Milk localization in Nigeria for improved food security and nutrition, better rural livelihoods, and national GDP growth.

Gaps and solutions for financing and investments.

About

This workshop is hosted by sùúrù on behalf of Arla, Danone and FrieslandCampina.

sùúrù is an advisory and research company, think tank and network, that seeks emerging market returns and impact for institutional investors in mature economies. Institutional investors in mature markets need higher returns. Entrepreneurs in emerging markets need investment and partnerships to create value at scale. sùúrù seeks to connect these worlds by improving mutual understanding, removing roadblocks, and mitigating risks.

sùúrù, the Yoruba word for patience, recognizes that impact investing can simultaneously solve challenges in mature and emerging economies.

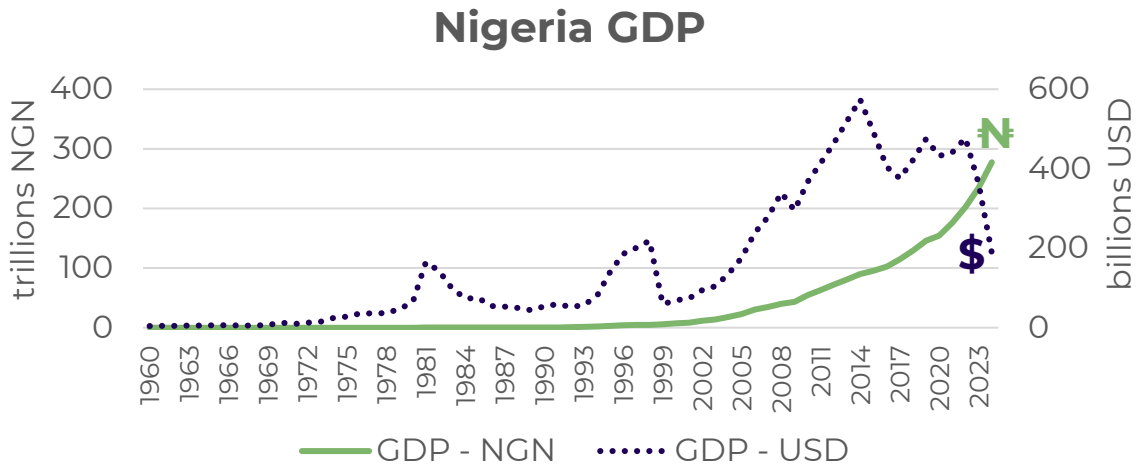
Introducing the challenge

Milk localization in Nigeria.

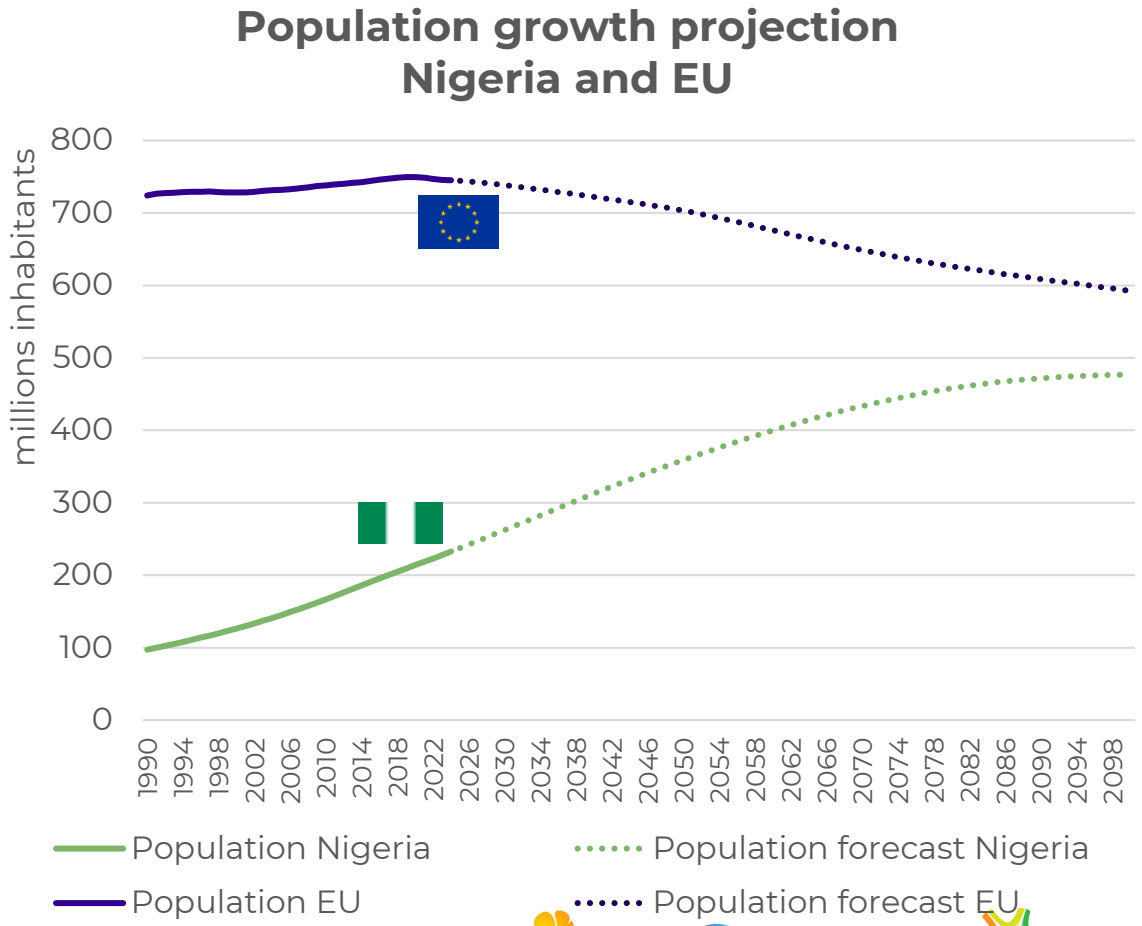
Population and economy in Nigeria

Nigeria has the largest population in Africa, and its GDP consistently ranks in the top five economies on the continent. Forecasts show significant projected growth.

- Nigeria with has over 230 million inhabitants in 2025, and is the largest country in Africa.
- While EU population decreases in size, Nigeria's population is expected to double by 2080.
- Nigeria is consistently in the top 5 economies in Africa. While GDP in local currency terms shows steady growth, the USD equivalent GDP value is sensitive to exchange rate volatility.



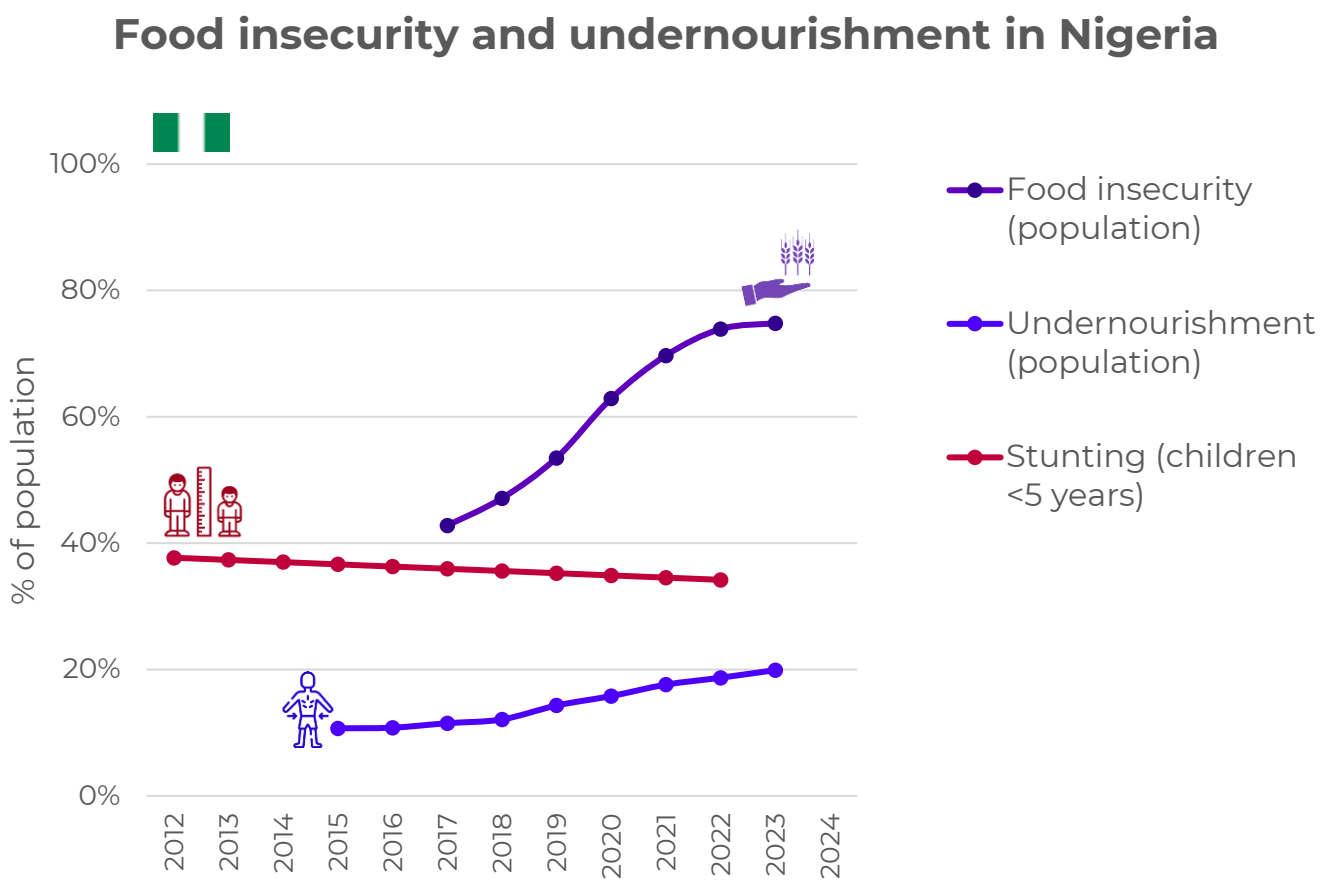
Source: World Bank (2025)



Source: UN (2024)

Nutrition and health

Food insecurity is on the rise, with 75% of the population currently food insecure. One third of children under five are stunted, signalling protein deficiency.

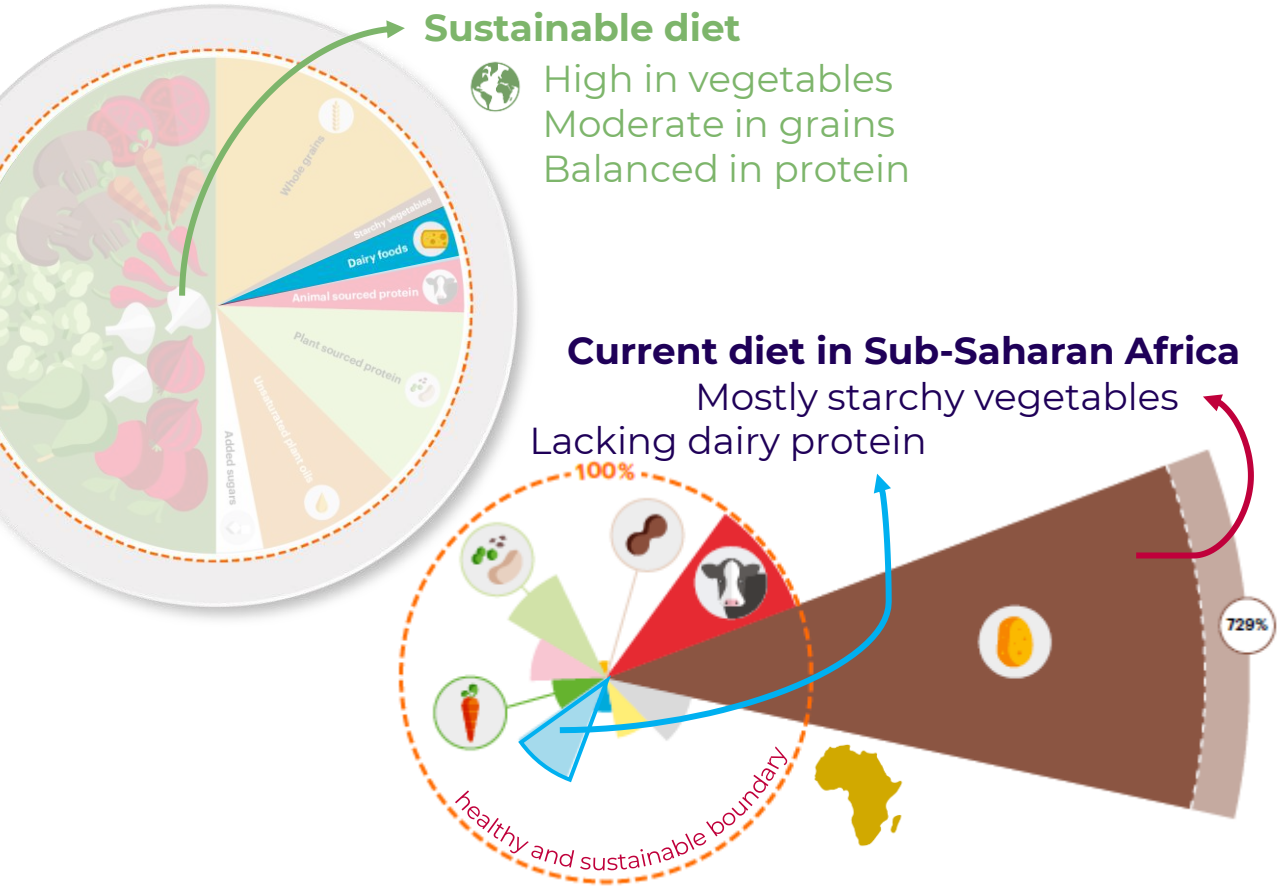


- The prevalence of moderate to severe food insecurity in the population is currently 74.8% and has increased significantly in the last decade.
- Almost twenty percent of the population is undernourished, and 1 in 3 children under five are too short for their age.
- Indicators signal a protein deficiency, alongside a general shortage of calories, in both children and adults.

Source: FAO (2024), GAIN (2025)

Sustainable diets in Nigeria

Combining human health and planetary sustainability targets, a daily intake of 250g dairy is recommended. Essential nutrition is currently lacking.



Source: EAT-Lancet (2025), sùúrù (2025)

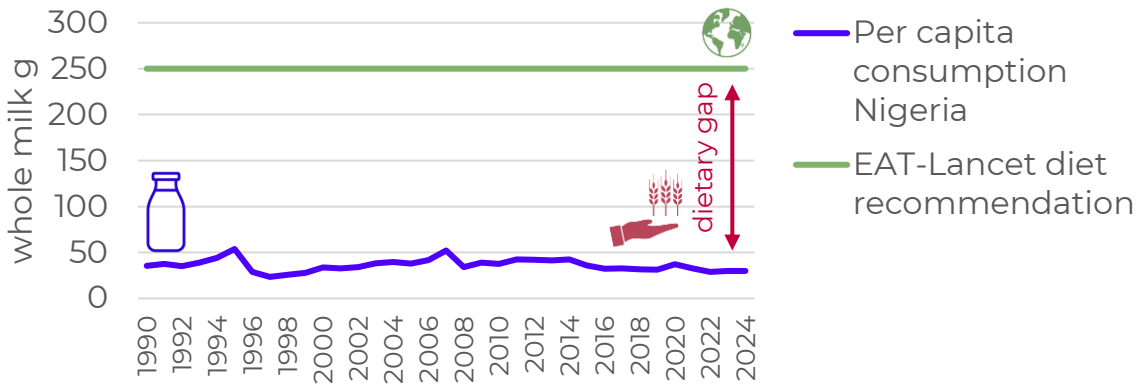
- The EAT-Lancet Commission on Food, Planet and Health, has developed diet recommendations that combine human health and planetary sustainability targets.
- The Planetary Health Diet, in addition to inclusion of vegetables and grains, **recommends a daily intake of 250g dairy** (whole milk equivalent), equal to **6%** of total daily caloric intake. **This is equivalent to one large glass of milk daily.**
- Tubers, like yams and cassava are a very large part of current diets in Africa, and with this heavy reliance, essential nutrition from other food groups is lacking.

Dairy consumption in Nigeria

Dairy consumption in Nigeria is among the lowest in the world with 8-10 litres per person per year. It is far below healthy diet requirement of 90 litres per capita.

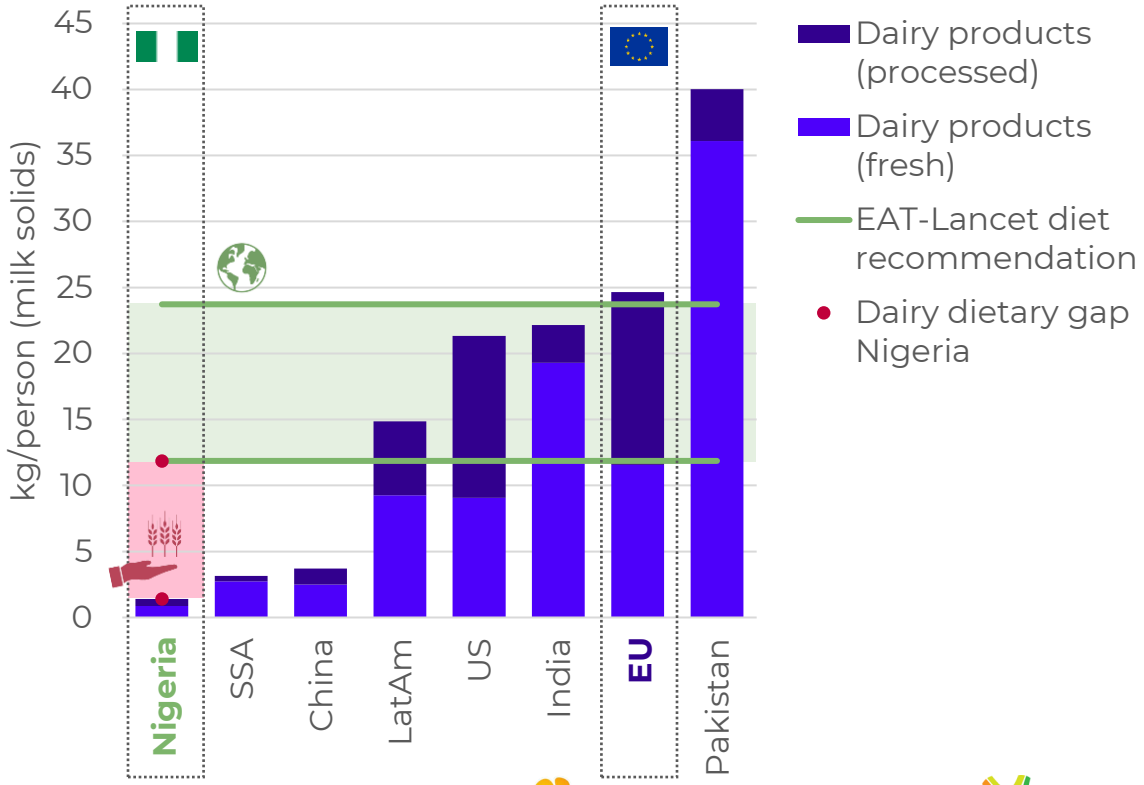
- Dairy consumption in Nigeria is 6-10 litres per person per year (equivalent to 1.4kg of milk solids). This is among the lowest in the world, and there is no real growth trend since the 1990s.
- Recommended healthy and sustainable diet includes 90-180 litres of milk per person per year (250g per day).

Consumption of dairy products per person per day in Nigeria



Source: OECD, FAO (2024), EAT-Lancet (2025), sùúrù (2025)

Per capita consumption of fresh and processed dairy products by region



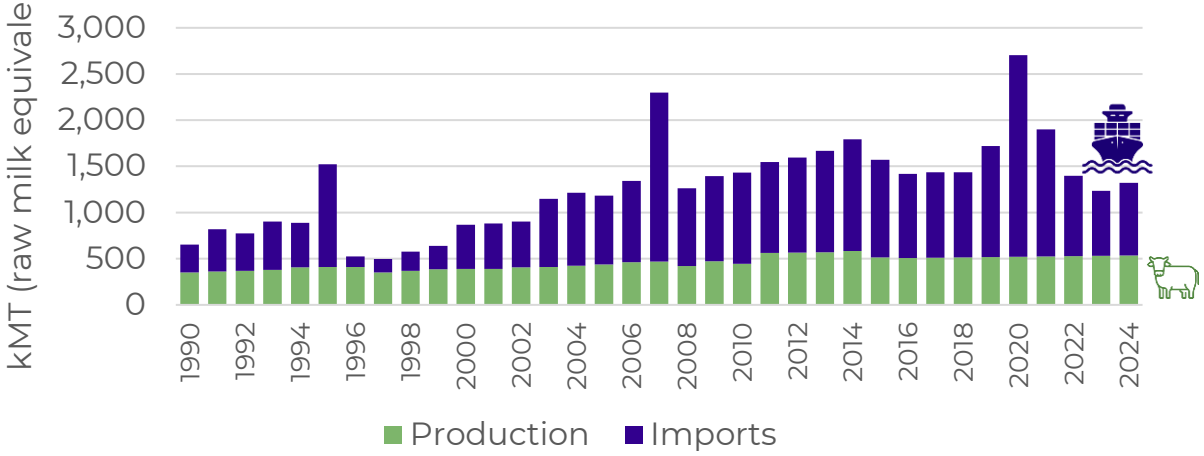
Source: OECD, FAO (2024), EAT-Lancet (2025), sùúrù (2025)

Dairy production in Nigeria

Local production of dairy is insufficient, with yield per animal among the lowest globally. To meet demand, Nigeria currently imports over half of its dairy.

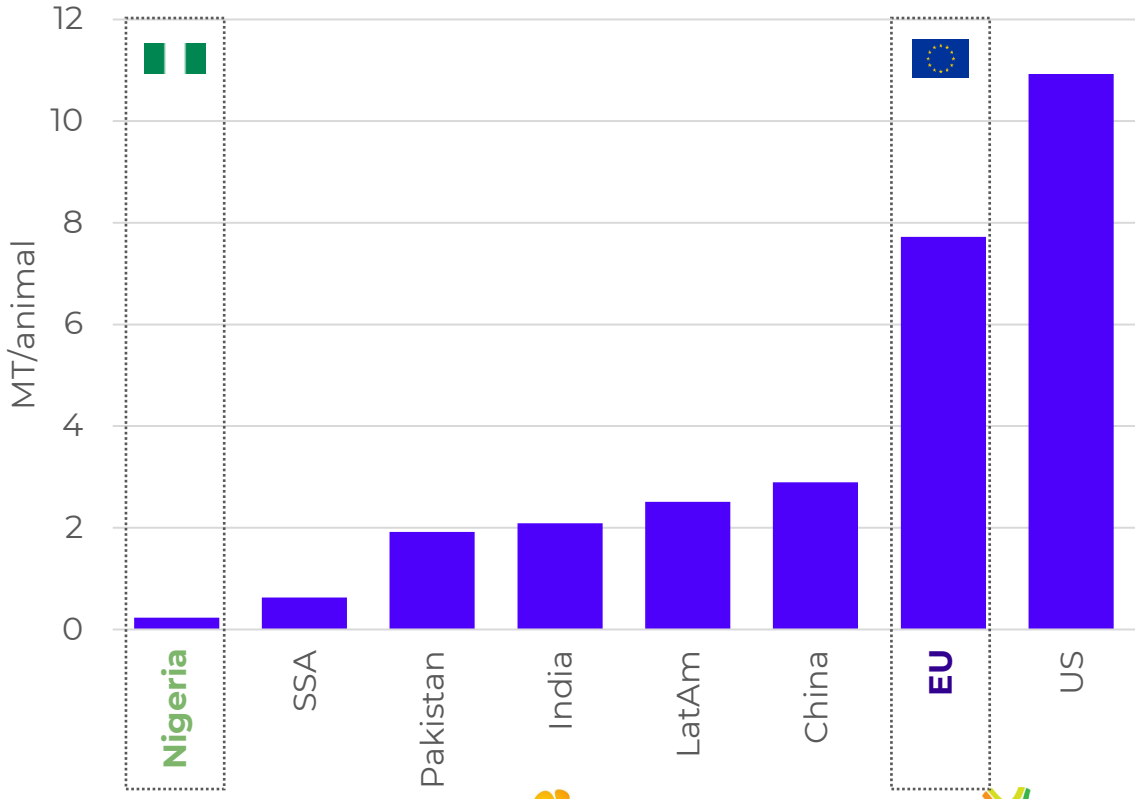
- Nigerian production of raw milk is estimated at ~500 kMT annually, with an additional ~700 kMT annual imports. Most of the imports are milk powder.
- Yield per cow is among the lowest globally, estimated at 1-3 litres per cow per day.

Production and imports of dairy in Nigeria



Source: OECD (2024)

Dairy productivity in yield per animal by region



Source: OECD, FAO (2024)

Summary: introducing the challenge

When local diary production can be increased, this is an opportunity for improved food security and nutrition.

- Nigeria has the largest population in Africa, and its GDP consistently ranks in the top five economies on the continent. Forecasts show significant projected growth.
- Food insecurity is on the rise, with 75% of the population currently food insecure. One third of children under five are stunted, signalling protein deficiency.
- Combining human health and planetary sustainability targets, a daily intake of 250g dairy is recommended. Essential nutrition is currently lacking.
- Dairy consumption in Nigeria is among the lowest in the world with 8-10 litres per person per year. It is far below healthy diet requirement of 90 litres per capita.
- Local production of dairy is insufficient, with yield per animal among the lowest globally. To meet demand, Nigeria currently imports over half of its dairy.

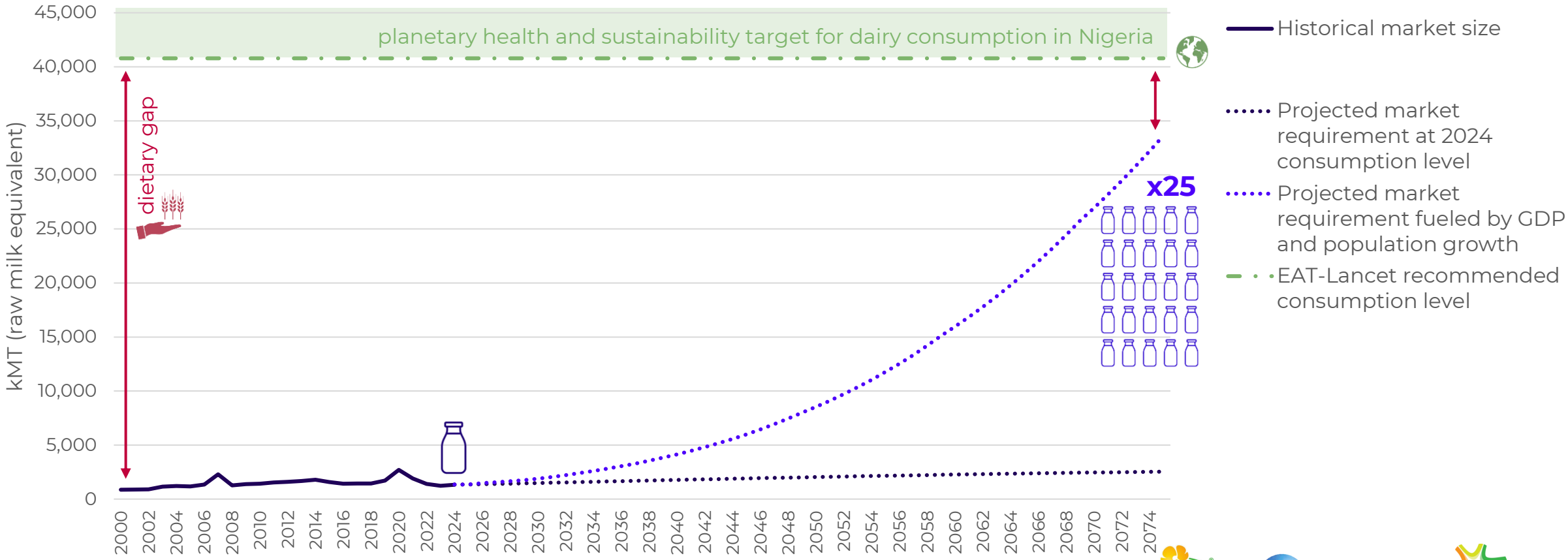
Sizing the investment opportunity

Milk localization in Nigeria.

Grow the market to meet nutritional gap

Assuming per capita consumption could grow at the pace of GDP growth, supply needs to grow exponentially, yet it would take >50 years to achieve the diet target.

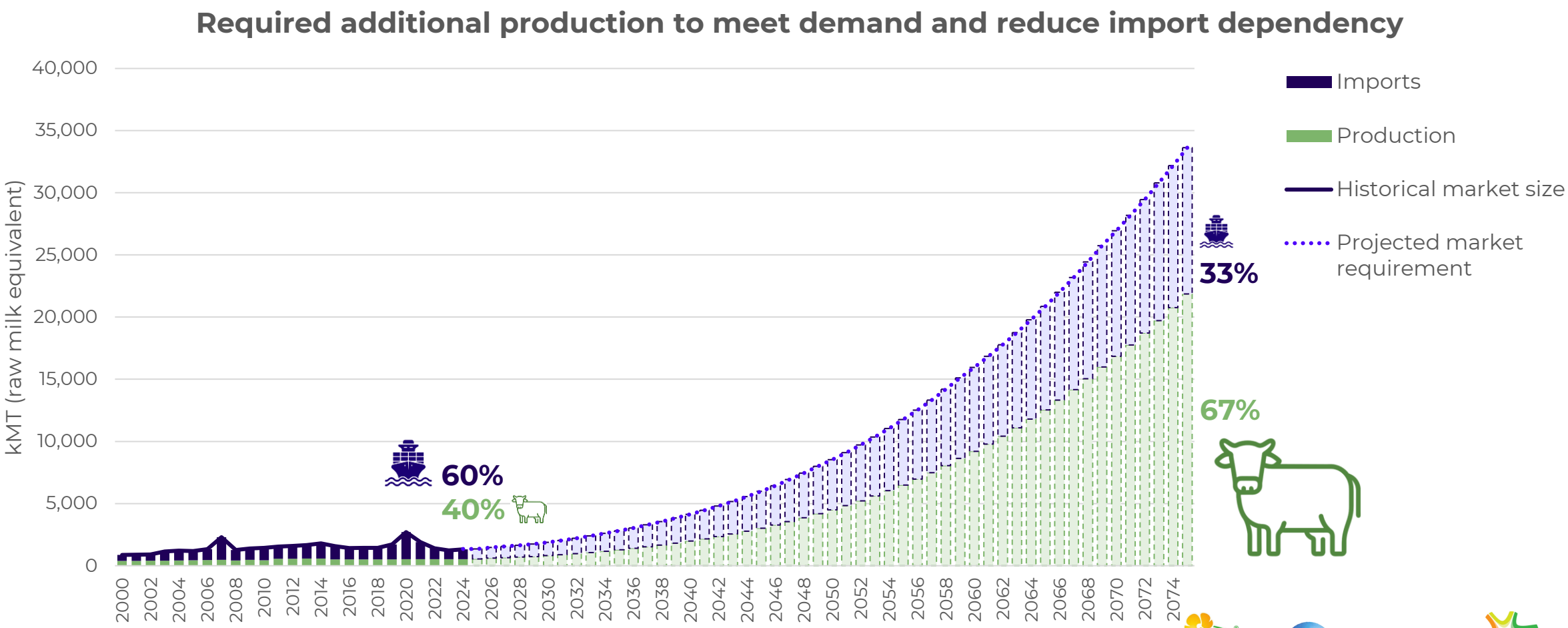
Projected dairy market size in Nigeria based on GDP growth and nutrition targets



Source: OECD (2024), UN (2025), Goldman Sachs (2022), EAT-Lancet (2025), sùúrù (2025)

Supply growth requirements

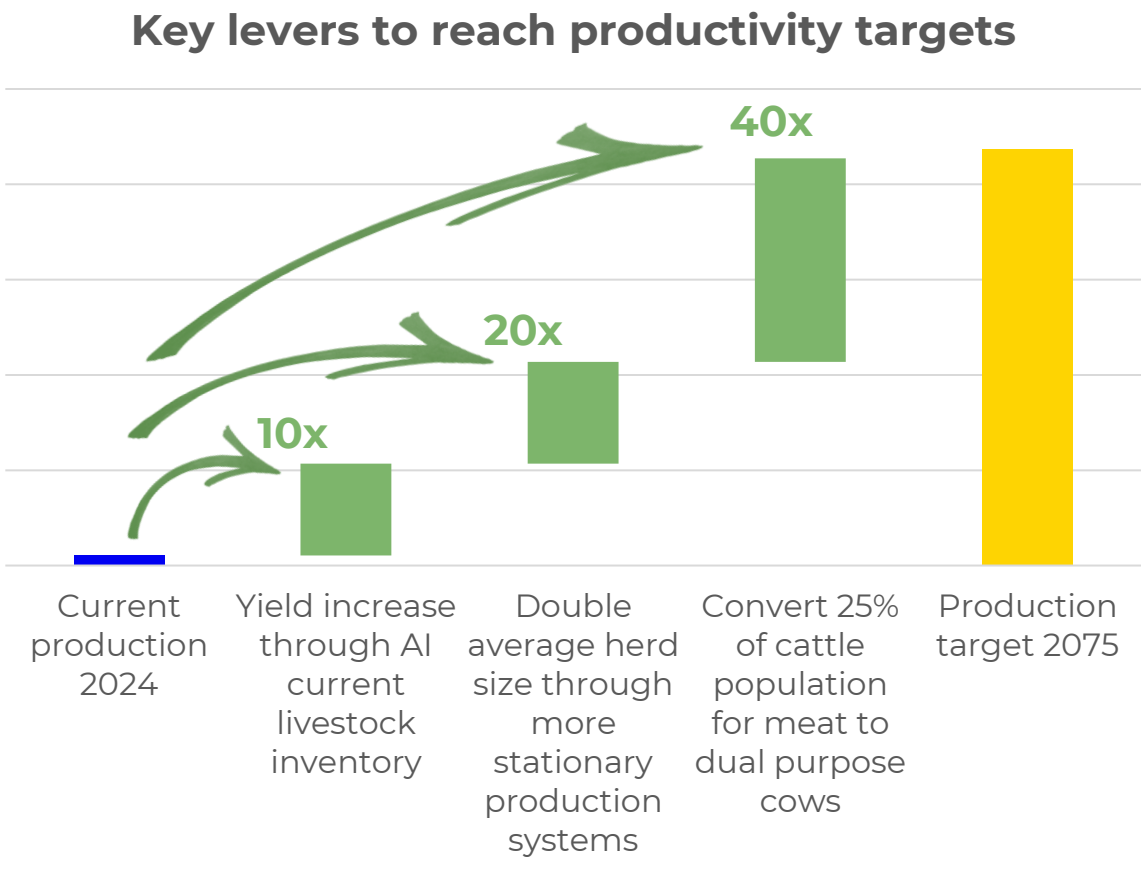
To secure sufficient supply to meet consumption targets, while reducing import dependency, production needs to grow 8% annually for the next 50 years.



Production growth and productivity

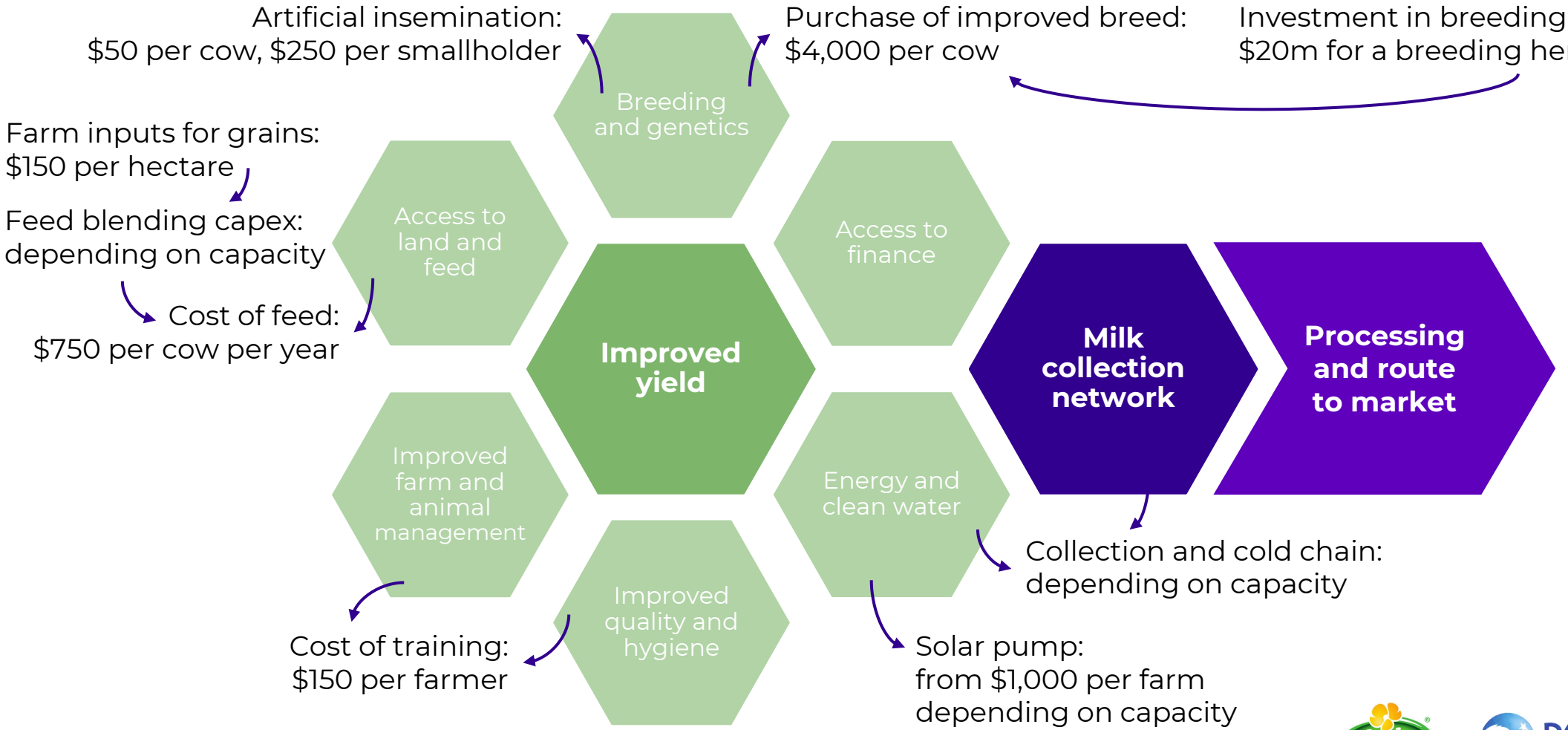
Production growth can be realized with increased yield for dairy cows, increased herd size and introduction of dual-purpose cows to replace current meat-only herds.

- The required 8% CAGR implies that production should increase ~40x from 2024 levels to meet demand growth and import substitution targets.
- To meet the full growth target, this would require:
  - Yield increase through AI and better animal care practices for existing inventory of dairy cows can multiply production 5x in short term and 10x in long term.
  - Growth of the average herd size from 5 to 10 cows through a balance of smallholders (5 cows), mid-sized farms (20 cows), and big farms (300 cows) can have a similar total impact on production.
  - If 25% of the current cattle population for meat can be converted to dual purpose cows, this could meet dairy targets, create additional income for farmers, without need to grow the total livestock population.
- With currently 2 million dairy cows, 20 million meat cows, and 500,000 dairy famers, this is of course a massive task and budget. Let's break it down into smaller investment packages.



Building blocks for sustainable dairy

Localizing a milk supply chain is feasible but requires a consistent, and multi-faceted journey focused on yield, towards a hybrid model with small and large farms.



Investment packages

The investment opportunity could be up to $10 billion, requiring grants, debt and equity. Interconnectedness and fragmentation are challenges.

Artificial insemination (AI)	
TAM	$500 million
Investee	smallholder farmer
Ticket size	$50 - $500
Payback	3-5 years
Impact	climate: **high** livelihoods: **high** food security: **medium**
Challenges	farmer bankability small ticket long tenor
Instrument	grant subsidy debt via aggregator
Commercial financing viability	**low**

Technical Assistance (TA)	
TAM	$150 million
Investee	smallholder farmer
Ticket size	$100 - $150
Payback	no
Impact	climate: **medium** livelihoods: **high** food security: **low**
Challenges	prerequisite for other investments
Instrument	grant subsidy
Commercial financing viability	**no**

Cold chain and blending capex	
TAM	$2-5 billion
Investee	SME to corporate
Ticket size	$100,000 - $5 million
Term	3-7 years
Impact	climate: **high** livelihoods: **high** food security: **high**
Challenges	dependency on throughput supply
Instrument	long term debt equity
Commercial financing viability	**medium**

Breeding centers	
TAM	$100 million
Investee	SME or sovereign
Ticket size	$20 million
Term	10-15 years
Impact	climate: **high** livelihoods: **low** food security: **high**
Challenges	patient capital required
Instrument	equity blended finance
Commercial financing viability	**low** to **medium**

Working capital for feed, raw materials, opex
all value chain actors, varying ticket sizes
12-24 month debt

Summary: sizing the investment opportunity

The investment opportunity could be up to $10 billion, requiring grants, debt and equity. A pilot project would need a fraction of this total funding.

- Assuming per capita consumption could grow at the pace of GDP growth, supply needs to grow exponentially, yet it would take >50 years to achieve the diet target.
- To secure sufficient supply to meet consumption targets, while reducing import dependency, production needs to grow 8% annually for the next 50 years.
- Production growth can be realized with increased yield for dairy cows, increased herd size and introduction of dual-purpose cows to replace current meat-only herds.
- Localizing a milk supply chain is feasible but requires a consistent, and multi-faceted journey focused on yield, towards a hybrid model with small and large farms.
- The investment opportunity could be up to $10 billion, requiring grants, debt and equity. Interconnectedness and fragmentation are challenges.

Thank you