

Commodity Price Volatility and Risk Management Strategies

Saudi Agricultural and Livestock Investment Company



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Market Overview

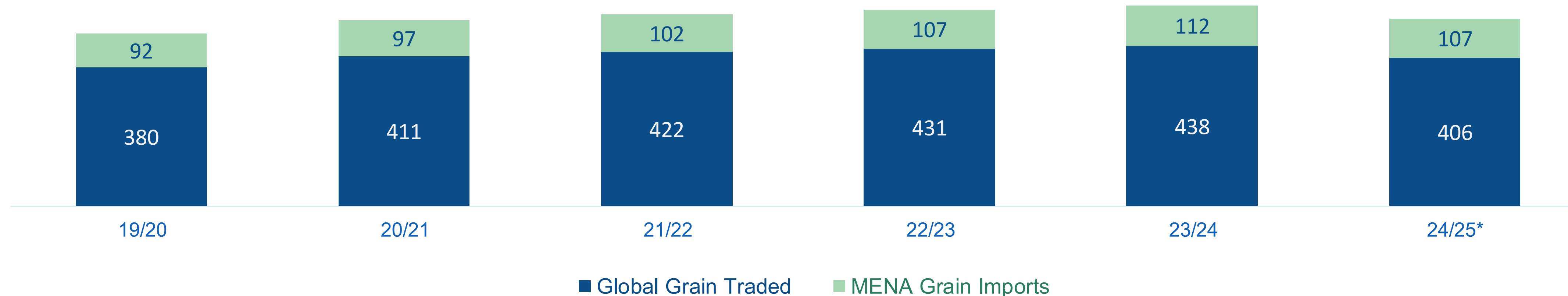
- Global and Regional Agri-commodities Market.
- Key Factors influencing Price Fluctuations.



Global and Regional Agri-commodities Market

Key sectors in global and regional Agri-commodities Market - Grains

Grains traded globally versus MENA imported volumes - MMT



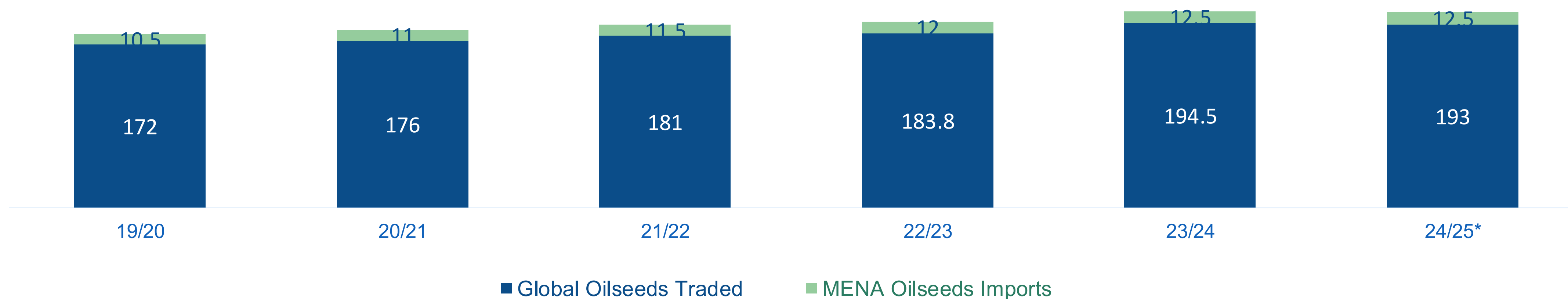
- 24/25 Traded volumes globally forecasted to decline following geopolitical tension.
- MENA countries adopt different strategies to mitigate risk associated with price volatility. Egypt expand its local procurement from farmers while Saudi Arabia continues investments in farmlands to secure supply chains.
- Genetic development use in seeds witness a growth especially for rust disease-resistant wheat seed and drought-tolerant corn seeds.



Global and Regional Agri-commodities Market

Key sectors in global and regional Agri-commodities Market - Oilseeds

Oilseeds traded globally versus MENA imported volumes - MMT



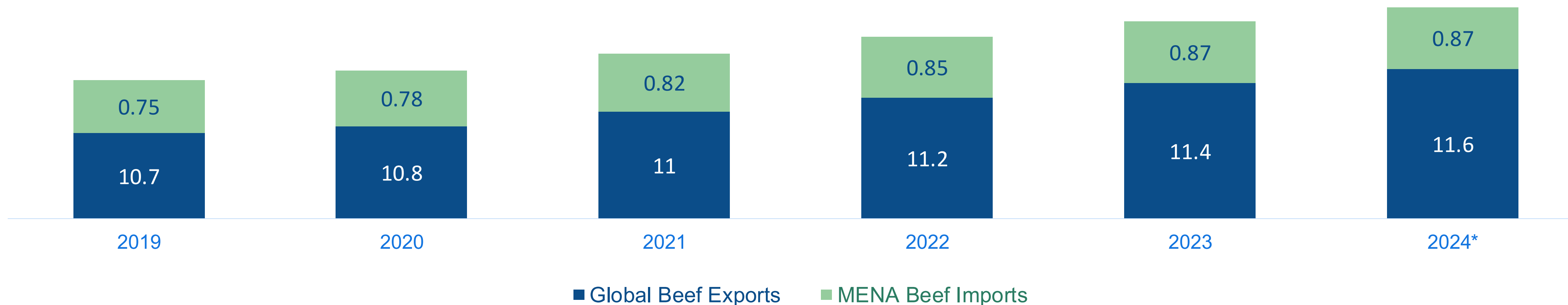
- Dominated by soybean with slight stabilization in rapeseed and sunflower due to shift in consumption and production pattern.
- Emerging Producers in South America and Africa: Countries like Paraguay, Argentina (soybeans), and Sudan (sesame and sunflower) are expanding oilseed cultivation



Global and Regional Agri-commodities Market

Key sectors in global and regional Agri-commodities Market - Beef

Global beef exports versus MENA imported volumes - MMT



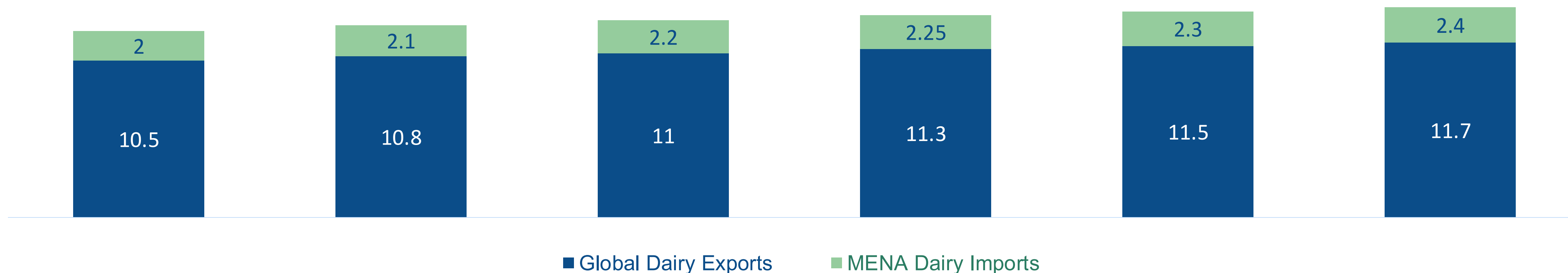
- Global beef market was valued at ~USD 460 Bn with United States dominating the market holding ~ 39% share driven by high consumer demand.
- Brazil, Australia, and India count for the major exporters particularly to Korea, Japan, and South Korea.



Global and Regional Agri-commodities Market

Key sectors in global and regional Agri-commodities Market - Dairy

Global dairy exports versus MENA imported volumes - MMT



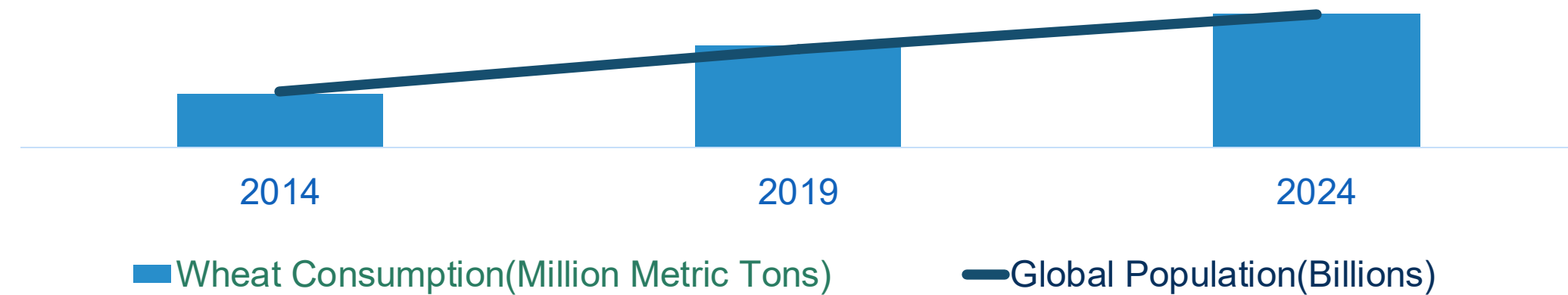
- MENA imports represent ~ 20% of global trade driven by milk powder catering for both consumer and industrial needs.
- Rising incomes and urbanization in markets like Indonesia, Vietnam, and the Philippines are boosting dairy demand and imports.
- China's dairy imports are plateauing due to growing local output, affecting global trade growth slightly.
- Exporters (e.g., Fonterra, Arla) are shifting to higher-value dairy products to offset cost and margin pressures.

Key Factors Influencing Price Fluctuations

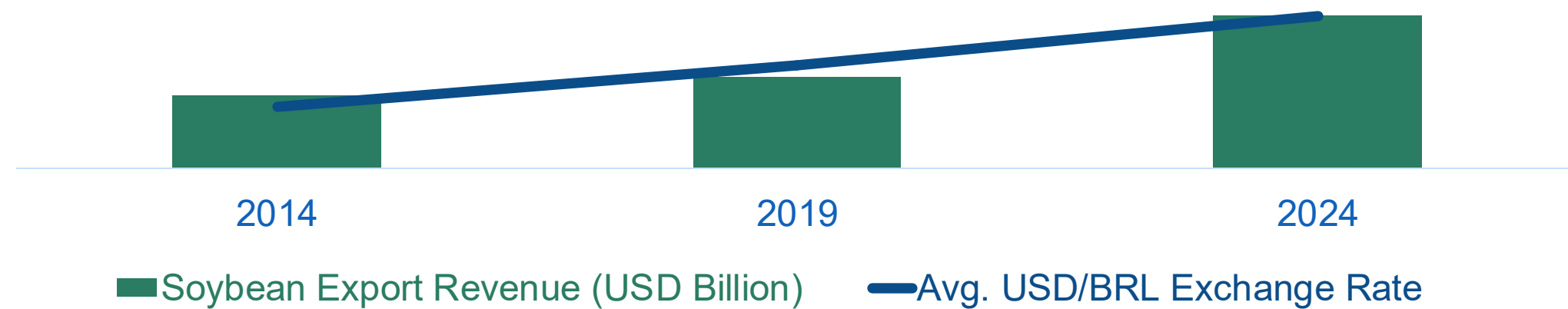
Factors impacting commodities pricing



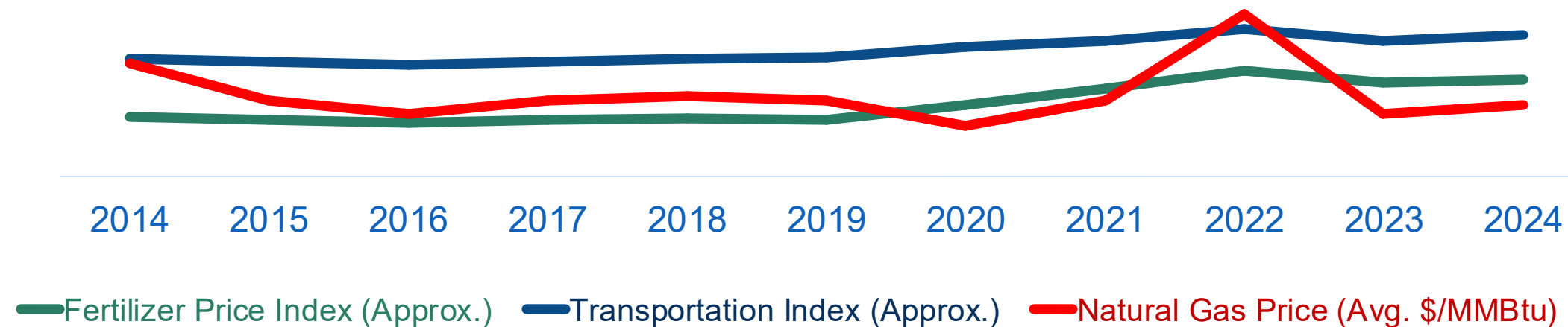
Demand Influence – Wheat consumption to population growth



Currency Rate – USD/BRL impact on soybean export revenues



Energy Prices – Natural gas prices impact on fertilizers & trans. indexes



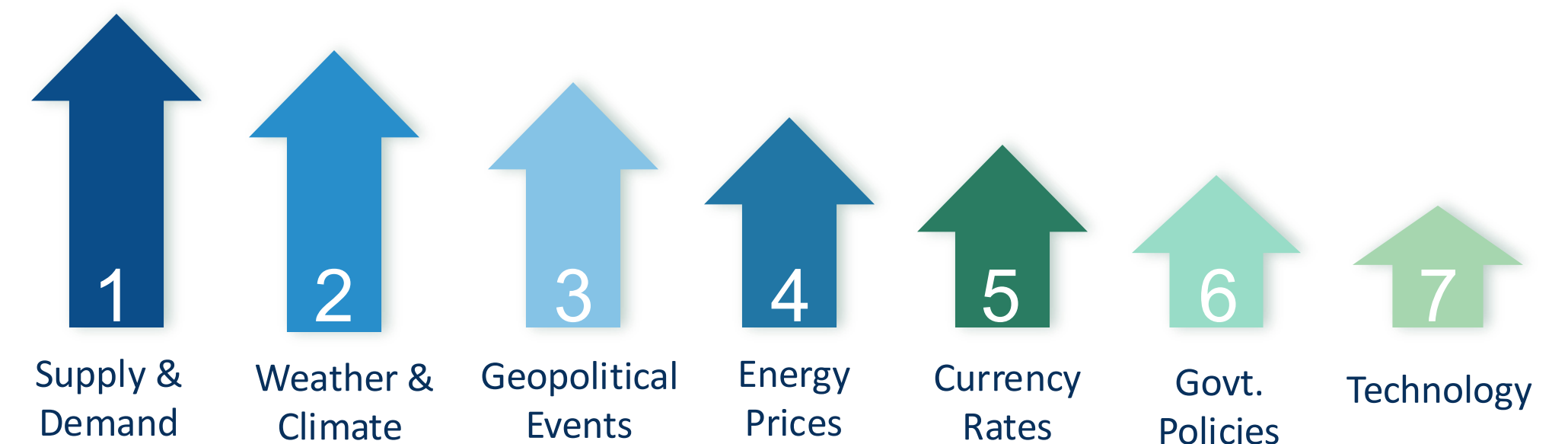
Weather & Climate

| Year | Weather Condition | Soybean | Approx. Price Change |
|------|---------------------------------------------|--------------|----------------------|
| 2022 | Drought (cloud, lightning, snowflake icons) | Soybean icon | ~25% ↑ |

Drought in Argentine and Brazil impacted Soybean prices globally averaged 25%

Government Policies

- Export bans, subsidies, tariffs, or price controls influence production and trade.
- Cron prices peaked at ~USD 330/Ton during 2022 but began to fall in 2023 ~USD 250/Ton as United States supply entered global market due to US subsidies on agricultural commodities.






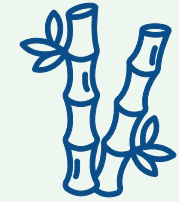





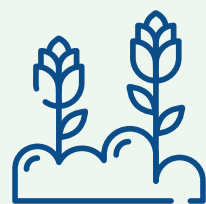
Impact of Commodity Price Volatility on Agri-Financing

- Increased Credit Risk for Lenders.
- Higher Cost of Capital.



Increased Credit Risk for Lenders

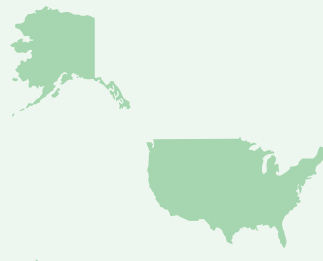







Higer premiums due to revenues uncertainty

| Country | Commodity | Volatility Issues | Credit Risk Outcome | Lending Response |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|------------------------------------------------|
| India  | Sugarcane  | Government-set price delays and fluctuations | Farmers can't repay seasonal input loans | Co-op banks tighten lending criteria |
| Brazil  | Corn  | Anticipated weather and trade disruption risks | Increased perceived borrower risk | Ag banks adjust interest rates annually |
| Ghana  | Cocoa  | Price swings due to global oversupply/speculation | Irregular cash flows; income unpredictability | Banks hesitant to lend; informal lending grows |
| East Africa Kenya, Uganda  | Mixed Crops  | Climate and price unpredictability | MFI clients struggle to repay during bad seasons | MFI's charge risk-adjusted higher interest |

Higher Cost of Capital

Agri-Business examples due to price volatility



| Country/Region | Commodity/ Context | Volatility Management | Cost Impact | Who Bears the Cost |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------|-------------------------------------|
| USA  | Corn/ Soybean  | Future contracts via CME | Broker fees, margin calls, basis risk | Farmers and large producers |
| India  | General Agri-loans – (NABARD, banks)  | Risk adjusted loan pricing | Higher risk rate – 2%-3% for volatile sectors | Small holders and Agri-SME's |
| New Zealand  | Dairy (Fonterra)  | Fixed price contract, price insurance | Premium and admin cost for protection tools | Co-ops and individual dairy farmers |
| Latin America  | Agri-business corporate bonds  | Exposure to global prices | Higher yields demanded by investors | Medium to large Agri-enterprises |



Risk Management Strategies

- Risk Source Analysis.
- Sector-Specific Stakeholder Analysis.



Risk Source Analysis

Key Evolution in Agri-Finance Risk Management

| Risk Type | Source of Risk | Example | Suggested Mitigation Strategy |
|-------------------|-----------------------------------------------|----------------------------------|-------------------------------------------------------------------|
| Production Risk | Drought, pests, disease, climate variability | Crop failure due to drought | Irrigation systems, drought-resistant seeds, crop diversification |
| Market/Price Risk | Price volatility, demand shifts | Fall in coffee prices | Futures contracts, offtake agreements |
| Financial Risk | Debt default, cash flow issues, credit access | Farmer can't repay seasonal loan | Blended finance, flexible credit terms |
| Operational Risk | Supply chain delays | Broken cold storage system | Preventive maintenance, contingency planning |

Historical Events – Agri-finance Risk Management



Sector-Specific Stakeholder Analysis

Real-world examples on grain and dairy sectors



Grains Sector

| Stakeholder | Key Risk | Examples | Response |
|---------------------|-------------------------------------------------|--------------------------------------------------|---------------------------------------------------------|
| Smallholder Farmers | Price crashes, drought, rising fertilizer costs | Indian wheat during export bans | Shift to pulses or oilseeds, store grains post-harvest. |
| Govt Agencies | Food security, inflation, political pressure | Egypt wheat procurement program – expand locally | Subsidies, buffer stocks, input schemes |
| Exporters | Trade bans, logistics issues | Russian grain exporters hit by sanctions | Hedging, market diversification |



Dairy Sector

| Stakeholder | Key Risk | Examples | Response |
|---------------|-----------------------------------------------|-------------------------------------------------------|------------------------------------------------|
| Dairy Farmers | Input inflation (feed, fuel), unstable demand | New Zealand dairy price drop post-COVID | Co-op participation, value-added milk products |
| Processors | Energy costs, packaging shortages | Amul faced packaging disruptions | Shift to bulk formats, energy-efficient tech |
| Consumers | Rising retail prices | EU butter price spikes affect household dairy choices | Move to local brands, reduce consumption |



Market Opportunities

- Current Market Opportunities (Grain, Livestock, Sugar).
- Current Market Opportunities (Animal Feed Ingredients).

Current Market Opportunities

Grains, Livestock, Sugar



| | Grains | Livestock | Sugar |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Market Opportunity | <p>Invest in grain storage infrastructure</p> <p>Structured contracts with farmers.</p> <p>Export-oriented investments.</p> | <p>Vertical integration: farms and processing plants.</p> <p>Premium/organic meat markets.</p> <p>Meat protein demand in Asia plus Africa growing.</p> | <p>Upstream investments (plantations, mills in Brazil, India).</p> <p>Commodity trading desks (taking adv. of price swings).</p> |
| Associated Risk | <p>War risks (Black Sea region)</p> <p>Policy changes (tariffs, ESG regulations).</p> | <p>Disease outbreaks (avian flu, swine fever).</p> <p>Feed cost volatility (grains for feed).</p> | <p>Weather shocks (El Niño)</p> <p>Energy market linkages (ethanol vs. oil).</p> |
| Market Attractiveness | <p>Steady Demand and global trade potential</p> | <p>Rising global protein consumption.</p> <p>High-margin niche markets (organic, grass-fed).</p> | <p>Price volatility provides arbitrage chances for traders</p> |

Current Market Opportunities

Animal Feed Ingredients



Alfalfa Investment Opportunities

Export Grade Alfalfa Production

Invest in farms producing high-protein, dehydrated alfalfa for export to China, UAE, Japan, others.



Alfalfa Seed Production and Genetics
Develop drought-tolerant, salt-tolerant alfalfa seeds.

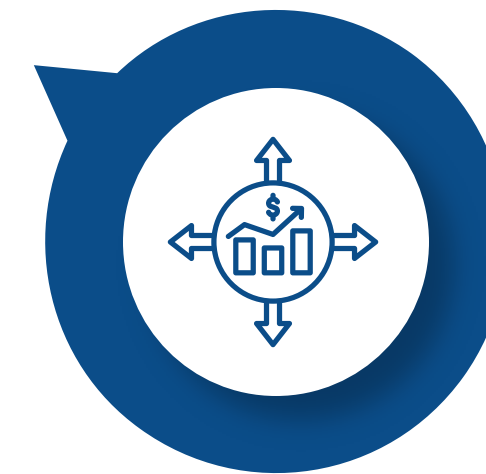


Irrigated Farmland Acquisition

Target farmland with secure water rights (especially in U.S. Northwest, Argentina, Australia)



Domestic Feed Market Expansion
Target dairy-heavy regions where alfalfa demand is less export-exposed (e.g., Midwest US, EU markets).



Dehydration and Baling Facilities

Invest in processing plants that dehydrate and compress alfalfa for export



Carbon Credit and Regenerative Alfalfa

Investing in regenerative farming practices tied to carbon markets.





Appendix

- Glossary.
- References.



Glossary

| Term | Definition |
|-----------------|-----------------------------------------------------------------------------------------------------|
| Grains | Wheat, Corn (Maize), Barley, Sorghum |
| Oilseed | Soybean, Sunflower seeds, Sesame, rapeseed |
| MFI | Micro Finance Institutions as SKS Microfinance in India, and KIVA institutions which works globally |
| Co – Op Bank | Cooperative financial institutions owned and operated by their members as Rabobank. |
| NABARD | National Bank for Agriculture and Rural Development |
| CME | Chicago Mercantile Exchange |
| SME's | Small and Medium sized Enterprises |
| Amul | Anand Milk Union Limited |
| ESG Regulations | Environmental, Social and Governance regulations |



References

| Source | Relevant Insights |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. USDA Foreign Agricultural Service (FAS) | Annual reports on alfalfa trade, especially exports from the U.S. to China, UAE, and Saudi Arabia. https://www.fas.usda.gov/ |
| 2. FAO (Food and Agriculture Organization) | Reports on forage crop demand and global livestock trends; supports the role of alfalfa in feed supply. https://www.fao.org |
| 3. UN Comtrade Database | Global trade volumes and values of alfalfa exports/imports by country. https://comtrade.un.org |
| 4. Trade Map (ITC) | Detailed country-level alfalfa trade statistics (HS Code: 1214) https://www.trademap.org |
| 5. Al Dahra Agriculture | Company case studies on alfalfa production and exports from UAE, Sudan, and U.S https://www.aldahra.com |
| 6. World Bank – Climate-Smart Agriculture Profiles | Discusses water-efficient and resilient forage crops in arid regions, including alfalfa. |
| 7. Rabobank, and Agri Investor Reports | Market intelligence on Agri-investment trends, including forage crops and feed demand. |



Thank You

Saudi Agricultural and Livestock Investment Company