Value-Added Products
3. **United States** — Cheese & Powders
4. **Australia** — Asian Market Focus
5. **Argentina** — South American Hub

Top Importers

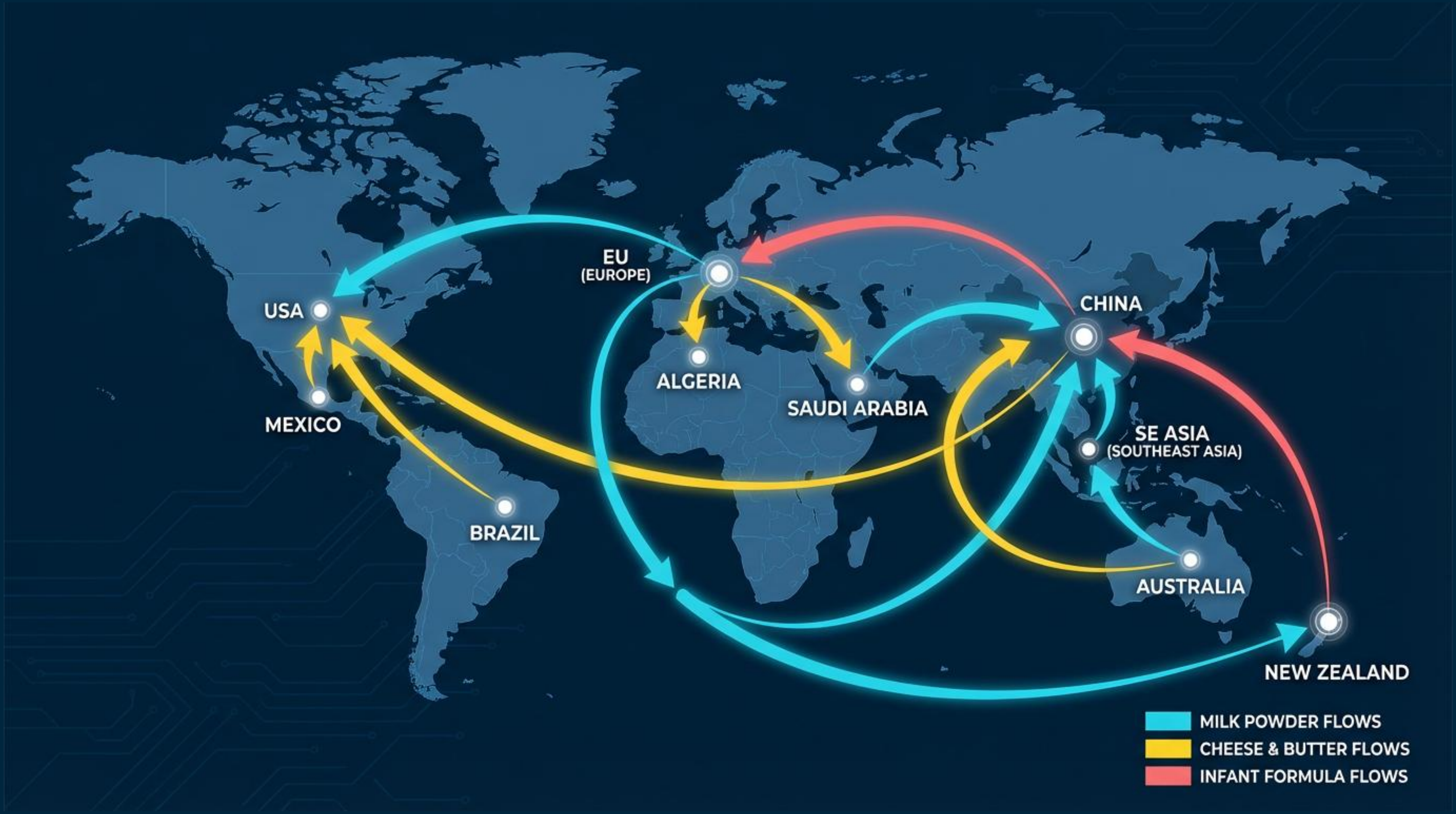
1. **China** — WMP & Infant Formula
2. **Russia** — Cheese & Butter
3. **Saudi Arabia** — Dairy Ingredients
4. **Algeria** — Milk Powders
5. **Mexico** — Cheese & SMP

Sources: USDA Foreign Agricultural Service, FAOSTAT, CLAL Dairy, International Dairy Federation (IDF), Local Ministry Data (2024-2025).

Note: Production figures represent total milk output. Trade rankings based on value and volume aggregates.

Global Dairy Trade Flow Visualization

Major Dairy Commodity Routes: Exporters to Importers (2024-2025 Estimates)



$65.0 Billion
GLOBAL EXPORT VALUE

$13.8 Billion
CHINA IMPORT VALUE

Sources: FAOSTAT (2024), USDA Foreign Agricultural Service, CLAL, Global Dairy Trade (GDT), World Bank WITS.

Trade Analysis by Product Category

Global Flow Dynamics: Key Exporters & Importers (2024-2025)

Milk Powders (WMP/SMP)

TOP EXPORTERS

- **New Zealand** — Dominant in WMP
- **European Union** — Leading SMP supplier
- **United States** — Growing SMP market share

MAJOR IMPORTERS

- **China** — #1 Buyer (WMP & SMP)
- **Algeria** — Strategic WMP/SMP imports
- **Mexico** — Major SMP destination

Cheese

TOP EXPORTERS

- **European Union** — Premium & Specialty
- **United States** — Cheddar & Industrial
- **New Zealand** — Commodity Cheese

MAJOR IMPORTERS

- **United Kingdom** — Cross-channel trade
- **Japan** — High-value imports
- **China** — Fastest growing segment

Butter / AMF

TOP EXPORTERS

- **New Zealand** — Global price setter
- **European Union** — High domestic use
- **India** — Top Producer (Low Export)

MAJOR IMPORTERS

- **China** — Bakery sector demand
- **Middle East** — Saudi Arabia & UAE
- **South Asia** — Supply gap filling

Sources: USDA Foreign Agricultural Service (2024), Global Dairy Trade (GDT), Eurostat, CLAL, Trade Map.

Note: AMF = Anhydrous Milk Fat. WMP/SMP = Whole/Skim Milk Powder. Arrows indicate trade direction.

Market Insights & Strategic Outlook

Trends, Risks, and Pak-China Collaboration Opportunities (2025-2026)

Key Market Trends

Farm Consolidation: China's shift toward mega-farms (>1,000 heads) is stabilizing quality and supply, setting a model for Pakistan's modernization.

Formalization Push: Regulatory drive in Pakistan to shift from loose milk (97% of market) to packaged/processed milk ensures hygiene and value addition.

Premiumization: Rising middle-class demand in Asia for cheese, butter, and functional dairy products is driving import value growth.

Risks & Challenges

Price Volatility: Global WMP/SMP prices remain sensitive to energy costs and feed availability, impacting import bills.

Cold Chain Gaps: Pakistan faces ~20% milk wastage due to infrastructure deficits; investment in chilling centers is critical.

Quality Compliance: Meeting China's rigorous SPS (Sanitary and Phytosanitary) standards is the primary hurdle for potential exports.

Pak-China Collaboration

Strategic partnership opportunities leveraging Pakistan's production volume and China's technology and market demand.

TECHNOLOGY TRANSFER & PROCESSING

Joint Ventures (JVs) for modern UHT and milk powder plants to utilize surplus milk.

Investment in cold chain logistics and village-level chilling centers to reduce wastage.

GENETICS & INPUT IMPROVEMENT

Introduction of high-yield cattle breeds and embryo transfer technology from China.

Development of high-nutrition fodder and feed mills to improve milk yield per animal.

Sources: USDA Foreign Agricultural Service (2025), Rabobank Global Dairy Quarterly, Pakistan Economic Survey 2024, China Dairy Industry Association, Expert Interviews.