# DAIRY FARMING PRACTICAL TRAINING PROGRAMME

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## A. Objective of the Training Programme.

The Agriculture sector in Uganda employs approximately 70% of Uganda's population with almost 80% under subsistence farming characterized by limited value addition and low farm productivity. The dairy industry has been identified by H.E President Yoweri Museveni under the "four-acre model" as one of the main undertakings to uplift and transform smallholder farming into commercial agriculture. Under the "four-acre model" initiative, the President advised the first acre is used to grow cash crops such as coffee and tea, the second for growing fruits, the third is for pasture for dairy cows and the fourth is set aside for food security at the household level.

However, these smallholder dairy farmers are still faced with many challenges among them include; inadequate extension advisory services, limited practical knowledge on

raising dairy animals and disease control. The value addition in the dairy industry in Uganda is so low with up to 67% consumed as raw milk.

Through the above training, Tomosi's Farm Bweshaire, a model commercial dairy enterprise in Uganda seeks to provide practical interventions aimed at improving smallholder and commercial dairy farm productivity by providing practical skills and knowledge on animal nutrition, breeding, records management and young stock management. The target participants for the training include; dairy farmers, extension service providers in the dairy sector, students, and all relevant stakeholders in the Agriculture sector.

## Session One: Introduction to Dairy farming as an enterprise.


Milk production increased to 2.81 billion litres in the period ended July 2021 from 2.6bn litres in July, 2020 according to statistics from the Dairy Development Authority (DDA). However, the increase was lower than three billion litres that DDA had projected during the period. On average only 30 percent of the total annual production is processed, which means that there is a lot of wastage and low levels of value addition.

Milk consumption in Uganda remains low with a per capita consumption standing at 62 litres per person against World Health Organization recommended consumption of 200litres. However, consumption, according to DDA is expected to slightly increase to approximately 65 litres in the short term due to rapid urbanisation and other

consumption campaigns such as the School Milk Programme. The Dairy Sector is one of the leading agricultural commodity export income earner to coffee and slowly edging its way to be the leading agricultural export earner in the country. For example, the sector is growing at an average rate of 8% per annum, contributing to export revenues of Ugx 750bn in 2020.

This session draws participants to appreciate the benefits of undertaking dairy farming as an enterprise, its impact on incomes for the small households to commercial production levels and the opportunities available for the dairy products along the value chain

## Session 2: Feeding and nutrition

Owing to the effects of climate change, the country is experiencing more prolonged dry spells thus affecting a majority of dairy farmers, who rely on pasture as the main composition of the dairy feeds. Unfortunately, some of these farmers lose cattle in addition to the significant reduction in milk production. For example, Mr. David Agweno, a cattle keeper in Obalia village, Ibuje sub-county in Apac District, says his cattle have started dying due to inadequate water and pasture. "I have more than 200 head of cattle in my kraal, but I lost more than 10 calves and I believe it happened due to poor feeding"

What is the volume of feeds a cow should consume in a day? How much nutrients must be in a cow's feeds and what is the required water in-take? etc.
Feed and nutrition management is the process of understanding the nutrient requirements of dairy cattle at different growth and lactation stage and combining

various feed ingredients to meet these needs in a cost effective manner.

The objectives of this session are;

i) Understanding the feed and nutritional requirements for maintaining dairy cattle in good condition.

ii) Maximizing milk production potential for dairy cattle.

iii) Fulfilling feeds and nutrient requirements of dairy cattle in a cost-effective way.

## Session 3: Young Stock Management


This session will provide practical skills and knowledge to the participants on how to:

- Rear sufficient stock to replaced culled dairy cows.
- Lower average age at first calving.
- Reduce/ eradicate mortality rate of calves.

The foundation of dairy farming and performance are hinged on how well the heifers are handled at a farm. **The purpose of rearing young stock is to raise well-developed heifers, able to calve at an early age, without calving difficulties. The advantages of calving at an early age are; lower rearing costs, early productivity and consequently a higher life-time milk production, thus making the cows more profitable**.

Young stock management begins before birth, a few days before the calf is born, the pregnant cow is transferred to a maternity paddock, which should be near the homestead to allow closer observation and monitoring. At birth and immediately after, the farmer needs to exercise the right precautions to ensure that the calf is not lost. Lastly, the feeding program for the "heifer calf" should address overall animal health, nutrient requirements and rumen development.

## Session 4: Artificial Insemination


The goal for most dairy farmers is to raise cows that are productive, efficient and profitable. This can easily be achieved through Artificial Insemination (AI) done correctly and with precision. "Though AI is common in the cattle industry and often performed by farm managers or employees, it should not be assumed that AI is an easy technique or that all of those performing AI are proficient in the technique. Success rates differ, as can sometimes be evidenced by a difference in conception rates between technicians"

At Tomosi's farm, we understand the objective of farmers and practitioners/technicians of AI in the industry because we are farmers and we have learned over the years, the best practices through raising dairy cattle for optimum production. Our hands-on staff will take the learners through the core steps for successful AI among which include; reproductive anatomy, sanitation and accuracy of semen deposition.

## Session 5: Records Management

Record keeping is a key component of any successful dairy farm enterprise. Among the types of records to be kept at a dairy farm include;

- Animal Identification/genetic history records
- Milk production records
- Feeding records
- Financial performance records
- Breeding records
- Veterinary records

**Why is it important to keep records?**

The dairy farm records provide a foundation for tracking and evaluating enterprise performance. They act as a "student report card" that highlights the performance of a student at school. Records also help in identifying gaps or areas of improvement that need to be addressed in terms of resources and priority, etc.

This session will demonstrate the practical aspects of keeping and maintain records. We will also teach the participants how to integrate technology in record keeping as a way of maximizing efficiency and enhancing productivity.

## B. Methodology for the Training.


### i. Situational Analysis and intelligence gathering.

We have learnt that there is a very big direct relationship between preparedness and success in designing and implementing training packages. We therefore take time to prepare and plan prior to execution of the training programmes. We work with our clients to understand the fears, misconceptions, attitudes, opinions, behaviors and knowledge of key target audiences. This specific phase entails the following;

- Needs assessment exercise with select group to establish socio-economic livelihood, social cohesiveness and how the training modules will be customized for the target beneficiaries.
- Physical meeting with the client to present and discuss the inception report. The inception report will spell out how the consultant intends to execute the assignment.
- Delve deeper into the training programme and modules, choice of training methods and styles, appropriateness and relevance of training materials etc.
- A dedicated Account Manager, responsible for the day-to-day running of the training programme will also be designated.

### ii. Design of Training Materials.

This stage will flow from the situational analysis. Challenges and issues identified in situation analysis will be central in this stage. Below are the activities that will be undertaken in this activity:

- Drafting the training manual.
- Design of the overall training roll out programme – with proposed dates, training venuesand trainer details.
- Develop user-friendly aids to support the training.

### iii. Development and testing of training materials.

The main focus is the development of information, education and communication training materials. The key activities to be undertaken during this stage include:

- Pre-testing in form of focus group discussions including select farmer groups.
- Identify the type of training content that will be palatable for the target audience (facts as well as tone needed).
- Develop a recognisable layout/format of all information material.
- Prepare all training content in the developed format.
- Develop training materials to be used during demonstrations/ "role play"
- Train presenters for the demonstrations (know-how).

**The following strategic design principles will guide the pre-testing process;-**

- Consistency with the training objectives.
- Relevancy.
- Attention-grabbing.
- Memorability.
- Motivation.
- Gender responsiveness.
- Simplicity & conciseness.
- Clarity.

### iv. Management and Implementation

The specific activities to be undertaken during this stage are:

- Develop Information, Education and Communication training materials.
- Mobilize participants for the training.
- Secure venue, meals and refreshments for the training.
- Facilitate all training activities to meet the objectives of the training programme.

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### v. Evaluation

At the end of the training, an evaluation questionnaire to assess the level of output achieved from the training in line with the objectives will be issued to the participants. This will form part of the training report to be prepared and issued to the Client.

## C. Lead Trainer- Andre Scheepers

Andre possesses 30 years of field experience in agricultural management with proven track record working across the African continent, specializing in Dairy and Beef management with Pasture and Crop Establishment. Between 2015-2020, Andre worked for Novelto Beef value chain, Eastern Cape, South Africa in the design and implementation of the commercialization of 200 beef farmers, incorporating 16 small scale feedlots and 3 abattoirs with a combined slaughter capacity of 20,000 animals per 120-day cycle. From 2009-2014, Andre worked as a ministerial consultant, Department Rural Development and Land reform, South Africa, tasked with the revitalization of various farms and agro-business ventures;

- corromandel Estates, a 14,300 acre estate involving 1000 cow Holstein Dairy herd, irrigated pastures and crops.

- Rosedene Dairy-A small and medium player in the South African Dairy Industry, with a capacity of approximately 30,000 litres per day.

- GenNXT Heifers of Excellence-Setting in place a Dairy Livestock Breeding Program, breeding and raising dairy heifers to improve the standard of cows used to facilitate the establishment of GenNXT Farmers.

Andre's specialty is in the construction of unique agriculture and agro-industrial projects in developing countries. Collaborating with local populations, engaging in agricultural operations and projects by creating job opportunities that are sustainable. He has managed diverse farming and livestock agri-businesses impacting the lives of thousands, particularly managing the transformation from smallholder farms into fully fledged commercial agri-business entities.