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DAIRY POLICY ACTION PLAN

Enhancing the performance of Uganda's dairy value chain

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Summary

Dairy is one of the agricultural commodities prioritized by the Government of Uganda to drive the agro-industrialisation agenda under the third National Development Plan (NDP III) 2020/21–2024/25 owing to its potential impact on improving export earnings and the significant contribution to household nutrition and food security. Dairy has strong potential to enhance household incomes/wealth creation and socio-economic transformation and is therefore crucial for the successful implementation of the Parish Development Model. Dairy production in Uganda is dominated by smallholder farmers who face numerous constraints such as a lack of quality breeding stock, shortage of water and feed resources during droughts, and poor integration in commercial dairy value chains.

The Dairy Development Authority (DDA) partnered with the Food and Agriculture Organization of the United Nations (FAO) through its AgrInvest[1] project, to implement an **"Evidence-based analysis for facilitating public-private policy dialogue project"** aimed at identifying and addressing some of the bottlenecks in the dairy value chain. The DDA also worked closely with FAO through its Monitoring and Analysing Food and Agricultural Policies (MAFAP)[2] programme to organize policy dialogues with dairy sector stakeholders, identify the key policy issues, and recommend interventions to address them.

The project involved carrying out analytical studies on four thematic areas, namely:

i. Analysis of price incentives for milk
ii. Assessment of the performance of Milk Collection Centres (MCC)
iii. Assessment of post-harvest losses in the dairy value chain
iv. Estimate of per-capita milk consumption in Uganda

The results of the studies were presented to public and private dairy stakeholders during two regional policy dialogue meetings (in Mbarara on 7 April 2022, and in Wakiso on 12 April 2022) and one national policy dialogue meeting (in Kampala on 13–14 April 2022). The regional meetings identified seven key policy areas and recommended a number of interventions to address the policy issues identified. The outcomes of the regional policy dialogue meetings were presented to stakeholders who also took part in a priority ranking exercise, which identified three (3) priority policy areas to focus on. A number of interventions and concrete actions were recommended to be undertaken and outlined in this Dairy Policy Action Plan.

The three priority policy areas include:

1. Increase production of milk to address seasonal supply gaps in the dry season
2. Increase the demand for Ugandan milk and dairy products in the domestic and export markets
3. Improve the quality of milk through enforcement and incentives

The objective of the Dairy Policy Action Plan is to guide policy, planning and investment decisions that will enhance the performance of Uganda's dairy value chain. A detailed implementation matrix (see Table 3) provides the interventions, concrete actions, timelines and responsible stakeholders for each policy area.

1 FAO established the AgrInvest project, financed by the European Union and FAO Investment Centre, to promote the creation of enabling policies for responsible business conduct in agrifood systems, and boost responsible private investment in the agriculture and agribusiness sectors, while ensuring their alignment with the Sustainable Development Goals.

2 The Monitoring and Analysing Food and Agricultural Policies (MAFAP) programme is a leading policy support initiative at FAO that works with countries in Africa to strategically prioritize, reform and implement policies on food and agriculture.

Acronyms / abbreviations

aBi	agricultural Business initiative Development Limited
CIP	Clean-in-Place
DDA	Dairy Development Authority
DPAP	Dairy Policy Action Plan
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMD	foot-and-mouth disease
GDP	gross domestic product
ILRI	International Livestock Research Institute
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAFAP	Monitoring and Analysing Food and Agricultural Policies programme (FAO)
MDAs	Ministries, Departments and Agencies
MCCs	Milk Collection Centres
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning and Economic Development
MoH	Ministry of Health
MoWT	Ministry of Works and Transport
MoLG	Ministry of Local Government
MoTIC	Ministry of Trade, Industry and Cooperatives
NARO	National Agricultural Research Organization
NAGRC&DB	National Animal Genetic Resources Centre & Data Bank
NDP	National Development Plan
NRP	nominal rate of protection
LGs	Local Governments
SNV	Netherlands Development Organization
UIA	Uganda Investment Authority
UN	United Nations
UNBS	Uganda National Bureau of Standards
URA	Uganda Revenue Authority
WHO	World Health Organization

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Foreword

The Government of Uganda prioritized 18 strategic commodities for investment in pursuit of wealth creation under the Agro-Industrialisation Programme. Dairy is one of the key commodities under the Agro-Industrialisation Programme of the NDP III, which the Government of Uganda is focusing on for increased foreign exchange and local currency earnings, post COVID-19 pandemic economic recovery and enhancement of household incomes. The dairy industry in the country contributes to more than 89 percent of livestock GDP and employs at least 250 000 people. With an average growth rate of 11 percent annually, the dairy industry is critical for economic growth and development as well as social economic transformation under the Parish Development Model.

In spite of its growth, the industry continues to face bottlenecks that impede the attainment of its full potential. These include low domestic milk consumption, non-tariff trade barriers, inadequate mechanization and limited production and productivity among others. This Dairy Policy Action Plan presents an opportunity once again for all dairy stakeholders to focus their efforts to address the issues identified here in. This will enable the sub-sector to attract more investments in the industry and hence accelerate its growth and meet the aspirations of the Government of Uganda in the short, medium and long term. I therefore call upon all dairy industry players to support the implementation of this Action Plan.

For God and My Country.

Rev'd. Sandra Mugyenyi Mwebaze

Chairperson, Board of Directors,
Dairy Development Authority (DDA), Uganda.

Acknowledgements

This Dairy Policy Action Plan is a pinnacle of a series of actions from various actors over the last six months. What started as a courtesy visit to the Dairy Development Authority by officials from the Food and Agriculture Organization of the United Nations (FAO) through its AgrInvest project and agricultural Business initiative (aBi) Development Limited, led to a project that entailed a wider and lengthy consultative process of stakeholders along the dairy value chain. This Plan is one of the key outputs of the evidence-based policy dialogue activities.

The Authority is therefore grateful to the project staff of AgrInvest with the support and guidance towards the project implementation. We also appreciate the milk producers, managers of Milk Collection Centres, milk processors and transporters who provided evidence and identification of policy issues incorporated in this plan. We also recognize the invaluable input of the MAFAP team and the key experts for the technical support provided in the analysis and moderation of the policy dialogue meetings. A special thanks goes to the FAO team (Thibault Meilland, MAFAP Policy Advisor; Jules Cabrel Nkuingoua Nana, MAFAP Agricultural Policy Analyst; Martin Maugustini, AgrInvest Project Coordinator; and Julien Vallet, Economist and AgrInvest Lead Technical Officer).

The staff of the Dairy Development Authority who participated in the development of this Plan is commended for their valuable contribution. A special mention goes to Kenneth Otikal, Principal Planning Officer at the DDA.

All these efforts and contributions are recognized in pursuit of a developed and well-regulated dairy value chain in Uganda.

Dr. Michael Kansiime
Executive Director,
Dairy Development Authority (DDA), Uganda.

Background

Dairy is one of the agricultural commodities prioritized by the Government of Uganda to drive the agro-industrialisation agenda under the third National Development Plan (NDP III) 2020/21–2024/25 owing to its potential impact on improving export earnings and the significant contribution to household nutrition and food security. Dairy has strong potential to enhance household incomes/wealth creation and socio-economic transformation and is therefore crucial for the successful implementation of the Parish Development Model. The NDP III adopted the Area-Based Commodity Planning approach to promote value addition of selected commodities within specific agro-ecological zones.

A value chain approach is used to identify bottlenecks holding back increased production/productivity and wealth creation, and to develop projects to address the bottlenecks. Among the major constraints facing dairy production is lack of quality breeding stock, and the shortage of water and feed resources during droughts. Milk production is dominated by smallholder farmers who face numerous constraints that hinder their integration in commercial dairy value chains.

In order to enhance the performance of the dairy value chain, the Dairy Development Authority partnered with FAO through its AgrInvest project and MAFAP programme, to conduct studies in the dairy value chain with the aim of generating evidence to inform policy, planning and investment decisions. The partnership resulted in an **"Evidence-based analysis for facilitating public-private policy dialogue project"**. The project sought to revive and institutionalize the Dairy Multi-stakeholder Platform as an avenue to engage public and private stakeholders in regular policy dialogue on important issues in the value chain. Two regional and one national evidence-based policy dialogue meetings were convened to disseminate findings from four value chain studies and to identify the priority policy issues and recommended interventions.

The regional and national policy dialogue meetings culminated in the development of this Dairy Policy Action Plan. FAO provided technical support during the development of analytical frameworks and tools, data collection, analysis and reporting as well as facilitated the policy dialogues.

Context

The Dairy Development Authority collaborated with FAO to collate, identify and analyse evidence-based policy issues and related solutions in the dairy sub-sector. The project generated evidence and developed thematic reports in the following areas:

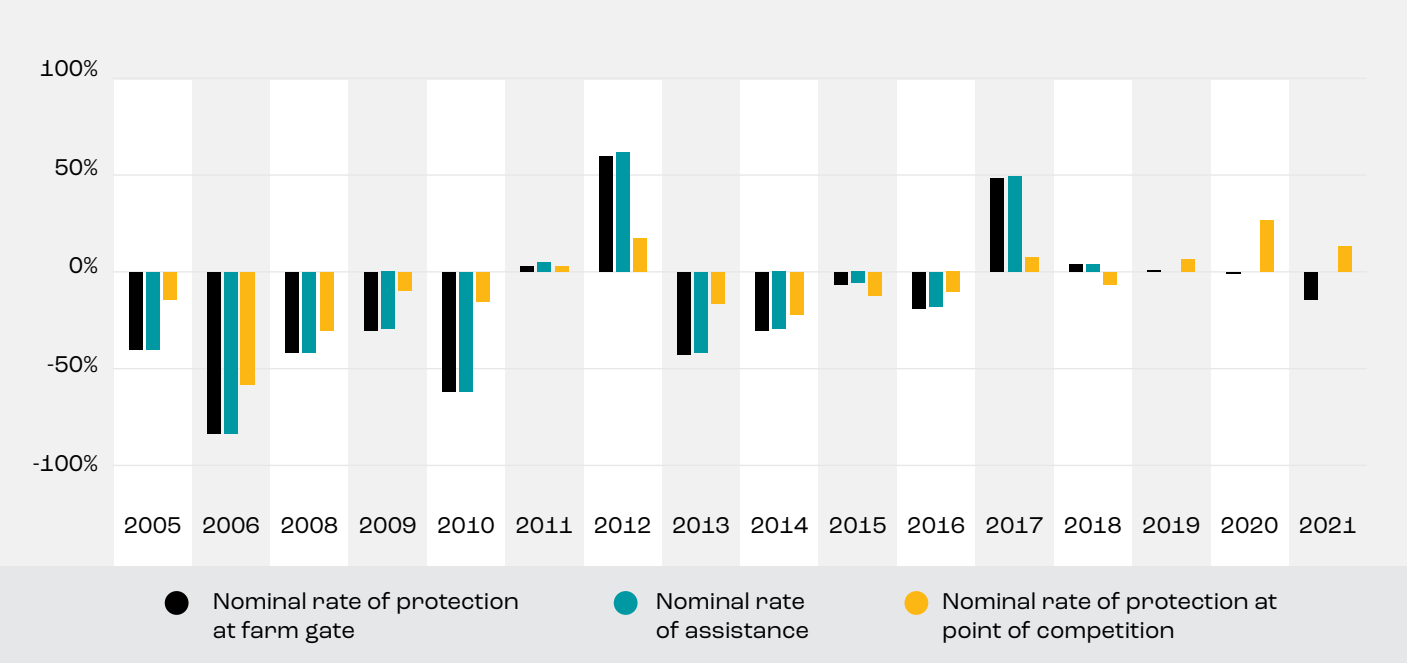
i. Analysis of price incentives for milk
ii. Assessment of the performance of Milk Collection Centres (MCCs)
iii. Assessment of post-harvest losses in the dairy value chain
iv. Estimate of per-capita milk consumption in Uganda

Key findings from the thematic reports are presented below.

2.1 Analysis of price incentives for milk

Overall, evidence suggests that milk producers in Uganda experienced price disincentives during the period 2005–2021, as shown by the evolution of the nominal rate of protection for producers (see Figure 1).[3] However, the trend varies across different periods: in the early years, 2005–2010, price disincentives for producers were quite high, while they were positive in 2011 and 2012 and, in most recent years, disincentives were minimal. Generally, this trend was quite similar for prices at wholesale, yet, traders were less penalised than producers.

Figure 1: Nominal rate of protection for fresh milk in Uganda, 2005–2021



Source: MAFAP database (2022).

3 Nominal rates of protection (NRP) are used as a measure of the effect of public policies and market factors on agricultural prices. A positive NRP indicates that the policy environment and market dynamics provide price incentives to produce or commercialize the analysed product. On the contrary, a negative NRP signals that farmer and/or traders receive disincentives in terms of specific commodity output prices.

The pattern of price disincentives for milk in Uganda seems to be driven mainly by poor market integration, monopsony/oligopoly at the buyers/processors level and the prevalence of informal markets. While the sector was liberalised during the 1990s and the government did not adopt any explicit trade and market policy that could influence prices, price transmission remains quite limited, especially until 2017. This is partly due to oligopoly tendencies that seem to prevail because of the presence of few processors, including a former state-owned enterprise, that enjoyed large market power over milk producers. In addition, informal markets largely dominate milk trade in Uganda, and they evade regulatory obligations imposed on formal traders. To tackle such unfair competition, processors are compelled to sell at prices that are often below the reference price to avoid losing customers.

From 2018, reference prices were much more aligned to the domestic ones, indicating some improvements in price transmission and integration of the local market with the international one. Yet, farmers experienced a reduction in prices in 2019 and 2020, which could be partially linked to international market dynamics. In those years, Kenya – Uganda's largest milk export partner – decided to restrict the entry of milk from Uganda creating a surplus on the local market, thereby depressing prices.

Finally, important value chain inefficiencies, such as high transport costs and trader margins, hinder market integration, and they affect value chain development negatively and contribute to depressed producer prices.

2.2 Assessment of post-harvest loss in the dairy value chain

In Uganda, milk is mainly produced by smallholder farmers in rural areas, bulked and transported over long distances to the processing plants that are mainly located in urban areas. Post-harvest losses of fresh milk take place on the farm as well as the different nodes of the dairy value chain. The major causes and extent of the losses vary along the value chain.

Evidence suggests that the highest post-harvest losses take place at milk collection and bulking, as shown in Table 1 below. The reason for high post-harvest losses at this level is milk being rejected due to poor quality and the occasional failure to find a market for the milk collected.

Table 1: Summary of annual post-harvest milk losses at different dairy value chain nodes, as percentage of volume

Stage	Value chain node	Annual post-harvest loss (% of volume)
1	Farm level	0.96%
2	Milk collection	13.60%
3	Milk bulking	7.09%
4	Bulk transport	0.86%
5	Processing plants (medium size)	2.01%
6	Processing plants (large)	0.20%

The level of post-harvest loss at farm level has reduced significantly from an average of 2.7 percent documented in 2005 to less than 1 percent in 2021. The possible reasons for the decrease in level of post-harvest losses may include i) increased farmer access to milk markets; ii) improved infrastructure for milk collection, bulking and transportation; iii) increased processing capacity; iv) increased domestic consumption; and v) increased export of milk and dairy products to regional and international markets.

The private sector and the Government of Uganda have invested a lot of resources in establishing new MCCs and repairing old ones in different parts of the country to strengthen the cold chain and minimize post-harvest losses. Currently, rural MCCs total 475 units with a storage capacity of 2.21 million litres (DDA, 2021). The mean annual milk loss at MCCs is 13.6 percent, with significant seasonal variations (7.7 percent in the dry season; and 19.5 percent in the wet season).

The main reason for the loss is milk being rejected by processing plants due to poor quality and inadequate markets. Other important reasons include wastage during measuring and testing as well as failure to access milk markets in the wet season due to transportation challenges. Although bulking centres are few across the country, they lose 7.09 percent of the volume they handle annually, due to similar reasons identified for MCCs. Meanwhile, bulk transporters of raw milk from the MCCs to factories lose 0.86 percent of their milk annually. The majority of the milk loss at transportation is also caused by milk being rejected at the processing plant due to poor quality. Spillage during loading and offloading as well as during measuring and testing are also common. Importantly, the cost of milk losses incurred by transporters is borne by the producer cooperative societies and unions as well as processing companies and wholesale traders that own the milk.

At the higher end of the value chain, the proportion of milk lost by medium-sized processors is 2.01 percent while it is 0.20 percent for large processors. The main reasons reported for milk loss by processors is spillage during offloading of milk delivered in road tankers and milk cans, followed by rejection of milk due to poor quality.

2.3 Assessment of the performance of Milk Collection Centres

Although the majority of the MCCs in the country are functioning, their performance as viable agribusiness enterprises is generally suboptimal. The main reasons for the suboptimal performance include: i) inability to receive adequate volumes of milk leading to low capacity-utilization of the milk-cooling equipment particularly in the dry season, ii) high operating costs, iii) bottlenecks in the dairy value chain (such as access to clean water, waste-disposal facilities, reliable and affordable energy), and iv) post-harvest losses that result from failure to access the market throughout the year.

Failure to receive adequate volumes of milk is common in the dry season and hinders achieving economies of scale and optimum profitability of the MCCs. Low capacity-utilisation of the milk cooling equipment increases the unit cost of chilling milk and reduces the net returns per litre of milk chilled, hence, making the MCCs less profitable. The main reasons for failure to receive enough milk include: i) low productivity of animals due to shortage of nutritious forage and water particularly in the dry season, and the utilization of low-performance dairy breeds ii) small number of milk producers in the area either due to a shortage of land for livestock farming or the existence of alternative and better sources of livelihood, and iii) animal health constraints such as foot-and-mouth disease, East Coast fever and tick-acaricide resistance.

The high cost of operating MCCs may be attributed to high energy tariffs, particularly grid power and diesel, high cost of transport, labour and other services as well as possible prohibitive statutory requirements such as the collection of a withholding tax from the milk producers. Struggling MCCs are not able to generate enough net revenue to allow them to hire competent and qualified MCC workers.

2.4 Estimate of per-capita milk consumption in Uganda

Milk consumption, at levels recommended by WHO/FAO, translates to a daily milk intake of just over 1/2 litre (0.55 litres) per person per day. Evidence suggests that per-capita annual consumption in Uganda was about 63 litres of milk translating to less than 1/4 litre (0.17 litres) of milk a day.
Based on these results, individual milk consumption in Uganda is 68 percent less than the dietary intake recommended by WHO/FAO. An individual in Uganda consumes the recommended quantity of milk for about two days in a week which explains low domestic milk consumption in terms of annual per capita or daily requirement.

Table 2: Per-capita milk consumption trends in Uganda

Year	Per capita consumption (litres)	
	Based on entire HH sample	Based on only HH that consumed milk
2005	44.10 (1.901)	92.67 (4.929)
2013	46.64 (1.203)	80.47 (2.507)
2018	52.95 (1.539)	90.82 (3.659)
2019	62.72 (1.311)	76.54 (1.937)

The DDA's objective is to promote milk consumption and increase per-capita consumption to 200 litres annually. Addressing constraints to milk access and consumption has a potential to triple domestic milk demand in Uganda if those not consuming are encouraged to consume milk.

Consumption is significantly higher in the urban areas compared to the rural areas, meanwhile regional comparisons show that consumption is highest in the western region and lowest in the eastern and northern region. The western region is characterised with high milk production compared to other areas, and has significant investments in milk consumption programmes. The low consumption level of milk calls for some interventions to not only increase consumption but also to reduce levels of malnutrition. These interventions will spur further growth in the dairy value chain, which for the past 10 years has experienced export-led growth and at the same time being affected by export barriers coupled with low domestic demand.

Objective of the Dairy Policy Action Plan

The objective of the Dairy Policy Action Plan (DPAP) is to guide policy, planning and investment decisions that will enhance the performance of Uganda's dairy value chain, in alignment with the Agro-Industrialisation Programme, the third National Development Plan (NDP III) and the DDA's five-year Strategic Plan. It intends to focus on high-return policy issues and seeks to translate the high-level feedback offered during the policy dialogues into tangible, concrete steps and activities for various stakeholders. It identifies an ambitious but manageable number of focused actions, in anticipation of future collaborations with various stakeholders of the dairy platform. The DPAP is planned over a five-year period and will be updated on an annual basis.

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Development of the Dairy Policy Action Plan

The development of the Dairy Policy Action Plan commenced with the dissemination of findings and recommendations from the studies covering the four different thematic areas, namely: i) Analysis of price incentives for milk; ii) Assessment of the performance of Milk Collection Centres (MCCs); iii) Assessment of post-harvest losses in the dairy value chain; and iv) Estimate of per-capita milk consumption in Uganda.

The results of the analytical studies were presented to dairy stakeholders during two regional and one national policy dialogue meetings held during April 2022. During discussions held in breakout groups and plenary sessions, the participants to regional policy dialogue meetings identified **eight policy areas** and their respective corresponding interventions, including:

i. Increase production of milk to address seasonal supply gaps in the dry season.
ii. Increase the demand for Ugandan milk and dairy products.
iii. Improve the quality of milk through enforcement and incentives.
iv. Promote production-processing linkages and value addition.
v. Improve and/or rehabilitate rangeland.
vi. Improve transport infrastructure and logistics services.
vii. Formalize milk trade through enforcement and incentives.
viii. Promote country policy formulation and analysis of inter-country comparison.

The outcomes of the two regional policy dialogue meetings were presented to the national policy dialogue meeting. Through a participatory prioritization and ranking exercise, the national policy dialogue meeting identified **three priority policy areas** and recommended a number of concrete actions for each policy area as well as estimated timelines and responsible stakeholders.

Priority Policy Areas and Interventions

Of the eight policy areas identified above, the national policy dialogue meeting selected **three priority policy areas** and recommended a number of interventions and concrete actions to be undertaken:

i. Increase production of milk to address seasonal supply gaps in the dry season.
ii. Increase the demand for Ugandan milk and dairy products.
iii. Improve the quality of milk through enforcement and incentive.

5.1. Increase milk production to address seasonal supply gaps

The recommended interventions:

i. Secure affordable access to quality dairy inputs (e.g. pastures, forage, water, and milking cans) with sustainable management, production, preservation and storage.
ii. Tackle animal health (e.g. FMD, East Coast fever, tick-acaricide resistance).
iii. Incentivize investments in improved dairy breeds and breeding technologies across the country.
iv. Promote mind-set change on dairy as a family business, ensuring women are included.
v. Promoting local pasture seed production and mechanising pasture/fodder production.
vi. Initiate an on-farm water for production system for dairy farmers.
vii. Advance climate-smart technologies in dairy.

5.2. Increase the demand for Ugandan milk & dairy products in the domestic & export markets

The recommended interventions:

i. Promote increase in domestic consumption (e.g. nutrition campaigns, public procurement).
ii. Diversify exports strategically (products and trading partners).

5.3. Improve the quality of milk through enforcement and incentives

The recommended interventions:

i. Enforce dairy regulations and code of hygiene practices.
ii. Adopt appropriate technologies and practices for milk production, handling, collection, transport, and processing.
iii. Offer premium for quality milk (quality-based milk payment system).
iv. Revive the Dairy Multi-Stakeholder Platform as a feedback mechanism.

Implementation matrix

The table below summarizes the interventions, suggested concrete actions as well as an expected start timeframe and responsible parties for the three priority policy areas.

Timeframe legend

Immediate: less than 1 year
Short term: 1-3 years
Medium term: 3-5 years
Long term: 5 years and above

Table 3: Priority policy areas, interventions and concrete actions

Interventions	Concrete action	Expected start[4]	Responsible party
Policy area 1: Increase production of milk to address seasonal supply gap (dry season)			
Secure affordable access to quality dairy inputs (pastures, forage, water, milking cans) with sustainable management, production, preservation & storage	Fast track the implementation of animal feeds policy and rangeland policy (including the implementation of input traceability measures)	Immediate	MAAIF, DDA, LGs, UNBS, NARO, farmers, private sector, development partners
	Certification of forage seeds	Short term	
	Establish pasture demonstration gardens per sub county	Immediate	
	Subsidize the cost of artificial insemination material (semen) for adoption by farmers	Short term	
	Develop a standard for certification of improved pasture seeds varieties	Short term	
	Provide subsidies/co-funding on forage equipment per parish	Medium term	
	Intensify the efforts and implementation of the interventions on water for production countrywide	Immediate	
	Initiate a water-for-production system for dairy farms	Short term	
	Establishment of input stores at MCC level	Short term	
Tackle animal health (FMD, East Coast fever, tick-acaricide resistance)	Advocate for the regulation of public-private collaboration on the procurement and administration of FMD vaccines[5]	Short term	MAAIF, LGs, private sector, development partners
	Develop a disease calendar and training for farmers	Immediate	
	Construct disease labs in the cattle corridor districts	Short term	
	Procure cold chain equipment at district level to store the vaccines	Short term	
	Strengthen research into local programmes/solutions for animal disease control	Medium term	
	Conduct routine vaccination and spraying of animals	Immediate	
	Speed up innovations on research and development of tick vaccines and other diseases	Short term	

4 Indicative start date of activity, not implementation duration.
5 A similar recommendation has been prioritized/identified by the stakeholders gathered in the beef sector policy dialogue. Under the beef policy dialogues, facilitated by the Uganda Agribusiness Alliance, a FMD task force is planning a desk review of the regulatory environment around the import of FMD vaccines.

Interventions	Concrete action	Expected start	Responsible party
Incentivize investments in improved dairy breeds	Provide artificial insemination kits and a technician per sub county	Short term	MAAIF, DDA, DLG. Private sector, development partners
	Fast track the development and implementation of the breeding policy	Short term	
	Establish regional semen banks	Short term	
	Raise farmers' awareness of different dairy breeds for informed decisions through dairy farmers' groups	Immediate	
	Establish decentralized sources of breeding animals, involving dairy farmers' groups	Medium term	
Mind-set change on dairy as a family business including women	Organize visits to model dairy farms	Short term	MAAIF, MoTIC, DDA, LGs. Private sector, development partners
	Mobilization and awareness-raising among dairy farmers (men and women)	Immediate	
	Involving women in decision-making	Immediate	
	Fast track formation of multi-purpose dairy cooperatives (men and women)	Short term	
	Train dairy farmers (men and women) in herd raising/ breeding, milk-handling best practices, farm record keeping and business skills	Immediate	
	Engage extension staff at the district and sub county	Immediate	
Promoting local pasture seed production and mechanizing pasture/ fodder production	Train dairy farmers in local pasture seed production	Immediate	NARO, DDA
	Develop pasture mechanisation technology	Short term	NARO
	Create a social enterprise on fodder production	Short term	NARO, MAAIF
Advance climate-smart technology	Mainstream climate-smart technology into dairy development activities	Immediate	DDA, MAAIF
Build the capacity of farmers in proper in animal husbandry practices	Develop a breeding plan for the different regions in Uganda	Short term	Development partners, NAGRC&DB
	Increase provision of extension services through public and private actors	Immediate	MAAIF, LGs, cooperatives
Policy area 2: Increase demand for Ugandan milk and dairy products			
Promote increase in domestic consumption	Ensure an integrated campaign led by Ministry of Health and involving Ministry of Education and Sports, MAAIF, MoLG etc on the benefits of dairy consumption for health and development	Immediate	DDA, MAAIF
	Scale up the school milk programme (SNV-piloted school milk programme in the southwest region) to expand in the country	Immediate	
	Establish a small premium to parents through schools to support milk production	Short term	DDA, MAAIF, MoES
	Advocate for milk to be provided at all government functions/gatherings/meetings	Immediate	DDA, MAAIF
	Advocate for exemption of VAT on processed dairy products for affordability	Immediate	MoE, development partners, MAAIF, DDA
	Conduct research for new technologies to diversify dairy products	Immediate	DDA, processors, NARO
	Participate in national and international dairy exhibitions and trade expos	Immediate	LG, MAAIF, MoFPED
	Support value addition at MCC level	Immediate	DDA, MAAIF, MoTIC
	Conduct massive awareness-raising and advertising about milk products	Immediate	DDA
	Educate parents on nutritional importance of milk	Immediate	

Interventions	Concrete action	Expected start	Responsible party
Diversify exports strategically (products and trading partners)	Conduct periodic analyses of available data on export destinations so Uganda can position itself as a competitive supplier (product safety, quality requirements, and the products themselves)	Immediate	DDA, MoTIC
	Identify export markets with potential to strategically strengthen the value chain actors' capacity to meet the needs and requirements of those export markets	Immediate	DDA, MAAIF, MoTIC
	Support existing small- and medium-scale enterprises to improve the quality, packaging and marketing of their dairy products	Immediate	DDA, MoTIC, UIA
	Develop premium products for specific niche markets	Immediate	Private sector
	Ensure adherence to signed treaties regarding dairy trade	Immediate	MAAIF, MoTIC
	Increase milk cottage processing, yoghurt processing and installation of innovative distribution channels, such as milk vending machines ("milk ATM")	Immediate	Private sector, DDA, MoTIC
	Proactively engage processors to source for and meet export requirements for more export destinations	Short term	MoTIC
	Benchmark attractive markets, mapping of potential buyers to support competitive export negotiations	Short term	DDA, MoTIC
	Advocate for the removal of trade barriers affecting dairy products	Immediate	
Policy area 3: Improve quality of milk through enforcement and incentives			
Enforce dairy regulations and code of hygiene practices	Enforce rapid field and spot milk checks and enforce deterrent punitive measures	Immediate	DDA
	Set up certification centres along the whole chain especially at farm and MCC level	Short term	MAAIF
	Procure and deploy mobile-testing vans countrywide	Short term	DDA, MAAIF
	Conduct public health education/awareness campaigns about dangers associated with consumption of poor quality milk	Short term	DDA, MoH, development partners
	Scale up frequency of milk surveillance and traceability at all levels along the chain	Immediate	DDA, LGs
	Advocate for the reduction of taxes for shipping the dairy processing and milk-handling equipment	Short term	DDA
	Support manufacturing of milk-handling utensils within the country	Medium term	DDA, MoTIC, UIA
	Review and simplify the code of hygienic practices (through pictorials, brochures, posters)	Immediate	DDA, LGs
	Enforce CIP systems in milk tankers	Short term	

Interventions	Concrete action	Expected start	Responsible party
Support adoption of technologies and good practices in production, handling, collection, transport, processing	Train all actors along the dairy value chain on hygienic milk-handling practices and their importance	Short term	DDA
	Set up water purification systems at MCCs	Short term	Private sector
	Subsidize the cost of milk-handling utensils (e.g. cans and milking pails) and equipment (e.g. milk trucks)	Short term	MoFPED
	Encourage opinion leaders to promote behaviour change among dairy farmers	Short term	DDA, MAAIF
	Develop certification schemes for farmers, transporters and MCCs	Short term	
	License milk trucks with cleaning systems	Short term	MoH, development partners
	Soft/subsidized loans to purchase equipment	Short term	Private sector
Offer premium for quality milk (quality-based milk payment system)	Create awareness on quality-based milk pricing countrywide	Short term	DDA, LGs
	Revive and strengthen dairy platforms and stakeholders as a feedback mechanism	Immediate	DDA, development partners
	Develop policy on quality-milk pricing and prohibit delivery of milk after 10.00 a.m. for milk produced in the morning	Short term	DDA, MAAIF
Revive Dairy Multi-Stakeholder Platform as feedback mechanism	Initiate periodic engagement of key value chain stakeholders in the dairy industry	Immediate	Development partners
	Maintain regular engagements and information sharing	Immediate	DDA, development partners
	Develop the dairy master plan to guide public and private sector investments	Short term	

The table below summarizes the interventions, suggested concrete actions as well as estimated timeline and responsible parties for the remaining **5 non-prioritized policy areas.**

Table 4: Other policy areas, interventions and concrete actions

Interventions	Concrete action	Expected start	Responsible party
Policy area 4: Promote production-processing linkages and value-addition			
Support vertical integration/ coordination production-processing	Conduct research in available evidenced-based market opportunities and disseminate (info sheet) to value chain players	Immediate	MAAIF, DDA, private sector
	Create awareness of, and capabilities, in production processing	Immediate	DDA, private sector
	Advocate for quick turnaround times in regulatory services, e.g. UNBS certification & DDA registration	Immediate	DDA, UNBS, private sector
	Establish dairy policy stakeholders' platform	Immediate	DDA, development partners
	Create linkages to access credit facilities (e.g. loans from Uganda Development Bank)	Immediate	Private sector, UDB
Support producer-owned processing capacity	Mobilize existing – and establish new – cottage industries for value addition	Immediate	DDA, development partners, private sector
	Procure and distribute processing machinery for dairy umbrella organizations	Immediate	
	Advocate for the reduction of the cost and requirement for certification of local processors operating within, or near, production areas	Immediate	
	Decentralize the testing and certification labs (quality labs) to regional dairy hubs	Immediate	
	Increase access to processing equipment	Immediate	Private sector, DDA
Policy area 5: Fast track rangeland improvement/rehabilitation			
Control of stocking rates	Reseeding of degraded rangelands across the country	Immediate	LGs, farmers
	Practice over-sowing in degrading rangelands countrywide	Immediate	
	Remove the weeds and provide rest time to allow regeneration	Immediate	

Interventions	Concrete action	Expected start	Responsible party
Policy area 6: Improve transport infrastructure and logistics services			
Invest in transport infrastructure and feeder roads improvement	Identify and profile the high-impact roads for dairy development	Long term	MoFPED, MoLG, MoWT
	Collaborate with relevant partners	Long term	MAAIF, MoWT
	Seek funding for community road infrastructure improvements	Short term	MoWT
Incentivize investments in logistics services (refrigerated trucks and storage facilities)	Capacity building on use of refrigerated trucks and storage facilities	Short term	MAAIF, DDA
	Create awareness on tax wavers on refrigerated trucks	Short term	URA, MoFPED, UDB
	Initiate cost-sharing initiatives to purchase refrigerated trucks for dairy farmer groups and cooperatives		
	Increase access to financial products for logistics services (e.g. loans from Uganda Development Bank)		
	Conduct research on the affordability and quality of storage facilities	Short term	DDA, ILRI, FAO, NARO
Policy area 7: Support formalization of milk trade through enforcement and incentives			
Increase incentives to use Milk Collection Centres for producers and all traders (formal and informal)	Increase milk-handling performance of MCCs and offer MCC-based services to improve users' satisfaction	Short term	MAAIF, DDA
	Provide incentives to informal traders to formalize their businesses (e.g training and certification scheme)	Short term	Cooperatives, DDA, development partners
	Strengthen farmers' cooperatives	Immediate	Development partners, DDA, LGs, MCCs
Empower farmers to form farmer groups and cooperatives	Develop a hub model at MCCs to attract farmers	Immediate	
	Assist farmers to form groups to facilitate access to finance (e.g. loans from Uganda Development Bank)	Long term	MAAIF, DDA, UDB
Establish training and certification schemes for informal milk traders	Train and certify milk traders	Short term	MAAIF, DDA
	Register and license milk traders	Short term	
Professionalize milk handling countrywide	Provide retooling, refresher and certification courses at Entebbe Dairy Training School	Medium term	
Policy area 8: Support country policy formulation and analysis of intercountry comparison indices			
Support country policy formulation and analysis of inter-country comparison indices	Conduct a study on the political economy of the dairy value chain in the East African region	Short term	Development partners, FAO, and DDA
	Develop a dairy master plan for the industry	Short term	DDA, development partners

Planning, implementation, monitoring, evaluation and learning

The successful implementation of this Dairy Policy Action Plan will require collaboration and active engagement of a wide range of stakeholders not only in planning and implementation of the proposed interventions and concrete actions but also in participatory monitoring, evaluation and learning. Through regular multi-stakeholder platform meetings, dairy stakeholders will be able to identify any emerging policy issues and value chain bottlenecks and determine the required actions. The dairy platform will provide the avenue for engaging different stakeholders in planning, implementation, and reporting on the agreed policy actions as well as evaluating progress towards achievement of the desired policy changes. The Dairy Development Authority will play the coordination role with support from the private sector, civil society and development partners.

While the public sector is responsible for implementing majority of the recommended policy actions, a strong public-private partnership reinforced by support from civil society will be vital for successful implementation of the Plan. The key stakeholders implementing this Plan include dairy farmers and farmers' groups, dairy cooperative societies and unions, government Ministries, Departments and Agencies (MDAs), development partners, dairy processors, importers and exporters, financial institutions (e.g. Uganda Development Bank), milk transporters and consumers as well as academic and research institutions. All stakeholders will play an important role in monitoring and evaluation of the implementation process as well as reviewing and updating the Dairy Policy Action Plan.

7.1. Planning and implementation

The Dairy Development Authority in collaboration with civil society (dairy-sector NGOs) and with support of development partners will coordinate the planning process involving all concerned stakeholders. A well-structured planning process will be developed in a participatory manner and an annual planning, implementation and reporting calendar developed and circulated among stakeholders. The planning process for the Dairy Policy Action Plan will be harmonised with the strategic planning processes of the concerned stakeholder organisations and might require the synchronisation of the implementation time for common actions. Where possible, collaboration or joint implementation of common actions will help to rationalise deployment of scarce resources and avoid duplication of interventions.

7.2. Monitoring, evaluation and learning

A participatory monitoring, evaluation and learning framework will be developed and used by the DDA to track progress of the implementation of the action plan, and to generate reports that will be shared with stakeholders during the platform meetings. The details of the monitoring and evaluation plan and framework of the Dairy Policy Action Plan will be developed in the first sitting of the Dairy Multi-stakeholder Platform. They will include the frequent submission of performance reports to be reviewed by the Dairy Multi-stakeholder Platform, and will provide lessons learned and best practices to ultimately inform and improve policy interventions in the dairy value chain in Uganda.

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