



# UGANDA'S 60<sup>TH</sup> INDEPENDENCE ANNIVERSARY

DAIRY SECTOR SOUVENIR MAGAZINE





## **Vision**

**Dairy For Improved Health And Prosperity Of Ugandans**



## **Mission**

**To Increase Productivity And Competitiveness Of The Dairy Sector Enhancing Its Contribution To Population Health And Wealth Of All Ugandans.**



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President of Uganda



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Minister of Agriculture, Animal Industry and Fisheries



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Minister of State for Animal Industry



**Maj. Gen. David Kasura Kyomukama**  
Permanent Secretary MAAIF



**Rev Can Sandra Mugenyi Mwebaze**  
DDA Board Chairperson



**Dr. Michael Kansiime**  
Executive Director

**HAPPY 60TH INDEPENDENCE ANNIVERSARY TO H.E GEN YOWERI KAGUTA MUSEVENI, THE PEOPLE OF UGANDA, AND ALL OUR STAKEHOLDERS**

## Foreword



Uganda's dairy sector plays a vital role in wealth creation at household level as well as improving the nutrition and health of people. Today the sector accounts for 6.5% of the nation's agricultural Gross Domestic Product (GDP). Dairy production has enjoyed a tremendous growth since independence through various government interventions.

For many years after Uganda gained independence in 1962, Uganda was importing milk from Kenya, mostly in pasteurized and powder form. Deliberate National Resistance Movement Government programs aimed at securing independence and sustainability of the sector has now seen it grow into a leading producer and exporter of milk by attracting large investments.

From 1962, as with most of the other sectors, the then Uganda Dairy Cooperation exercised a monopolistic control and had conflicting roles of Development, Regulation and Marketing. This meant that there was limited room for innovation and growth. Thus in 1987, NRM Government adopted the Economic Recovery Programme (ERP), bringing in economic reforms that motivated farmers and manufacturers to increase production.

Liberalization included abolishing the monopoly of state-owned parastatal entities in domestic trade and export, and removing government price controls. The 1986 National Rehabilitation and Development Plan aimed at regaining self-sufficiency in milk and milk products, with a focus on restoring production on dairy farms, improving milk collection and marketing, strengthening extension services, encouraging private-sector participation in dairy development.

Following a March 1991 Cabinet decision, which initiated the 1993 Dairy Sector Development Policy, the role of government in the dairy sector was gradually reduced. The policy required government to withdraw from direct participation in milk production, commercial processing and trade by divesting itself of the Dairy Corporation and concentrate its scarce resources on developing an enabling environment for private-sector led growth. The birth of Dairy Development Authority in 2000 therefore was to ensure that there is strict inspection and regulation of the sector but not direct participation by government in production and processing systems.

In the year 2003 Uganda was producing 1.1 billion litres annually to currently 3.21 billion litres. This was possible through increased investments in various interventions such as adoption of improved dairy breeds, provision of improved pasture seeds and planting materials, skilling dairy farmers in good dairy farming practices among others.

Government banned the use of non-food grade utensils like jerry cans in transporting milk and instead supported the acquisition of recommended vessels which are insulated road milk tankers which have increased to a total transportation capacity of 2.16 million litres from a paltry 44 in 2004.

Milk collection/bulking have improved tremendously with a number of players in the market. A total of 483 centres with a total collection capacity of 1.9 million litres of milk per day are operational countrywide owned by dairy cooperatives, private individuals, companies and processors. Government through DDA has also been investing in rehabilitation of dilapidated milk collection centers previously run by Dairy Corporation.

Milk marketing is done through formal and informal channels. Milk that is marketed through formal channels is processed at 45% of the total production, while the one marketed through informal channels is sold in raw form to homes, hotels, hospitals, restaurants and schools. The government is introducing Bag-in-Box technology for dispensing pasteurized milk which will in turn substitute the raw milk vending and avail safe milk cheaply to low income earners.

Uganda's processing companies have increased from the sole Dairy Corporation with installed capacity of 100,000 litres per day to 135 with a processing capacity of 2.89 million litres per day. This has been as a result of new players joining the market and some processors upgrading their processing capacities due to a good business environment.

Dairy processors which range from large, medium, small scale and cottages process a variety of products such as Powdered Milk, Ghee, Butter, UHT Milk, Casein/Whey, Pasteurised Milk, Yoghurt, Cream, Icecream, Fermented Milk and Cheese.

However, withdrawal of direct participation in dairy did not mean government had abandoned dairy farmers and entire sector. Various interventions have

been made to ensure adequate growth. Key among these is the National Agricultural Advisory Services (NAADS) and Operation Wealth Creation (OWC) support interventions. This has seen a magnitude of farmers benefit from direct government support through provision of dairy cattle, agro-processing equipment, improved pastures as well as mechanized equipment.

The sector continues to be of top priority to the NRM government and the people of Uganda because it serves a core purpose of improving the nutrition of citizens as well as incomes at household and national levels. I thank H.E the President of Republic of Uganda Gen. Yoweri Kaguta Museveni Tibuhabwe for his support and guidance in sector reforms and congratulate DDA and all the dairy sector players for their role in developing Uganda as we celebrate 60 years of Independence.

HAPPY 60TH INDEPENDENCE UGANDA  
For God and My Country



**Lt Col. (Rtd). Dr. Rwamirama Bright Kanyontore PhD**  
Minister of State for Agriculture, Animal Industry and Fisheries/AI

## Board Chairperson's Message



Global milk production currently stands at 852 metric tons, and is expected to grow to 997 metric tons by 2027 (OECD-FAO). Production in India, which is the largest milk producer, is currently at 192 metric tons. With an annual growth rate of 1.6% per annum, dairy is performing better than most other agricultural commodities. The East African region is the leader in dairy production on the continent, accounting for 68% of milk production. Uganda's average dairy production growth rate per annum stands at 5 which is far above the global figure.

Part of the major reasons of this high growth rate can be accredited to the Dairy Development Authority's ability in fulfilling her mandates of increasing production and productivity since it's established in 2000 under the Dairy Industry Act of 1998. Prior to this, activities in the sector had been largely uncoordinated since Uganda's Independence in 1962. The Uganda Dairy Corporation was a state parastatal that was charged with production and marketing of milk and milk products on behalf of the government. However, this proved fertile ground for informal milk traders, including those involved in milk collection, transportation and in the unregulated urban milk markets.

Following liberalization, some processors entered into competition with the intention of challenging the informal players. The demise of milk processors in the first decade of liberalization was high. Out of ten processing companies established, five collapsed: Ra-milk Ltd., Western Highlands Creameries Ltd., Dairy Bell, Country Taste Ltd. and Sunshine Dairies Ltd. Most cited unfair competition (in the form of informal milk marketing) as the main cause of their collapse.

The absence of a regulator favored the informal traders and was clearly a disadvantage for the processing sector. After considering the dairy master plan recommendations on setting up a government-owned statutory body under the 1998 Dairy Industry Act, the DDA was formed under MAAIF coordinate the development of the Ugandan dairy industry.

From being a net importer of milk two decades ago, Uganda now currently exports 83 million kilograms of milk per year as of 2021 and Dairy now accounts for 8% of total export value, even as the sector exhibits a high growth potential in terms of exploration of new markets and new products. The favorable interventions and policies by government both at production, value addition and marketing have ensured steady growth and return on investment.

Some of the key challenges for dairy sector players such as limited access to clean water supply in rural areas, low access to stable energy supply for milk processing, morning only deliveries, poor road infrastructure, high operating costs have already been addressed by various government programs and interventions or are in the process of being resolved. The issue of post-harvest losses has also been tackled through establishment or renovation of milk collection centers (MCCS) in our various operational areas. We are equally grateful to the government for supporting us in enhancing our manpower which has enabled us in improving our statutory obligations.

As Uganda celebrates 60 years of INDEPENDENCE, we in the dairy sector are therefore very pleased with what has been achieved with the support from the NRM government, the confidence that the investors (domestic and foreign) have put in us, as well as the farmers and citizens of Uganda who are our backbone. This Dairy Sector Souvenir Magazine has been published to showcase and highlight our humble contribution to the prosperity of Uganda. We hope you find the content informative and educative.

HAPPY 60th INDEPENDENCE

For God and My Country

A handwritten signature in black ink that reads "S. Mwebaze".

**Rev Can Sandra Mugenyi Mwebaze**  
DDA Board Chairperson

## Executive Director's Message



The Uganda dairy sector has grown exponentially over the years and its products continue to gain increased demand and consumption within and beyond our borders. In the past 5 years (2018-2022), our production has increased from 2.51 billion litres to currently 2.81 billion litres. In terms of foreign earnings, we have grown from 276 billion shillings to 358 billion shillings. Our annual growth rate average is 11 percent, which is among the highest of any sector in the economy.

Out of the 2.8 billion litres of milk currently produced, 80.2% (2,245,600,000L) is marketed, 19.8% (554,400,000L) is consumed at the farm, 66% of the marketed milk is sold unprocessed (1,482,096,000L) of which 10% (148,209,600L) is sold door-to-door (homes) and 56% (1,333,886,400L) is sold at sales outlets. 34% of the marketed milk is processed (763,504,400L) into various milk and milk products including pasteurized milk, yoghurt, UHT milk, cream, ice cream butter, ghee, cheese, milk powder, casein, whey powder and butter oil.

Milk collection and bulking has equally improved tremendously with a number of players such as Government, Dairy Cooperatives, Traders, Processors and Private individuals continuously investing in cold chain infrastructure. Cold chain infrastructure ensures that the milk is kept at an optimum temperature that enables it retain its nutritional and palatable qualities.

We currently have 198 registered roadworthy milk tankers of different capacities mainly: 5,000, 10,000, 15,000, 20,000L operating countrywide. At farm level, milk handling containers from the farms include food grade milk cans.

There are 160 (Large, Medium, small scale and cottages) licensed entities processing milk. Our key export market is comprised mainly of: EAC regional countries, COMESA, SADC, Malaysia, India, USA, Japan, Oman, UAE, Nepal, Syria and Bangladesh. The top exporters include Vital Tomosis Dairy Limited, Jesa Farm Dairy Limited, GBK Dairy Products Limited, Birunga Dairies (U) Limited, Brookside Limited, Amos Dairies limited, Pearl Dairy Farms Limited, Lakeside Dairy Limited and Rainbow Dairy (U)

The most exported products include: milk powder, yoghurt, cheese, butter, ghee, butter oil, UHT milk, casein and whey protein powder,

As DDA, our pledge to Uganda as we celebrate 60 years of independence is to ensure that the dairy products they consume are very safe and nutritious. We regularly inspect milk handling premises to ensure that they handle milk and milk products that are fit for human consumption. We also conduct frequent analysis and on-spot testing of milk and milk products to ensure they are fit for human consumption using our mobile laboratories that analyze antibiotic residues in milk and other chemical adulterants. Our laboratories are also equipped to handle microbiological analysis among other parameters.

Our market surveillance verifies the quality and safety of milk sold in raw milk sales outlets as well as milk collection and bulking centers and adulterated or contaminated milk is easily identified and action taken immediately. Surveillance is undertaken through supermarket visits and other dairy products selling outlets. In addition to this is our constant enforcement of dairy standards in line with the dairy regulations and other related food laws.

The growth and good health of the sector can be attributed to our stakeholders who have invested heavily at various levels in the dairy chain and the exports of various products to countries that have stringent quality and safety control measures where our dairy products have consistently met international standards. We also commend government's deliberate effort of prioritization of the dairy commodity and creation of the enabling environment including supporting regulation, value addition enterprise support and provision of inputs to improve productivity. We congratulate all Ugandan's as they celebrate 60 years of independence.

For God and My Country

**Mr. Samson Akankiza Mpiira**  
Acting Executive Director



## The DDA Board



*The incoming Board Chairperson Rtd. Rev. Can. Sandra Mugenyi Mwebaze hands over a plaque to outgoing Board Chairperson Ms. Bernadette Katureebe, July 2021.*



*Front row: Ms Jane Vivian Tumwebaze (MoFPED); Mrs. Immaculate M. N. Kibirango (DFCs); Rtd Revd. Can Sandra Mugenyi Mwebaze (Chairperson); Mr. Robert Walimbwa (UNDPA); Dr. Juliet Sentumbwe (MAAIF); Dr. Daniel Kasibule (UVA)  
Back row: Mrs Clare Pamela Atoo (DFCL); Mr. Caleb Kangye Mugabi (UNDTA); Mr. Bigira David Rwaje (UCCCU); Mr. Samson Akankiza Mpiira (Ag ED); Mrs Achaloi Jane Frances (DFC)*

## The Mandate of the DDA Board

The DDA Board of Directors is the policy-making body of the Ugandan dairy industry. Board members and the Chair are appointed by the Minister of Agriculture. According to Section 8 of the 1998 Dairy Industry Act, the authority is required to have a Board of Directors headed by a Chairperson.

The full Board is made up of nine members representing different stakeholder groups, including:

- the Chairperson;
- three members from dairy cooperatives, associations or cattle keepers' groups;(DFC)
- one representative of medium- and large-scale dairy farmers; (UCCCU)
- one member from the ministry responsible for planning and economic development; (MOFPED)
- one representative of the ministry responsible for agriculture, animal industry and fisheries; (MAAIF)
- one representative of the Ugandan Veterinary Association; (UVA)
- one representative of the dairy traders; (UNDATA)
- one representative of the dairy-processing companies; (UNDPA) and
- the Executive Director of the authority who, according to Section 11 of the Act, is appointed

by the Board of Directors

The Board of Directors' functions are spelled out in Section 10 of the Act, as follows: "Subject to the general supervision and control by the Board, the Executive Director is the Chief Executive Officer of the Authority with responsibility for the day-to-day operation of the organization; and in particular, for the management of funds, property and business of the Authority, as well as the administration, organization and control of the other officers and staff of the Authority."

The DDA's objectives, as specified in the 1998 Dairy Industry Act are, "to provide proper coordination and efficient implementation of all government policies which are designed to achieve and maintain self-sufficiency in the production of milk in Uganda by promoting production and competition in the dairy industry and monitoring the market for all milk and dairy products.

1. The DDA is specifically charged with facilitating the dairy industry to: raise incomes and living standards of small-scale farmers through increasing their returns in dairy farming;
2. achieve and maintain self-sufficiency in milk and dairy products and export the surplus;
3. increase production in an environmentally sustainable manner (productivity other than population of cattle); and
4. establish a liberal dairy market and enhance competition in processing and marketing."



### Trade and investment opportunities

- High potential to increase milk production through better storage, a stronger value chain and improved breeds
- Animal genetics: improving dairy breeds through cross-breeding through artificial breeding technologies.
- Quality animal feed, commercialization of forage production, conservation and marketing
- Quality veterinary services
- Milk handling and processing equipment
- Cold chain transportation trucks
- Agri-financing
- Large share of raw milk present opportunities for value addition
- Improved pastures/fodder crops and forage conservation
- CIP for milk tankers

## The DDA Executice Directors From 2000 - Todate



**DR. KANSIIME MICHAEL**  
Executive Director - DDA  
(June 2020-Todate)



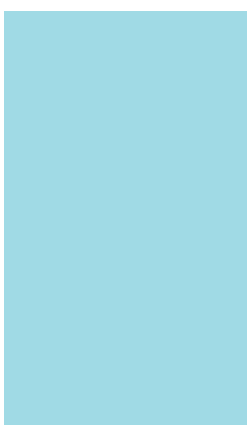
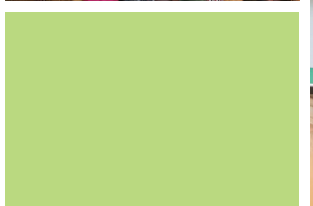
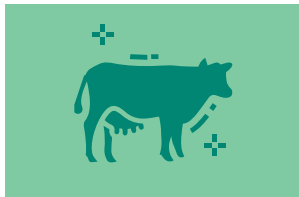
**DR. TWINAMASIKO NATHAN**  
Executive Director - DDA  
(Sep 2001-Oct 2010)



**DR. JOLLY K. ZARIBWENDE**  
Executive Director - DDA  
(March 2011-June 2020)



# DDA - What We Do



### Compliance to dairy standards and regulations

DDA carries out various interventions to ensure compliance to dairy standards and regulations, and as a result, the quality of raw milk and resulting milk products has improved, attracting more market both domestically and internationally.

### Inspection of milk handling premises and equipment

DDA routinely carries out inspection of milk handling premises and equipment and annually registers/licenses those that comply with standards and regulations. These include; large scale milk processing plants, Small scale plants/cottages, Milk Collection Centres and selling outlets and road milk tankers.

The inspection exercises ensures compliance to the dairy standards and regulations which in turn ensures that milk and milk products are of good quality, safe for human consumption and meet international standards for export purposes.

The same exercises have also led to establishment of mini labs at MCCS and selling outlets to carry out basic milk quality tests on raw milk delivered.



*Inspector crosschecking quality control documentation in the laboratory of the stakeholder*

### Market surveillances, milk and milk products sampling and analysis

In order to ensure that milk and milk products on the market are fit and safe for human consumption, DDA routinely carries out market surveillance visits to MCCs, raw milk selling outlets, supermarkets and shops for processed dairy products. Here raw milk samples and samples of milk products are sampled and analyzed for quality and safety.

### Training and capacity building for stakeholders

We continuously carry out trainings for dairy farmers in mindset change and good dairy farming practices for increased milk production and productivity and increased household income. In addition, trainings are also conducted for stakeholders in milk value addition, dairy processing standards, business entrepreneurship, product development and good manufacturing practices.

### Provision of dairy inputs



*Training of farmers in Bisanje, Masaka District*

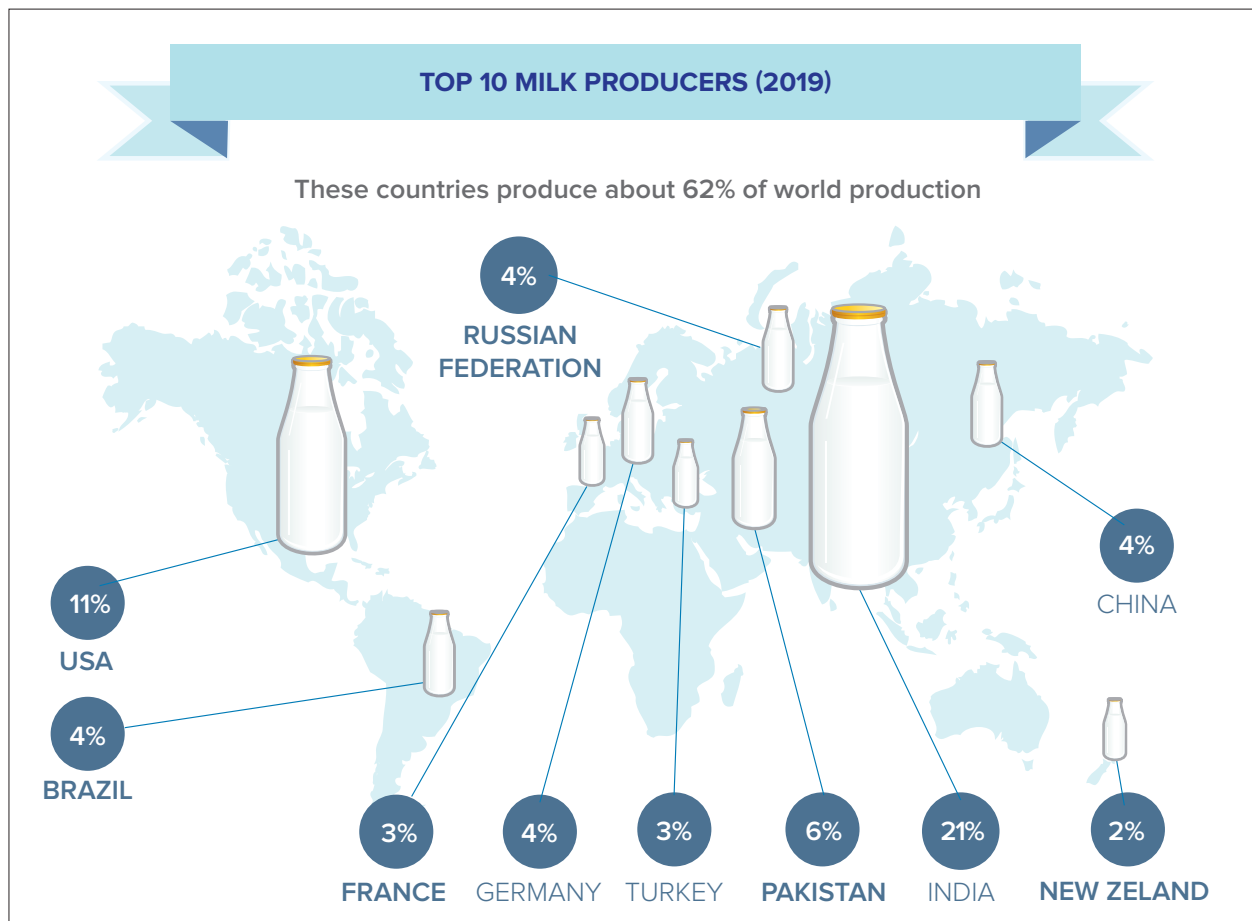
DDA supports farmers with seeds of nutritious pastures and pasture planting materials to improve the quality of the feed. Over the years we have given farmers items like calliandra, centrosema, chloris gayana, Lab lab, elephant grass, Brachiaria, sorghum and Mucuna seeds to different cooperatives and individual farmers for establishment of pasture demonstration farms and propagation for other farms to access the seeds.

In addition, DDA has also supported farmers with chuff cutters to aid in chopping fodder; milk cans, strainers, milk buckets, milking machines, tri-cycles, milk coolers and mini processing plants among others. These interventions have greatly reduced post-harvest losses along the dairy value chain and led to the improved industrialization of the dairy sector

### Increasing Milk Consumption

DDA in partnership with other stakeholders and development partners such as SNV-TIDE, dairy processors, dairy farmers' cooperatives, District Local governments, schools have been conducting a number of campaigns/programs to increase domestic milk consumption. One such program is the School Milk Program in partnership with SNV and National Steering Committee. (MOH, MOES and processors)

## Dairy Sector Global Outlook; Trends And Production



Source: Milk Facts FAO 2019.

The global dairy industry is one of the most important sectors in the global agriculture industry that deals with the production and processing of livestock milk consumed directly and processed into various dairy products such as cheese, butter, cream, yogurt, and curdled milk. With rising demand for dairy products and their proactive function in the global food industry, the dairy industry becomes an essential part of the growth of economies worldwide.

In the last three decades, world milk production has increased by more than 60%, from 530 million tonnes in 1988 to 852 million tonnes in 2019, with India being the world's largest milk producer contributing 22% of the global production. Despite the huge local demand for milk in Africa, the continent produces less than 3% of the world's milk, this is shocking for a continent with more than 10% of the world's cattle population. The top 10 leading producers of milk in Africa are; Ethiopia, Sudan, Kenya, Egypt, South

Africa, Zimbabwe, Nigeria, Uganda, Madagascar, and Tanzania. This makes Uganda the second highest milk producer in the East African region after Kenya.

### Dairy trade

The global dairy market size was valued at US\$ 673.8 Billion in 2018, and it is expected to reach a value of US\$ 1032.7 Billion by 2024, registering a Cumulative annual growth rate of around 8% during 2019-2024. However, the share of global trade in milk production remained under 10 percent, as exports constitute a small proportion of production in some of the milk-producing countries.

The increasing demand for dairy products is driven by the growing population, higher income levels, and rising health consciousness. The global market is primarily dominated by the milk segment, followed by the butter and cheese segments. The yogurt and

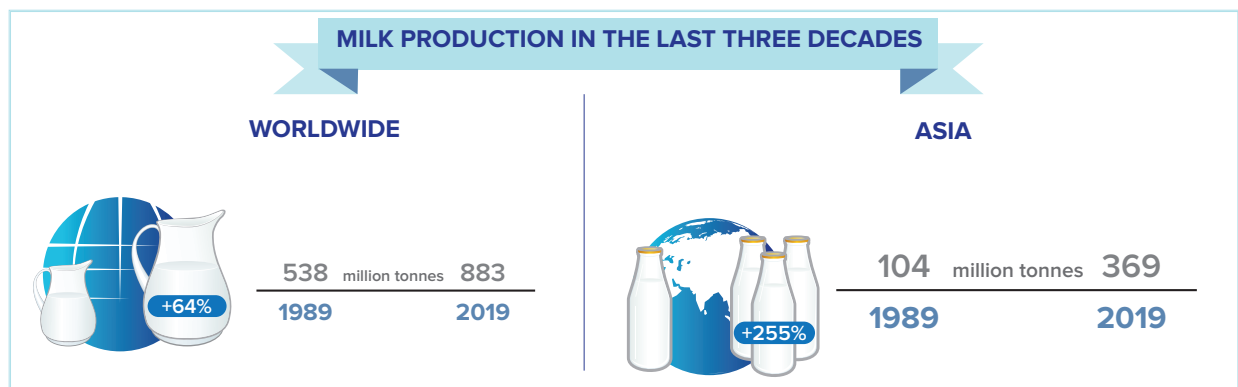
dairy desserts segments are expected to be the fastest-growing segments across the world.

The global milk exports reached 76.7 million tonnes in terms of volume, according to FAO, an increase of 1.0 percent from 2018, representing a relatively modest growth compared to the 3.2 percent expansion registered in 2018.

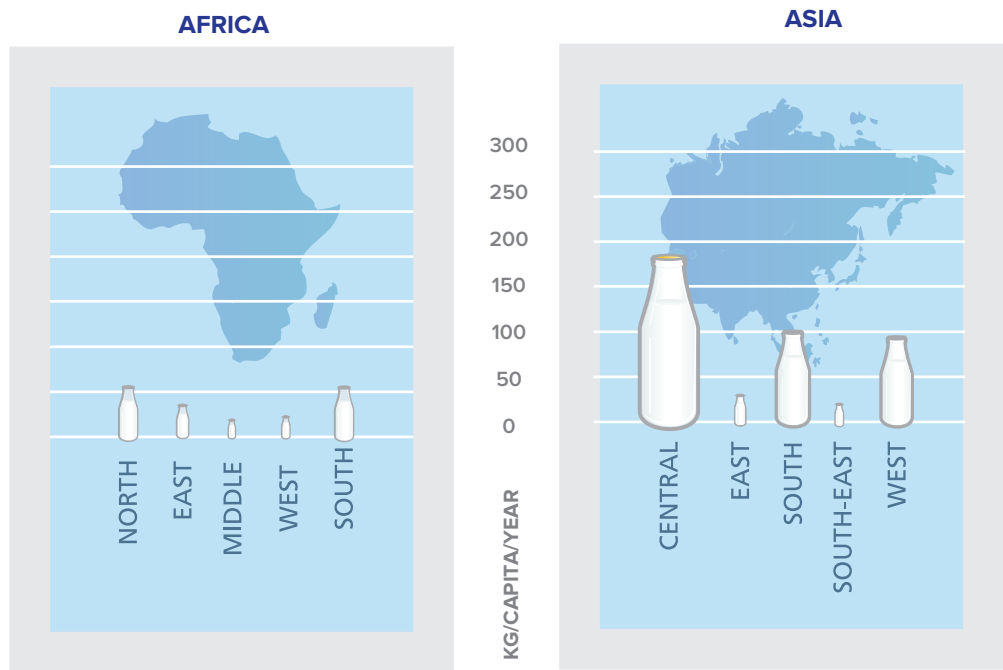
In Africa, although the leading dairy firms have adequate firm-level financial resources, and often have a large capacity in their processing plants and packaging capabilities, they often struggle with

capacity utilization: the insufficient supply of quality milk implies that most dairy processors operate below capacity, leading to high cost-per-liter processing costs.

China is not only one of the world's top 10 largest milk-producing countries but also the largest importer of milk and other dairy products in the world. The per capita consumption of dairy products in China keeps soaring rapidly over the past decade, mainly driven by the growth of China's economy and the rise in Chinese people's living standards. Other countries with the highest milk deficits are Italy, the Russian Federation, Mexico, Algeria, and Indonesia.



### PER CAPITA MILK CONSUMPTION\* (2018)



Source: Milk Facts FAO 2019.

## Domestic Dairy Data

Uganda's foreign trade in dairy products had been dominated by imports with little or no exports at all by the 1990s. However, the import of dairy products has been declining progressively over the years while exports have been on the rise reaching a level high of US\$ 102.6 Million in 2022 compared to imports of US\$4.1 Million. The only recent drop in exports recorded for the last 8-year period was in 2019/20 as a result of the Covid-19 pandemic disruptions. This decline was, however, followed by a registered growth of 11% in 2021/22.

The growth in exports is attributed to among other factors, the increase in milk volumes and the corresponding increase in the number of large-scale processors with a total installed capacity of 3.4 million liters. The dairy sector is slowly inching its way into Uganda's top exports, next to coffee and tea. The pull of the exporters is largely responsible for this astronomical increase in dairy exports over the last 7 years from US\$28.68 million in 2015 to US\$102.6 million in 2022. Uganda's Dairy exports accounted for 1.8% of the total export earnings by April 2022.

There has been an increase in the number of dairy products processed and exported over the years

with the top nine being UHT long life, Yoghurt, Milk powder, Pasteurized milk, Cheese, Ice cream, Casein, Ghee, and Butter.

With the increased compliance of Uganda's milk and dairy products with the international standards, the export destination countries have as well increased and attracted market from countries such as the USA, India, Japan, Turkey, Oman, Kenya, Egypt, Ethiopia, Tanzania, South Sudan, DRC, Algeria and Malawi as the major export destination countries.

Based on current market predictions, dairy exports from Uganda are likely to reach US\$160 million in 2026, this will make Uganda one of the top dairy exporters in Africa.

In context with the world's milk production which increased by more than 60% over the last three decades, Uganda's milk production has increased by 776.7% from 1991 to 2022 with an estimated 3.21 Billion liters annually by 2022. The last 10 years specifically have recorded significant growth from 1.9 billion liters in 2013 to 3.21 billion in 2022 growing at an average of 7% per annum. With this growth trend, milk production is estimated to reach 3.4 billion in 2023/24 as per DDA's 5-year strategic plan target.

### Milk Utilization:

- Out of the 2.8 billion litres of milk currently produced, 80.2% (2,245,600,000L) is marketed (sold/exchanged for money),
- 19.8% (554,400,000L) is consumed at the farm,
- 66% of the marketed milk is sold unprocessed (1,482,096,000L) of which 10% (148,209,600L) is sold door-to-door (homes) and 56% (1,333,886,400L) is sold at sales outlets.
- 34% of the marketed milk is processed (763,504,400L) into various milk and milk products including pasteurized milk, yoghurt, UHT milk, cream, ice cream butter, ghee, cheese, milk powder, casein, whey powder and butter oil.

Milk Production in Billion (000,000,000) litres

2003	2008	2013	2018	2022
1.1	1.40	1.91	2.51	3.21

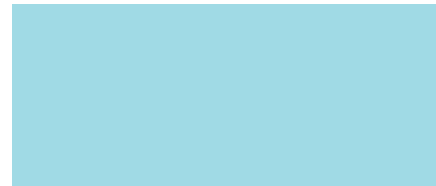
Contribution of dairy sector to GDP

Trends	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Value (UGX)	Shs 276 b	Shs 287.4 b	Shs 196.5 b	Shs 358.6 b





# Regional Spotlight



## How to Apply for a DDA Licence Online



- 1** Go to [Singlewindow.go.ug/stp/#/](http://Singlewindow.go.ug/stp/#/)
- 2** Click Sign up, and register to use the system. (Use the Company's TIN to register)
- 3** Sign in the system using registered details.
- 4** After successfully logging in, choose Dairy Development Authority
- 5** Choose category of licence you are applying for, and fill all the other required fields.
- 6** Submit your Application

The application will be received by DDA and work on it  
 You will be able to print your certificate immediately after payment  
 You will receive a notification with assessment to make payment to URA

For any inquiries please contact Dairy Development Authority  
 Tel: +256 414 343 901  
 Tel: +256 702 629 962

## South Western



*Dr. Bright Rwamirama (MOSAI) and Dr. Michael Kansime (ED DDA) handing over milk cans to a group of farmers at the DDA South Western Regional Office*

South-western Regional Office was operationalized in FY 2011/2012 and comprises of 4 sub- regions which include: Ankole, Kigezi, Rwenzori, and part of Buganda, comprising of 30 Districts and 2 Cities. The districts per sub-region include; Ankole: (12) i.e. Mbarara, Rwampara, Isingiro, Ntungamo, Kazo, Kiruhura, Ibanda, Bushenyi, Sheema, Mitooma, Buhweju and Rubirizi; Kigezi (06) i.e. Kabale, Kisoro, Rubanda, Rukiga, Kanungu, Rukungiri; Rwenzori (09) i.e. Ntoroko, Bundibugyo, Kabarole, Kyenjojo, Kyegegwa, Bunyangabu, Kasese Kamwenge and Kitagwenda. Buganda; Lyantonde, Rakai and Kyotera.

Cities; Mbarara City and Fort Portal Tourism City.

Municipalities (8) (i.e. Sheema, Bushenyi-Ishaka, Ibanda, Ntungamo, Rukungiri, Kabale, Kisoro and Kasese).

### Weather Patterns

Southwestern Uganda is sunny most of the year with temperatures rarely rising above 29 degrees Celsius (84 degrees Fahrenheit). The average annual temperature is about 26 degrees Celsius (78° Fahrenheit). The Region experiences two rainy seasons (long and short) and two dry seasons (long

and short). The long rainy season is from September to December, while the short rainy season is from March to May.

The long dry season is from June to August and the short one is from December to February. The dry seasons severely affect milk production, reducing the volumes of milk collected and marketed by about 55%, and there are also instances of cattle death due to scarcity of pastures/feeds and water during the dry season. DDA routinely sensitizes and supports farmers to do fodder establishment and conservation inform of silage and hay and to do water harvesting and storage for this period.

### Cattle population

The cattle population in the Region is estimated at 3.35 million heads of cattle and out of this 44.9% is comprised by Ankole sub-region, 22.9% -Rwenzori, 17.8% -Kigezi and 14.4% from the other districts.

### Milk production

The annual milk production in the Region is estimated at 1.28 billion Litres/ annum (46% of the National milk production) with 3.63 million litres/ day being

produced in the wet season and 1.82million litres/day being produced in the dry season. (DDA Cooler census, 2018).

Majority of the dairy farmers in the region depend on natural weather and natural grazing for milk production. DDA through the Regional Office and other development partners have continuously sensitized farmers on improving pasture and fodder production and supported the farmers with pasture planting materials like pasture seeds of Chloris gayana, Centrocema, Lablab, brachiaria, Napier, sorghum e.t.c for the farmers to grow during the rainy season and conserve for future use during dry periods.

### Milk collection and marketing

There are 235 Dairy Farmers' Cooperative Societies in the region, with 174 active and 61 non-active ones. The region has 534 milk collection centers and selling outlets with 696 milk coolers and total installed capacity of about 2 million liters (cooler census 2018). Most of the milk in the region (66%) is marketed through informal channels (not processed), while the rest (34%) is marketed through formal channels (goes through processing).

### Milk transportation

Milk transportation from the farms to the MCCs is mostly by use of aluminium or stainless steel cans tied on motorcycles or bicycles. Transportation from MCCs to processing plants is mostly by use of road milk tankers and some by pick-up trucks. There are currently 151 raw milk road tankers plying the region, transporting milk from MCCs to processing plants. There has been a significant reduction on use of jerry cans and other plastic containers to transport milk, courtesy of continuous sensitization and enforcement exercises by DDA South Western Regional Office.



*School children being served porridge mixed with milk*

### Milk Processing

There are 7 large processing plants in the Region with total processing capacity of about 2 million liters per day. Industrialization of the dairy sector has greatly increased in the region evidenced by the increased number of upcoming cottages and small-scale processors which totals up to 57, mostly run by both youth and women groups among other stakeholders.

The large processing plants in the region are the following;

Amos Dairies Ltd in Kiruhura (700,000 ltrs),  
GBK Dairy Products in Mbarara City (60,000 ltrs),  
Pearl Dairy Farms Ltd in Mbarara City (840,000 ltrs),  
Lake side Dairies in Mbarara City (300,000 ltrs),  
Vital Tomosis in Kiruhura (100,000 ltrs),  
Birunga Industries Ltd in Kisoro (30,000 ltrs) and  
Sanatos Foods Ltd in Mbarara City (10,000 ltrs).

The products processed include; UHT milk, yoghurt, casein, ghee, butter, whey permeate powder, whey permeate concentrate, milk powder and cheese. Amos Dairies is putting up a UHT line of approximately 100,000 litres capacity.

### Farm gate milk prices

Milk farm gate prices continue to fluctuate over the years depending on the seasons. However, there has been a significant increase in farm gate milk price over the last ten years from the lowest average of Shs.400 to average of Shs.800 per litre during the wet season and from the highest average of Shs.700 to Shs.1,400 during the dry season.

Quality Based Milk Payment System is a processor-led milk payment system piloted in southwestern region from 2016-2018 in partnership with SNV-TIDE with the aim of improving milk quality. It involved three processors; Pearl Dairy Farms Ltd, Lake Side Dairy and Sanatos Foods. Besides quality

improvement, the involved cooperatives benefited from bonus payments for superior milk quality supplied, increased milk volumes and an increased attractiveness in the market.

The bonus paid to farmers amounted to Ugx 271,429,633 and this necessitated DDA to develop National guidelines for scaling up. To date 08 milk processors in the region are participating in the QBPMs and this has greatly improved milk quality. A total of 15 milk analyzers have been installed at the MCCS, processors and DDA Regional Laboratory to support this initiative and more milk analyzers are yet to be acquired and installed.

### Key achievement of QBPMs

- Improvement of the quality of milk marketed within the chains involved.
- Reduced post-harvest losses as result of improved milk handling practices
- Increased milk volumes and an increased attractiveness in the market
- Improved collaboration among stakeholders Suppliers benefited from bonus payments



*DDA farmers training farmers in pasture establishment for hay making at one of the model farms in Kiruhura*

Processor	Total bonus paid (Ugx)	MCCs paid bonus
Pearl Dairy Farms Ltd	256,717,983	Nabitanga DFCS, Kikatsi DFCS, Kashaka DFCS, Kabula DFCS
Lakeside Dairy Ltd	4,000,000	Mutanoga DFCS, SUMPICA, Abetsigana-Kashari DFCS
Sanatos Food Ltd	10,711,650	Sanatos suppliers
Grand Total (Ugx)	271,429,633	

### Inspection of milk handling premises and equipment

In the last financial year 2021/2022, South Western regional Office inspected a total of 598 premises and equipment, among which 456 complied and were registered and issued with operating certificates/licenses.



DDA inspectors undertaking a spot check on a milk tanker

### Market surveillances, milk and milk products sampling and analysis

In the Financial year 2021/2022 alone, a total of 1,419 samples (780 processed products and 639 raw milk) were sampled and analyzed for quality and safety. The results indicated that milk and milk products were safe for human consumption. DDA continues to urge the stakeholders to desist from the habits of adding water in milk and cream separation so as to ensure continued quality milk marketing that will continue attracting a competitive market both locally and internationally.

### Regional milk testing Laboratory

With funding from the Government, South Western Regional Office operates a regional milk testing laboratory. This has been equipped with apparatuses and reagents to carry out many test parameters such as: Milk fat in raw, pasteurized, UHT milk; Composition (fat, Solids-Non-Fat, added water, freezing point, protein and lactose); Milk adulterant tests (Formalin, Neutralizers and Hydrogen peroxide etc); Antibiotic residues in milk (Qualitative); Aflatoxins M1 in milk (Qualitative) The laboratory has a state-of-the-art Mobile Laboratory Van which assists in carrying out on-spot milk testing at farms, sales outlets, milk collection centers and processing facilities.

### Training and capacity building for stakeholders

In the financial year 2021/2022, a total of 2,768 Stakeholders that included farmers and small scale/cottage processors were trained in various aspects that included; good dairy farming practices, climate smart dairy farming (hay and silage making, group dynamics and breeding technologies, hygienic milk handling; dairy processing standards, business entrepreneurship, product development and Good Manufacturing Practices (GMPs).

This has led to transformation of the dairy sector in the region from nomadism to paddocking and most recently increasing number of zero grazing farms. We have witnessed a number of youths who have taken up sale of silage and hay as a business in the region and the introduction of Practical Dairy Training Farms that offer practical learning experience to stakeholders.

### Milk consumption promotion

DDA south Western Regional office, in partnership with other stakeholders and development partners such as SNV-TIDE, dairy processors, dairy farmers' cooperatives, District Local governments, schools have been conducting a number of campaigns/programs to increase domestic milk consumption. Key among these is the School milk consumption program, June dairy month celebrations, and radio and TV talk shows.

## Mid Western



*Hon Bright Rwamirama together with DDA Executive handing over forage choppers to dairy farmers in Kiboga District at the launch of clean milk production campaign.*

Mid-western regional office was established and operationalized on 1st July 2021. The office oversees and coordinates all dairy development and regulatory activities in twelve Districts and one city. These are: Kiboga, Kyankwanzi, Masindi, Kiryandongo, Kikuube, Buliisa, Kagadi, Kibaale, Kakumiro, Mubende, Kassanda and Hoima City. Four of the Districts (Kyankwanzi, Kiboga, Mubende) and some parts of Masindi are located in the cattle corridor of Uganda. The three Districts of Kyankwanzi, Kiboga and Mubende respectively are the leading milk producers out of the twelve that make up the region. The region has 2 municipalities of Mubende and Masindi.

The region is located in the Midwest milk shed and is dominated by Ankole long horn followed by dairy crosses (mainly Friesian) then East African Zebu with an estimated cattle population of 1,106,816 (source UBOS, 2008). This region contributes approximately 12% milk production to the annual total milk production in the country which translates into (336m litres)

The region is strategically located around the Hoima Oil City and upcoming Hoima International airport

in Kikube District with improved road network due to oil exploration activities, the region has great potential for increased domestic market for milk and milk products.

This region is currently more developed at the node of primary production, milk collection and less at processing and value addition. The leading market buyers of raw milk from the region is Jesa Dairy Farm Ltd, Brookside Ltd and Sibyangu Dairy supply Ltd that is privately owned by the leading raw milk trader.

The region has two milk bulking centers, 96 MCC's with daily collection capacity of 466,650 litres of which 32 are owned by organized farmer institutions and the rest are privately owned by sole proprietors. There are over 60 milk tankers that are privately owned which evacuate milk from these milk collection centers and transport it to either established factories in Kampala or distribute it to raw milk sales outlets in cities and municipalities where milk is sold in raw form.

The region is still lagging behind in milk processing and value addition with only 11 small and cottage dairy processing plants that mainly process yoghurt and cheese. It therefore presents a unique investment

opportunity for potential investors to set up huge milk processing factory in Hoima or Kyankwanzi due to the huge market as results of oil activities. The region in collaboration with NAADS has distributed 20 milk coolers with an installed capacity of 1 million litres and two mini dairy processing plants which are not yet operational.

These mini dairy processing plants will stimulate milk production in Kiboga and Kyankwanzi and enhance the competitiveness of dairy products for better market access.

In the last two years of establishment of Midwestern regional Office, a total of 2013 dairy farmers have been skilled in best dairy husbandry practices with the focus on the following pillars:

- Capacity building of farmers in pasture establishment and conservation

In order to mitigate the challenges of prolonged dry spells that affect forage and feed for dairy farmers, the region has promoted pasture establishment and conservation for dry season feeding through silage and hay making.

In the last two years the region has distributed over 500kg of both legume and grass varieties of pasture seeds and cuttings to 24 organized dairy farmer groups in the twelve Districts of the region .The region has trained over 300 model dairy farmers in establishment of pasture multiplication and has distributed 10 labor saving forage chuff cutters to 10 farmer cooperatives.

- Prevention and control of cattle diseases that affect milk production and productivity

Dairy cattle diseases especially tick borne diseases and some cases of outbreak of Foot and Mouth Disease continue is still a challenge in the Districts that lie in the cattle belt. The region in partnership with District Production Department especially office of the District veterinary Office have prioritized extension and advisory service with emphasis on disease prevention.

The region has carried out extensive training of herdsmen and farm managers on mastitis detection, control and management because it causes a lot of economic loss since it affects the udder of dairy herds. In this regard, the region has distributed over 70 strip cups used in detection of clinical mastitis over the years.

- Breed and genetic improvement of dairy farms  
A number of dairy farmers have down sized their large Ankole herd size and purchased cross breeds and also embraced artificial insemination. The region has since profiled and veted 15 artificial inseminators from the District of Kibale, Kagadi and Kikube and submitted them to NAGRIC for capacity building to offer services of breed improvement to farmers.

- Training of dairy farmers and milk handlers in hygienic milk production

Over 1000 farmers and milk handlers have been equipped with knowledge and skills in clean milk production, milk testing, cleaning and sanitization of dairy equipment. In the past farmers were



Privately owned MCC and milk tanker at Yonak Farm in Mubende



*DDA staff training farmers on pasture*

experiencing high post-harvest losses on farm and during transportation due to inappropriate practices like, use of unsuitable containers, incomplete milking, inadequate knowledge in hygienic milking procedures. Over 200 milk cans, 40 measuring scoops and milking buckets have since been distributed to the farmers to promote adoption of use of food grade containers that are easy to clean.

- Strengthening Dairy Farmer institutions to enhance their bargaining power in milk marketing

40 Organized farmers' institutions including cooperatives, groups, and associations have been supported and strengthened in the last two years with membership of 2762 farmers. Our training ensures gender inclusiveness and cross-cutting issues and as such 3 youth groups and 4 women groups have been empowered to form associations for purposes of promoting commercial dairy farming, value addition and commercial feed production.

- Supporting Dairy Producer organizations to transition into milk processing

The region supported Kyankwanzi Processing Group and Dwaniro Dairy and Livestock Cooperative Society Ltd with soft skills, business plan and knowledge in value addition in preparation to run the mini dairy processing plants procured by the Government of Uganda through NAADS. These processing plants will be the first pilot in Kiboga and Kyankwanzi and will contribute to reduced post-harvest losses and help in price stabilization.

### Conformity Assessment Activities

With over 120 raw milk sales outlets, 98 milk collection centers, 2 bulking centers, 11 small scale processors

and over 60 road milk tankers, a number of quality assurance interventions are regularly undertaken by the region to ensure that the general public has access to safe, wholesome and quality milk at all times.

It has also boosted consumer confidence and stimulated milk processing because of reliable quality raw milk. This improvement in compliance can be attributed to the following conformity assessment activities regularly undertaken by the region.

### Registration and certification of Dairy Businesses

In the last two years the region registered 307 milk handling premises and subsequently issued them certificates of conformity. A number of stakeholder engagements in form of training, public awareness on the implications of trading in milk without certificates of registration have been undertaken through community radios, bulk SMS, noticeboards of farmer institutions and this has subsequently improved compliance in regard to registration. As a result of registration over 50 million Uganda shillings has been collected and sent to government coffers.

### Inspection of Dairy premises

Over 750 inspections were carried out in the last two years and a total of 400 milk handling premises and equipment were inspected and out of these 307 were registered and issued certificates of registration which represents 76% compliance. The 26% did not meet minimum registration criteria mainly due to premise suitability, unqualified milk handlers and processing products that do not meet product specification standards like microbial limits.

### Analysis of Milk and Milk Product Samples

In the last two financial years, a total of 1,393 milk and milk product samples were analyzed in the Midwestern region. These were mainly raw milk samples where the composition, quality and safety parameters were determined using rapid test methods. In terms of microbial quality, the freshness test was done using ethanol at 80%, while adulterant rapid test kits were used to determine chemical adulteration. Overall, results of analysis indicated that milk produced in the Mid-western region is safe because no chemical adulterants were detected in the last two years.

### Conducting Market Surveillance in supermarkets, shops, groceries and factories

24 market surveillance visits were conducted by the Midwestern regional office in the previous two financial



years to ensure that the milk and milk products on the market meets product standards, packaging and labeling requirements and that only safe and quality products are on shelf. Through these surveillance visits, 6 new processors without certified products were identified and given feedback to formalized registration and certification of their products. Over 100 attendants of supermarkets and groceries have been sensitized on product handling, storage conditions and vigilance of not marketing un certified dairy products.

### Training stakeholders in value addition and milk processing

The region has skilled and trained of over 120 youth, women and people with disabilities in dairy value addition mainly yoghurt production in the District of Kyankwanzi, Bulisa, Kikube, Hoima and Masindi. These include Kwankwanzi Processing Group, Kyenda Women's Development Group, and Rubaale Tukundane Womens Development Group in Kyankwanzi ditrict; Lwenyana Womens Development Group in Buliisa; and Tukoole Youth Group in Kikuube District. Out of this training Kyankwanzi processing group has since benefited from mini dairy processing plant of 250L capacity per hour of processing and this will contribute to reduced post-harvest losses and increases household incomes. Also trained were Yojoy yoghurt and precious yoghurt in Masindi District. Yojoy yoghurt has since attained a mark of quality by UNBS. Therefore, skilling and training stakeholders in value addition to promote cottage industries will be our strategic focus as a region to provide market for farmers's milk for stabilization of farm gate prices



Farmers delivering milk to a milk collection center

### Capacity building of milk assistants in milk testing and awareness creation on dairy standards

The region has trained and skilled over 400 milk vendors milk assistants and center managers in milk testing, standard operating procedures during milk reception and created awareness on specific dairy standards FY 2020/21 and FY 2021/22 to enhance

compliance to the dairy standards and regulations. A total of 25 packs of milk testing kits (lactodensimeters, measuring cylinders) and two automatic milk analyzers were distributed to 27 milk collection centers that are both private and farmer owned. This has enhanced testing capabilities of to receive quality milk at MCC and has subsequently reduced number of milk rejections at factories.

### Investment opportunities in the region

1. Increase in urbanization and population growth, improved road network, oil exploration and airport construction in the region will increase demand of milk and milk products
2. The region boasts of large volumes of good quality milk that can support a large scale dairy processing facility in line with the Agro-industrialization programme.
3. There is an opportunity to invest input supply shops for provision of critical inputs along the dairy value chain like milk cans, milk testing equipment, forage cutters, milk coolers
4. Availability of a commercial feed production. This will bridge the gap of the growing demand for animal feed and also ensure its safety. .
5. Increased Government support and funding particularly with the launch of PDM. It is expected that funds will be availed at the lower nodes of dairy value chain which will be invested in the sector

### Priority areas of focus for the region in the next five years

1. Rehabilitation of DDA property in Hoima city to a modern value addition center of Excellency to promote entrepreneurs and business incubation in milk processing.
2. Increase skilling and training of youth in commercial animal feed production to bridge the gap of lack of animal feed in dry season
3. Promote value addition at primary producer organization cooperatives to reduce over reliance on big processors who dictate price of milk
4. Promote milk consumption campaigns in the region among the population through partnership with development organization and District local government
5. Promote voluntary compliance to dairy standards and regulation by scaling training in milk testing and forming self-regulatory groups at parish level to monitor milk adulteration
6. Establishing model dairy farms at parish level in partnership with progressive farmers to act as centers for transfer of knowledge in best animal husbandry practices

## Regional Spotlight: Central



DDA staff inspecting Nabiswera Livestock Cooperative Society (LICOS) before rehabilitation

### Geography

The region undertakes its mandated activities in Nineteen Districts namely; Kampala, Wakiso, Mpigi, Mukono, Kayunga, Buikwe, Buvuma, Mityana, Butambala, Kalungu, Kalangala, Masaka, Lwengo, Bukomansimbi, Sembabule, Gomba, Luwero, Nakaseke, and Nakasongola Districts all belonging to the central milk shed which contributes 30% of the total milk production in the country. The region largely shares the Lake Victoria shores and is crossed by the Equator. It has a Population: 9,529,227 people

### Overview of Dairy Sector in the Central Region

The dairy sector in the region has undergone significant transformation and growth in terms of milk production, collection and bulking, milk transportation, processing, marketing access (export and imports) as it provides market for others regions with in the country. The region produces over 30%

of the total milk production. It has over 35 Dairy Processing plants, over 127 milk transporters, 3 dairy Equipment importers, Over 47 dairy farmers' groups, and 24 importers of milk and milk products among others. The average milk productivity in this region is 10 liters per cow per day.

### Uniqueness of the central Region

The central region contributes 30% to the total milk production in the country; it offers over 80% of the market for raw milk and milk products, with the percapita consumption rate at 63L, it has a high concentration of raw milk sales outlets both coolers and freezers as well as outlets for processed milk products. This calls for high gear development and regulatory services to safeguard the consumers' health and improve profitability of the business. The central region has overtime embraced the use of technology in its operations to increase its effectiveness, for example online registration,

mapping of farms, cooperatives and dairies on the GPS server.

### Cattle breeds and milk production in the region

The predominant dairy production systems in the central region include; zero grazing, which is the most intensive of all the dairy production systems in the region, the semi-intensive, where there a combination of grazing of cattle as well as supplementary feeding. Lastly, the Extensive system of grazing and animal herding with or without paddocking (the latter being-free range grazing), is the last category of production system that is employed in rearing cattle.

A variety of cattle breeds are kept in this region, these include; the local breeds (zebu and ankole) which have the lowest milk production, the exotic animals; the Holstein- Friesian breed, the Jersey breed, the Guernsey and Ayrshire, are found on the majority of milk producing farms in the region due to their high milk production potential. The majority of the cattle reared are crossbreeds between the exotic and the local animals. Number of cattle kept varies greatly from just a few animals to several hundred animals depending on the production system. Annual milk production in central region currently stands at 875 million liters, as of 2021.



*Inspection team checking on the finished products in chiller room at Jesa Farm Dairy*

### Activities undertaken in the region

#### Inspection

During inspection, the following are evaluated: location, premise design, walls, ceiling, floor, drainage, lighting, ventilation, water supply, waste disposal, personal hygiene, medical examination, cleanliness, facilities, equipment, equipment installation, cleaning of equipment.



*DDA inspectors carrying out market surveillance in supermarkets*

Furthermore, during inspection exercise, the inspection team checks the relevant documents related to the quality and quantity of raw materials, temperature of the product/cold storage, cleaning schedule, type of chemicals used, quantities of chemicals utilized, source of chemicals, medical certificates of workers, fumigation records, service provides for waste management, packing material, production records and quality records.

### Processing Companies In Central Region

The region has processors of varying sizes up to a capacity of 450,000 litres. Jesa Farm Dairies at 200,000 and Brookside with capacity of 450,000 litres are the largest processors

199 milk coolers are registered in the region with capacities ranging 2,000 to 51, 000 litres. In addition to this are 406 Freezers, all of which are regulary inspected.



DDA officers undertaking inspection in Lubaga division, Kampala

**DATA OF MILK COLLECTING CENTRES IN THE REGION**

No	Location	No. of Coolers	Capacity, L
1	Sembabule	33	154,110
2	Gomba	16	61,400
3	Nasongola	11	44,500
4	Nakaseke	35	197293
5	Kalungu	1	3000
6	Buikwe	1	2000

The business categories registered in central region include;

- Importers for milk and milk products
- Importers for Dairy equipment
- Importer for starter culture
- Exporter of milk and milk products
- Operate Coolers
- Operate Freezer
- Milk transporter
- Milk processors

**STATISTICS SHOWING REGISTERED STAKEHOLDERS FOR FY2021-2022**

No	Categories	Total
1	Large processors	12
2	Small scale processor	15
3	coolers	634
4	Freezers	250
5	Importer Starter culture	1
6	Importer Dairy equipment	3
7	Importer of milk and milk products	23
8	Exporter of milk and milk products	9
TOTAL		947

**Note:** The data in the table above involves stakeholders registered in the whole country.

**Training of dairy stakeholders;**

In order to effectively develop the dairy industry, DDA carries out trainings of dairy stakeholders for

capacity building towards recommended dairy practices. All stakeholders along the dairy value chain are considered during these trainings and dairy production related data is also collected.

Farm visits are also a unique aspect of the trainings. A selected farmers' farm is visited and activities are carried out physically for hands on skills as well as offering technical advice to help this farmer improve, the visits involve DDA training team, fellow farmers and local government extension workers. Training materials are also distributed in the local language for further reference.

### Trainings:

**Farmers:** Clean milk production; Dairy animal feeds and feeding; Farm structures and buildings; Calf management ; Dairy breeds and breeding ; Cooperative leadership and management; Farm records and record keeping; Pasture establishment and management; Dairy Animal diseases and their control; Farm vector and vermin control

**Transporters:** Milk quality; Raw milk quality tests; Standards for transporting milk and milk products; Hygiene practices

**Processors:** Quality of milk and milk practices; Standards for processing milk; Code of hygiene; Good manufacturing practices; Defects in dairy processing

Farmers' trainings usually take place at the cooperative level to ensure that a large number of stakeholders are reached and that these stakeholders further influence others to adopt modern proven dairy farming practices for improved production and productivity.

Within central region, farmers' training's have covered areas with many cooperatives, high milk production but with low productivity levels, these include; Sembabule, Masaka, Kalungu, Gomba, Mpigi, Mityana, Nakaseke, Nakasongola, Luweero, Kayunga, Wakiso, Mukono, Buikwe and Kyotera

A total of 23 farmer groups and 1,069 individuals have been trained since 2021.

### Arbitration

The authority has a role of arbitration which involves negotiation and reconciliation skills in conflict resolution between any conflicting dairy related parties for example, Dairy processing companies

vs Farmers' cooperatives. This may be due the termination or breach of a contract/agreement for the supply of a given quantity of milk, payment, marketing or quality of milk supplied. DDA in this case is expected to give a fair and balanced verdict which will not negatively affect the dairy business.

### Milk Collection Centres

Central region contributes 30% of the 2.8 billion litres of milk produced annually and it has over 88 Individually owned milk collection centres (MCCs), 28 Dairy Farmer's Cooperatives with milk Collection Centres (MCCs) and 9 Evolving Dairy Farmer's Cooperatives with MCCs but require more support.

Furthermore, the amount of milk that leaves the farms into both the formal and informal market stands at 80% of the total production, this calls for increased investment in milk collection to meet the increasing demand.

In order to address these gaps, DDA has greatly strategically invested in the rehabilitation and equipping of milk collection centres within the central region. We support 12 MCCs with a capacity of 5,000 litres in the districts of Kayunga, Nakasongola, Nakaseke, Gomba and Sembabule.

### Pasture improvements

Feeds represent 60-70% of the total dairy production costs; natural pastures have increasingly become unreliable and with low nutritive value hence being unable to sustain dairy production. In order to create a sustainable fodder resource base, DDA introduced modern high yielding varieties of pastures which are highly nutritive and can be conserved for feeding in times of scarcity through feed conservation technologies of silage and Hay.

These pasture varieties include: Chloris gayana; Bracharia spp; Napier; Centrosema; Calliandra; Lab lab

Propagation materials for the above pastures include seeds and cuttings. These are distributed after ensuring that they are free from diseases and have passed the germination test. These pasture seeds and planting materials are distributed to strategically selected farmer groups or community farms where mother gardens are established. Areas where mother gardens have been established include Mukono district, Nakaseke district and Luweero district.

DDA also trains the farmers to make silage and hay from these pasture varieties which can be conserved for dry season feeding to ensure constant milk production during all seasons. These pasture varieties have the following advantages compared to the natural pastures;

- Ability to withstand trampling by feeding animals
- Ability to withstand drought
- High palatability / tasty to the animal
- Nutritious
- High digestibility
- Provide an economical source of livestock feed
- Reduce invasions of noxious and poisonous weeds

**Provision of dairy inputs:**

As one of the interventions for increased access to quality inputs, DDA central region distributes dairy inputs to dairy stakeholders along the dairy value chain. These inputs act as demonstration materials or bench marking inputs for the different stakeholders for improved standards. Some of the quality inputs distributed include; Milk cans; Milking buckets; Pasture seeds and planting materials; Chuff cutters; Milk pumps and food grade horse pipes; Milk coolers; Alcohol and alcohol guns; Lactometers, Ethanol, measuring cylinder, beaker

**Future plans that DDA/GOU has for DDA central region**

The road map to Agro- industrialization of the dairy sector under the Parish Development Model will focus on the following priority areas of DDA for the central region; Increasing production of milk to address seasonal supply gaps in the dry season; Forming and strengthening farmer groups; Promoting milk production and consumption milk and milk products; Registration of Dairy Businesses; Enhance quality and safety of milk and milk products through enforcement and incentives; Reduce Post Harvest losses along the value chain, and promotion of local based processors; Promoting production-processing linkages and value addition; Improve transport infrastructure and logistics services; Increasing the demand for Ugandan milk and dairy products; School milk feeding parent led school milk program that will be implemented in in Kampala metropolitan districts that include Kampala, Mukono and Wakiso; Quality based payment system (QBMPS) with the goal to produce and avail good quality and safe raw milk that would translate into competitive milk and milk products in terms of compliance to dairy standards and regulations.



*Stakeholder witnessing the testing of her raw milk sample*

## Eastern



Mr Colin Mutungi, Director Finance and Admin (Center) with DDA staff at the launch of the Parish Development Model program in Kibuku District, Feb 2022

DDA Eastern Region comprises of all districts, cities and parishes under the two sub regions of Busoga and Bukedi found in the South Eastern part of Uganda.

Busoga sub region comprises Eleven districts and one city ( Mayuge, Kamuli, Buyende, Luuka, Iganga, Bugiri, Namayingo, Bugweri, Namutumba, Kaliro and Jinja City) which stretches immediately North of the equator, bordered by Lake Kyoga to the north, the Victoria Nile to the west, the Mpologoma River to the east, and Lake Victoria to the south. Busoga is 3,443 square miles (8,920 square kilometers) in area, with a length of about 160 kilometers and a width of a little over 80 kilometers.

Bukedi sub region comprises seven districts (Budaka, Butaleja, Butebo, Pallisa, Kibuku, Tororo and Busia) stretching from the low-lying foot of mount Elgon to the shores of lake victoria to the southern shore of lake kyoga with a total land area cover of about 845.5 square kilometers.

The region has one of the best weather and vegetation patterns that favor dairy farming with a bi-modal rainfall pattern of two annual seasons (i.e. March to June and August to November) with maximum peaks during May and October ranging between 1130mm and 1720 mm with minimum and maximum temperatures ranging between 16.20C and 28.70C respectively. The vegetation is predominantly grassland with swampy vegetation and few forest covers and very fertile soils conducive for pasture growth.

### Cattle population, Dairy herd and milk production

According to the National Livestock Census Report, 2009 by MAAIF and UBOS, the region had a total cattle population of 1,215,755 (1,085,510/96% local and 130,245 exotics/crosses) of which 130,245 cattle were milked in 2008. This census also revealed that the region had a total population of 1,443,928 goats of which 4,391 were exotic/ crossed dairy breeds and 94,640 sheep. It is currently estimated that over 95% of the cattle population in the region are of local breeds (predominantly the East African short horned zebu and intermediates of Nkedi, Nganda and kyoga). Majority of dairy farms rely on production from crossbreed exotic dairy breeds with the black and white Friesian Holstein and jersey dominating followed by fewer Ayrshire and Guernsey breeds.

It is estimated that the region produces approximately 9% of the National total milk production (DDA, 2019) with most of the milk production coming from the districts of Buyende, Kamuli, Kaliro, Luuka and Pallisa respectively.

Average daily milk production per cow from local cows in the region is less done 2 liters while that from the dairy cross breeds is 5.59 in the morning and 4.23 for evening making a total of 9.82 (DDA strategic plan 3).

### Interventions to increase milk production and productivity

Eastern region is considered a milk deficit region because the low volumes of milk produced within the region don't meet the deficiency need. With major consumption markets relying on supplies from milk sourced from other regions specifically the central and south western.

Over 1,200 dairy farmers have been trained in their respective dairy farmer groups/cooperatives' annually in proper dairy housing, dairy nutrition and feeding; dairy breeding; hygienic milk production; common dairy diseases control and prevention; pasture establishment and management; dairy calf and heifer management; fodder conservation and dairy farm record keeping.

DDA eastern region has promoted milk production from goats and camels in the region. This region is very receptive towards consumption of goat's milk and vulnerable groups of women, youth and PWDS have been encouraged to rear dairy goats.

The region has one stakeholder selling camel milk in Jinja town and over 100 households with goats which have adopted production of goats' milk for their own consumption.



Engaging stakeholders at a community breeding center

DDA Eastern region in collaboration with NAGRIC support Community Breeding Programs in the districts of Tororo, Jinja, Kamuli, Butaleja and Buyende where over 900 local cattle were synchronized and inseminated with jersey and Guernsey semen.

DDA eastern region has also enable and supported dairy farmers to access dairy farm inputs. The regional staff have always advised farmers on how to easily access recommended dairy farmers inputs



Training stakeholders on yogurt making

and also supported farmers with improved pasture seeds and seedlings; hay boxes; chuff-cutters; milk cans; milk buckets and milk test kits.

DDA Eastern region staff routinely conduct dairy farm visits vital for on-spot dairy farm trainings and demonstrations' to promote improved dairy farming practices for increased milk production and productivity.

The region office has supported and linked farmers to access improved dairy breeds through government programs under NAADS & OWC and NGOs such as HPI, Feed the Future and Feed the Hungry. Individual farmers and groups have also been advised by the regional staff were to buy improved good dairy breeds.

### Strengthening dairy institutions

DDA eastern regional office has supported the formation of a total of 26 dairy cooperative in the region and strengthened them with capacity building and creating linkages for sustainability.

### Improved safety of dairy products and sustained market competitiveness

Being a milk deficit region causes fertile ground for malpractices in dairy business as a result of low volumes supplied. Therefore the temptations for adulteration with added water and sell of milk that has lost freshness because of the long distances covered. There is also a high risk for the region to work as a dumping ground for substandard milk and dairy products.

A total of 201 dairy premises were inspected and a total of 65 dairy premises, 13 coolers, 1 processor and 1 tanker were registered in 2021. A total of 4



market surveillance exercises were conducted and a total of 450 dairy products samples analyzed for quality in 2021. A total of 2 enforcement exercises were conducted in 2021 to iron-out sell of bad quality milk & dairy products, illegal milk vending, illegal milk transportation and adulteration. 2 feedback meetings' were conducted to sensitize/train stakeholders and generate resolutions for improvement of the dairy sector in the region.

### Reduced post- harvest losses and enhanced milk processing and marketing.

Yoghurt processing is being supported and promoted because it does not require complex processing equipment and mainly uses locally available utensils commonly found in basic kitchens. Yoghurt processors require basic training in yoghurt processing before they start making yoghurt at cottage level.

The regional staffs' have supported, through trainings and technical backstopping, the growth of cottage yoghurt processors in the Eastern region of Uganda (Busoga and Bukedi sub regions). The practical and theoretical trainings are carried out on site at the dairy processors premises for individuals, for groups the trainings are conducted at the milk collection centres where the cooperative bulks milk. The skilling on cottage yoghurt processing is a hands on training and made as practical as possible for the participants to learn and adopt.

The dairy farmer groups at the end of the trainings process flavored yoghurt such as vanilla; strawberry; and fruit mango which they then package in semi - opaque plastic packaging of various sizes (500 ml, 1 litre, 2 litres and 5 litres).



*Training of farmers about dairy goats*

The following dairy farmer groups in the Eastern Region have been supported in yoghurt production over time; Bugweri Dairy Farmers' Cooperative; Nawanyingi Dairy Farmers Ass.; Tororo Dairy Farmers; Balawoli Kyebajatobona DFC; Jinja High Level DFC; Butagaya Dairy Farmers' Cooperative; Buzaaya DFC; Namwendwa DFC; Luuka DFC; Nawaikeke DFC; Kibuku Dairy Farmers' Cooperative; Umoja Heifer Women Group; Butebo Dairy Farmers' Cooperative

DDA with support from NAADS and CAAIP program established a total of 16 rural (MCCs) Milk collection centers with a total installation capacity of 39,000litres that are management by dairy farmers' cooperatives to collect milk from dairy farmers for collective marketing.

To reduce post-harvest losses while improving house hold incomes, DDA has been promoting and distributing appropriate food grade milk handling utensils in the region. A total of 47 milk can were distributed to 7 dairy farmers groups in 2021.

Government through DDA is also continually rehabilitating dilapidated milk collection centers that it inherited from Dairy Corporation Limited to enable the immediate chilling of the milk before it is transported to processing plants. The authority renovated 1 MCC property belonging to DDA in busia and handed over to dairy stakeholders for collection of milk from dairy farmers.

### Future plans for Eastern region

DDA plans to establish a regional office in one of the districts in the region to take services nearer to the dairy farmers since currently, coordination of activities is done from Head Office.

DDA offers Dairy value addition, Dairy quality assurance; Dairy farm and business management training programs at its Entebbe based Dairy Training School. Plans are under way to establish a region based dairy value addition skilling and cottage promotion center with Eastern Uganda Milk shed at Jinja to increase outreach to stakeholders.

DDA has a total of 9 MCC properties only one was renovated and operational. The region therefore plans to secure all land titles, renovate and equip all the remaining 8 MCCs for use by dairy stakeholders.

## Entebbe Dairy Training School (EDTS)



*Students during training at EDTS*

EDTS is a dairy training institution under Dairy Development Authority (DDA). EDTS was established in 1969. Government of Uganda through Dairy Development Authority, in the financial year 2013/14 allocated funds to revive EDTS with the main aim of skilling dairy stakeholders along the dairy value chain in milk quality assurance, value addition, farm production and dairy business management. The School is located at Old Entebbe Airport village, Kigungu Road, Entebbe Municipality, Plot 121M with a land area of 25 acres

### Functions of EDTS

- To equip dairy stakeholders with hands on skills in dairy value addition for employment and wealth creation.
- To promote quality and safety of milk and milk products through quality control and assurance trainings.
- To promote milk production and productivity through farm production and management trainings.
- Act as a centre of excellence for Best Practices in dairy subsector.
- To act as an incubation centre for dairy value addition enterprises.

### Modules Offered at the School

- The following modules are offered at the School with each
- module taking a period of one week;
- Milk Quality Control and Quality Assurance,
- Small scale milk processing in Yoghurt Production, Ice Cream Production, Cheese Production, Butter and Ghee Production.
- Dairy Farm Production and Management
- Dairy Business Management

### Facilities at the Institution

- Factory equipped for production of milk and milk products.
- An equipped Laboratory
- Good Hostel accommodation
- Well-equipped Computer Laboratory
- Out of class recreation activities

**Impact of Skilling/Training:** The majority being the youth have been able to secure jobs along the dairy value chain as a result of the trainings country wide. Others have been able to establish their own dairy cottages while some of the trained stakeholders have continued with career growth.

**Target Audience:** The training targets mainly dairy stakeholders along the value chain e.g. dairy farmers, milk collection center (MCC) operators/assistants, Milk Transporters and Value Addition Entrepreneurs.

**How to enroll:** The school invites applications on quarterly basis. The applicants pay a basic fee of 175,000/= as a contribution towards meals and Government meets the rest of the training and accommodation costs.

**Awards:** Trainees are awarded with a certificate of attendance upon completion of hands on skilling that lasts for at least seven (7) days. We in addition give each trainee a thermometer and lactometer to go with as a start up equipment.

**Outreach Activities:** The School conducts Regional Outreach skilling Programmes for continuous human capacity development in dairy subsector.

**Medium Term Goals:** Introduction of academic certificates and diploma programmes for career growth in Dairy Science and Dairy Technology.

Development and use of ICT materials to conduct the trainings; videos, lectures, assessments, tabs to upgrade the trainings.

### Agriculture Value Chain Development Programme (Avcp)-Project

The AGRICULTURE VALUE CHAIN DEVELOPMENT PROGRAMME (AVCP)-PROJECT 1 is GoU Project funded by a loan from African Development Bank (ADB) with a project cost of USD 86.95 Million with GoU contributing USD 10 Million.

It is Coordinated by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) with a fully supported



Students undergoing a lecture at the school



Products made by students at EDTS

National Project Coordination Unit (NPCU) which has a Coordinator and Technical Staff for Project implementation. The Project is implemented by the Ministry of Water and Environment together with MDA's (DDA, NAGRC & DB, NARO and UNBS).

The AVCP-Project 1 is a 5 year project running from FY June, 2019- June, 2023. The overall objective of the project is to contribute to poverty reduction and economic growth in Uganda through enhanced productivity and commercialization of Agriculture.

**Specific Objective:** The specific objective is; To improve household incomes, food security and climate resilience through commercial agricultural practices, sustainable natural resources management and agricultural enterprise development.

### Project Implementation Modalities

The Project's Executing Agency is (MAAIF) who is responsible for the overall implementation and management of the Project with an established Project Coordination Unit managed by Project Coordinator.

DDA's key implemented activities are expected to contribute mainly towards: Market Development and Trade Facilitation; Support to DDA to improve Food Safety and Quality Management Systems and Strengthening of Dairy Regulatory activities and quality infrastructure.

DDA management established the AVCP Project implementation team headed by Director Technical Services which includes representatives from all units.

## The National Dairy Laboratory



*A group of Egyptian Dairy Investors during a visit to National Dairy Laboratory*

DDA officially opened the National Dairy Laboratory, centrally located in UMA show grounds Lugogo, Kampala District with the purpose of providing testing services for milk and milk products. The Laboratory has steadily grown to include four regional laboratories in Kiboga, Mbarara, Gulu and Soroti Districts.

The Authority has invested in Mobile Laboratory Vans to monitor the quality of milk and milk products in the field. These have eased the mode of field inspections, on spot testing and dissemination of results. The laboratory further offers services to exporters and importers of dairy products with certificates of analysis, product development and quality assurance for factories and cottages.

National Dairy Laboratory also works closely with the UNBS to develop Dairy Standards, certify milk

products and generate data on the quality and safety of milk products, these services have greatly contributed to improving trade with in the country, the East African Region and beyond the seas and oceans.

We have partnered with Infectious Disease Institute (IDI-Uganda) to monitor the use of antimicrobials and consumption of antimicrobial resistant organisms in milk. The programme which is supported by the Flemming Fund Grant II and Mott MacDonald, is generating data on antimicrobial resistances in milk and milk products and contributing to the GoU One Health Approach monitoring system on antimicrobial resistance. This data will help to plan better for the treatment of dairy cows, control of drug resistance, use of drugs and consequently reduce postharvest loses, improve dairy farmers' gains, promote trade and protect the consumer.

The Laboratory practices the internationally recognized ISO 17025:2017 general requirements for competence of testing and calibration laboratories accreditation system. This has enabled the Laboratory to offer quality assurance services traceable to the international standards bodies. The system that is supported by the Agriculture Value addition Chain Programme (AVCP) – ADB, MAAIF and GoU development project, has rehabilitated and equipped the laboratory, trained staff and contributed to international registration. As a result, the laboratory collaborates with regional and international laboratories in testing services, contributing to international fora in food safety and food security, to include the Africa food safety network, EAC PT scheme, AFRA, and Internal Atomic Energy Agency/FAO food safety office.



### Dairy Goats Value Chain Project

The project for the institutionalization of the dairy industry was launched on 18th November 2020 by the Executive Director of DDA Dr Micheal Kansime. The project has the following main objectives;

1. To collect all dairy goats related data
2. To organize and develop the dairy goats' sector in Uganda
3. To effectively regulate the dairy goat's sector

The launch of the dairy goats project led to the formation of the DDA National dairy goats coordination office at the DDA head office. Through the efforts of this office, dairy goat stakeholders from all the major regions of Uganda have been mobilized and profiled. Close to 100 prospective and already established dairy goat stakeholders were mobilized from all the major regions across the country. The stakeholders were mobilized through already existing dairy goat platforms and under the guidance of the dairy goats' coordination office they elected an executive committee with regional representatives.

The dairy goats' stakeholders have since received quality inputs such as;

1. pasture seeds (Chloris gayana, Centrosema and Lablab)
2. Milk cans of 50l and 20l for hygienic milk handling.

Dairy goat stakeholders have also received technical advisory services for the registration of their federation with the Ministry of Trade, industries



Packaged goat milk



A product of goat milk

and Cooperatives and the umbrella body is legally registered in the initials "Uganda Dairy Goat farmers' Association" these stakeholders are also set to receive other inputs such as "high" breed dairy goats from the government of Uganda through Dairy Development Authority and will also take priority in all DDA interventions as well as establishing grass root structures of the national umbrella association.

### Why prioritize dairy goats?

Goat's milk is highly nutritious and has been used for the treatment of cancer, HIV and currently used to boost the human immunity against COVID19.

Only 2 percent of goats' milk is curd, this makes goats' milk easier to digest even to infants and therefore gives goats' milk a comparative advantage as a substitute to breast milk or weaning children.

Goats' milk is naturally homogenized therefore easy to process quality products.

Goats' milk contains less lactose which makes it acceptable even to individuals who are lactose intolerant, goats' milk is high in calcium and fatty acids but low in cholesterol therefore can be used to treat coronary diseases and intestinal disorders.

Goat's milk has also been proven to improve the skin and it fetches ten times more financial returns compared to cow's milk (Market price of 1 litre of goats' milk is ten times that of cow's milk). Dairy goats are highly prolific, easy to look after and hardy and this gives them a comparative advantage over dairy cows because they can be easily adopted by women, youth and the disabled.

## School Milk Programme



*School children displaying milk sachets received under SMP*

Following the UPE policy, primary school enrolment increased exponentially, from 3.1 million children in 1996 to about 10 million 2016/17. In 2007, the government launched Universal Secondary Education (USE), a measure aimed at increasing access to quality secondary school education for economically vulnerable families and communities. By the end of 2016/17, Secondary School Gross Enrolment Ratio for Uganda stood at an estimated 38%.

Although parents and guardians were required to take care of other schooling expenses, such as the cost of scholastic materials (books and supplies), uniforms and food, most parents/guardians interpreted the policy to mean 'free' education. Subsequently, a majority of school children attended school on empty stomachs. The lack of school meals threatens to reverse the gains made in both UPE and USE. Many children drop out of school due to failure to get a meal while in school. Malnutrition weakens Uganda's economy through losses in productivity due to poor physical status, low school performance, attainment of low levels of education or low grades as a result of impaired cognitive development.

### Piloting the Parent-led Approach in the School Milk Programme

A task force comprising of representatives from the MoES, MoH, DDA, Ministry of Agriculture, Animal Industry and Fisheries and SNV supported implementation through linkages and alignment to national-level policies and actions. They participated in joint supervision, monitoring, validation and verification of the programme in implementing schools.

A daily school meal is a vital incentive to keep children in schools and it allows them to concentrate


on their studies. School food is considered vital for achieving education for all (Drake et al., 2015). Schools also provide a huge opportunity to (re) set norms about healthy diets and good nutrition practices (IFPRI, 2016). By bringing District local authorities, school foundation bodies, parents through Parent Associations and Dairy farmer co-operatives, the SMP targets vulnerable households and children using school milk campaigns to create awareness on the importance of school meals in improving their nutritional status

The focus of the SMP developed by SNV/TIDE was to operationalize the national policy guidelines on school feeding and nutrition. The MoES developed the National School Feeding and Nutrition Policy Guidelines in 2013 to streamline school feeding and health. The programme was anchored on strengthening parental involvement to contribute towards the feeding of children at school on meals that included milk. SNV supported the national and district level task forces and local actors contracted by SNV to promote school feeding by mobilising and sensitizing parents about the need to contribute to their children's feeding and nutrition while at school.


The parents were encouraged to contribute to the provision of milk either in cash or in kind. In each school, the parents agreed to contribute an agreed amount of money (ranging from UGX 10,000 to 15,000) per term or its equivalent in kind to buy milk and other consumables (e.g. maize flour, sugar and firewood to boil the milk). In most cases, milk was added to maize porridge thereby improving the nutritional value of the porridge. Upon commitment by schools and parents (through Parents Teachers Associations), SNV/TIDE gave support through a matching grant to schools that attained 50% enrolment of learners consuming milk.

## Achievements


By the end of 2019




The School Milk Programme was successfully scaled up to **950** primary schools.




A total of **329,900** children (52.5% girls) were having milk mixed with porridge at school.



The proportion of learners taking milk in participating schools increased with some schools posting a **100%** coverage (private schools performed better than public schools).



Dairy farmers are earning an estimated daily income of **UGX 21 million** (EUR 5,000) and **UGX 5.3 billion** (EUR 1.2 million) per annum in sales of raw milk through the programme



The programme created a new local market for farmers' milk. With an average of **19,500** litres of milk consumed by the schools per day.

### Lessons learnt

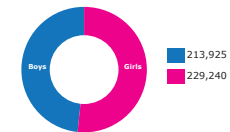
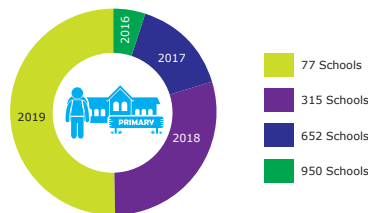
- Parents are effectively mobilised when there is concerted effort and engagement by the district and community leaders.
- Buy-in from School Head Teachers, Parents and Teachers Association (PTA) and the community leaders is a key entry point for sustainability.
- A rewarding system through matching grants to progressive schools boosts programme uptake.
- A national policy and statutory instrument on school feeding is of essence to guide on sustainable school feeding in all schools.

### Lessons from the Implementation

- A national policy and statutory instrument on school feeding is of essence to guide on sustainable school feeding in all schools of Uganda.
- SNV TIDE generated an evidence base on the implementation of the SMP and it showed that the school feeding and nutrition guidelines developed by the government of Uganda are instrumental and practical as long as there is an organisation ready to support its implementation in the school.
- The parent-led approach though understood is not always easy to practice especially in areas with poverty and food insecurity.
- School feeding programmes should integrate health promotion action such as deworming and promoting safe access to water, hygiene and sanitation.

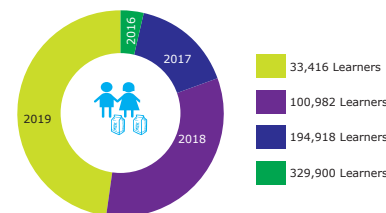
### Key figures on SMP enrolment

Schools on the programme



(More Girls than Boys 229,240 vs 213,925)

Learners consuming milk at school



Source: SNV SMP Policy Brief

## Key Processor Profiles



Lakeside Dairy Ltd. was incorporated on 15th July 2014, with the acquisition of Hillside Dairy & Agriculture Ltd to carry forward the business of Dairy and Agriculture. It is a wholly owned subsidiary of Dodla Holdings Pvt. Ltd., Singapore. Hillside Dairy Limited already had a commendable presence in Western and Central Uganda. Lakeside Dairy Ltd has also obtained Investments Licence to establish a new manufacturing plant for processing milk and dairy products. The group is in expansion mode in Eastern Africa and particularly in Uganda as it diversifies its business portfolio to seize the available opportunity in the growing African market. With a present handling capacity of 300,000 litres of (milk & milk products) per day, Lakeside Dairy is rapidly augmenting its processing capability and portfolio. Their Products include; Dairy Top UHT Milk, Yoghurt, Ghee and Cheese.



Birunga Dairy Industries is located in Kabira-Shozi village, Nyakabande Sub -county Kisoro district in South Western Uganda. It started operations in 2004 with capacity of 10,000 litres and processing only pasteurized milk before upgrading to long life milk (UHT) in 2006. Since then, the company has registered tremendous progress with its processing installed capacity growing to 60,000litres of milk per day. The company’s raw milk catchment area is Ntungamo, Mbarara and Kiruhura Districts with very little milk being procured from Rubuguri in Kisoro District. The product mix includes, UHT plain milk, UHT flavoured milk, Sweetened milk and Yoghurts all going by the Brand name Highland Everfresh. The company products are marketed/ sold within Uganda but the bigger percentage, over 60% is sold in the regional market with Rwanda taking the lead. Other countries where the company products are marketed in the region include Burundi, Kenya, South Sudan and now DRC.



Pearl Dairies was founded in 2009 with the establishment of the Milk processing plant at Mbarara, Uganda and goes by the LATO brand name. The factory is built on 15 acres and has capacity to process 500,000 liters of milk daily. The commercial production of whole milk powder and skimmed milk powder in 25Kg bulk packaging began in 2013. In 2014, the retail launch of Lato Instant full cream milk powder in 900gm, 400gm Tins and 15gm sachets was undertaken. Market was expanded to Egypt, Kenya, Tanzania, and DRC being as the first international markets and we see great reception. In 2016 liquid milk with a shelf life of 90 days in Extended Shelf Life 500 ml packs and 250 ml slim pack was introduced. This was followed by Fino Pack with a shelf life of 180 days to East African market, Lato Butter both Salted and Unsalted variants availed in 250gm and 500gm packs. The company has since expanded to Burundi. Their products include: Yoghurt; milk powder, liquid milk, ghee, butter oil and butter.





Jesa Farm Dairy is located along Old Port Bell Road, in Kampala. Founded in 1989, Jesa is a producer of fresh pasteurized milk, yoghurt and ultra-heat treated milk (UHT). Dairy farming is done on 600Ha of land on which a herd of 650 Friesian animals are raised under modern animal husbandry. All of the milk from the farm goes to the dairy which is also located on the farm. Jesa markets predominantly in the greater Kampala area. It also exports to the neighbouring Kenya, Tanzania and South Sudan. The JESA brand has a wide range of fresh, dairy products namely: fresh Pasteurised milk, UHT Milk, Yoghurt, Butter, Fresh Cream and Cream Cheese. The dairy plant currently processes over 200,000 lts of milk a day.



Amos Dairies Uganda Limited, also Amos Dairies located in Kiruhura District, South Western Uganda, is a dairy processing company established in 2014. It is a subsidiary of Amos Dairies Limited, an Indian company with headquarters in New Delhi, India. Beginning with a capacity of 400,000 liters per day. It is expected that production will gradually be increased to 2 million liters daily. The milk is processed into Anhydrous milk fat, Butter, Ghee, Casein and Whey.



Vital Tomosi Dairy Limited is a dairy processing company located in Kiruhura District, South Western Uganda. The factory is jointly owned by Vital Capital Fund, an Israel-based private equity firm and Tomosi Dairy Farms of Uganda. The processing plant was commissioned in November 2016 and produces yoghurt and UHT milk under the “Milkman” brand with a capacity of 50,000 litres per day. A new production line was commissioned on 29 January 2019 which increased production capacity at the factory to 100,000 liters per day. Production from their 202ha farm is supplemented with production from the community, to supply the factory’s fresh milk requirements. Products include fresh milk, UHT milk and yoghurt.



Brookside Limited goes by the brand name of Fresh Dairy which was established in 1967 is located in Kampala Ugandan. The factory has a daily processing capacity of 500,000 litres per day. The Kenyan company has operations in Uganda, Kenya, Tanzania, Ethiopia and Nigeria. Brookside produces a variety of milk products including Fresh milk, flavoured milk, Long life or UHT milk, powdered milk, Yoghurt (both flavoured and Brookside fruit yoghurt), Butter, Ghee and Cream.



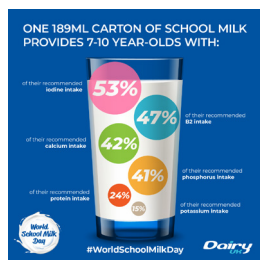
GBK Dairy Products Limited, often referred to as GBK Dairy, is a dairy processing company in Uganda. GBK Dairy Products Limited is located on the Mbarara–Kabale Road, in the central business district of Mbarara city in the Western Region of Uganda. GBK Dairy was opened in 1996, with capacity of 2,000 liters a day. The plant’s production capacity is 100,000 liters per day. The company’s products are marketed locally within Uganda and to neighboring countries within the East African Community The factory manufactures the following products among others: (a) pasteurized fresh milk (b) UHT milk (c) yoghurt and (d) ghee.

## Some Key Dairy Events



### June Dairy month celebrations

Since 1939, National Dairy Month has encouraged households to make milk their beverage of choice based on its nutritional value. Dairy's rich history continues with communities, companies and people from across the country and globally observing National Dairy Month in a variety of ways. In the Uganda, dairy farmers often open their gates to visitors for tours, while local community events and festivals offer taste testing and events featuring delicious dairy products.



### World School Milk Day

World School Milk Day is held all over the world on the last Wednesday of September every year to celebrate the benefits and success of school milk programs. The first world school milk day was celebrated in September 2000 and has since become an annual event promoted by the FAO (Food and Agricultural Organization of the United Nations)



### World Food Day

World Food Day is an international day celebrated every year worldwide on 16 October to commemorate the date of the founding of the United Nations Food and Agriculture Organization in 1945. The day is celebrated widely by many other organizations concerned with hunger and food security, including the World Food Program, the World Health Organization and the International Fund for Agricultural Development. Since 1981, World Food Day has adopted a different theme each year in order to highlight areas needed for action and provide a common focus. The theme for 2022 is 'Leave NO ONE Behind'.





# 13 Ways MILK CAN HELP YOUR BODY

One serving of MILK contains many of the essential nutrients your body needs, including:

<p><b>25% DAILY VALUE</b></p> <p><b>CALCIUM</b> Helps build and maintain strong bones and teeth.</p>	<p><b>30% DAILY VALUE</b></p> <p><b>RIBOFLAVIN</b> Helps your body use carbohydrates, fats and protein for fuel.</p>	<p><b>10% DAILY VALUE</b></p> <p><b>SELENIUM</b> Helps maintain a healthy immune system, helps regulate metabolism and helps protect healthy cells from damage.</p>
<p><b>16% DAILY VALUE</b></p> <p><b>PROTEIN</b> Helps build and repair tissue. Helps maintain a healthy immune system.</p>	<p><b>50% DAILY VALUE</b></p> <p><b>VITAMIN B12</b> Helps with normal blood function, helps keep the nervous system healthy.</p>	<p><b>60% DAILY VALUE</b></p> <p><b>IODINE</b> Necessary for proper bone and brain development during pregnancy and infancy; linked to cognitive function in childhood.</p>
<p><b>15% DAILY VALUE</b></p> <p><b>VITAMIN D</b> Helps build and maintain strong bones and teeth. Helps maintain a healthy immune system.</p>	<p><b>20% DAILY VALUE</b></p> <p><b>PANTOTHENIC ACID</b> Helps your body use carbohydrates, fats and protein for fuel.</p>	<p><b>10% DAILY VALUE</b></p> <p><b>POTASSIUM*</b> Helps maintain a healthy blood pressure and supports heart health. Helps regulate body fluid balance and helps maintain normal muscle function.</p>
<p><b>20% DAILY VALUE</b></p> <p><b>PHOSPHORUS</b> Helps build and maintain strong bones and teeth, supports tissue growth.</p>	<p><b>15% DAILY VALUE</b></p> <p><b>NIACIN</b> Used in energy metabolism in the body.</p>	
<p><b>15% DAILY VALUE</b></p> <p><b>VITAMIN A</b> Helps keep skin and eyes healthy; helps promote growth. Helps maintain a healthy immune system.</p>	<p><b>10% DAILY VALUE</b></p> <p><b>ZINC</b> Helps maintain a healthy immune system, helps support normal growth and development and helps maintain healthy skin.</p>	

\*Source: USDA FoodData Central. FDA's Daily Value (DV) for potassium of 4700 mg is based on a 2005 DRI recommendation. In 2019, NASEM updated the DRI to 3400 mg. Based on the 2019 DRI, a serving of milk provides 10% of the DRI. FDA rule-making is needed to update this value for the purpose of food labeling.

The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Source: USDA FoodData Central online at <https://fdc.nal.usda.gov/>. Mean values calculated from database entries across all fat levels of plain vitamin D-fortified fluid milk in Legacy, Foundation, and Survey (FNDDS) data sources.



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