

The implementation and impact of QBMPs pilot in Uganda as part of

SNV

TIDE.



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NETHERLANDS EAST AFRICAN
DAIRY PARTNERSHIP

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Background on dairy farming

Due to the start of long distance milk trading and the development of the dairy industry quality demands became eminent.

Electricity grid was expanded and cooling tanks were introduced.

Regulations were made. Plastic jerry cans were banned, milk transport was forced to use stainless steel tanks, etc. Nevertheless microbiological quality of milk stayed poor.

Characteristic	Requirement
Milk fat, %, min	3,25
Freezing point, °C	-0,550 to -0,525
Alcoholic test, 80%	Negative
Density at 20°C, g/ml	1.028 – 1.034
Milk Solids Non Fat, %, min	8,5
Total plate count, cfu/ml	2,000,000
Somatic Cell Count cells/ml	300.000

The standard

In Uganda processors pay for milk per litre and quality control levels are below the specifications as given in the EAS standards.

Especially the specs for Milk Solids Not Fat and density due to skimming and water adulteration.

And also total plate counts and alcohol, due to hygiene practices, the cool chain and again water adulteration



Reasons for poor micro-biological quality of milk

Adulteration with water.

- Water has often high bacterial counts.
- Milk from the cow does not contain bacteria.

Hygiene practices

- At the farm
- At the MCC
- During transport

Cool chain

- Availability electricity
- Availability cool tanks

Objective:

The objective was to do a pilot in which quality-based milk payment system was implemented and tested in order to gain experience, so on a bigger scale the system could be introduced in Uganda with the aim to create a strong tool to work on a continuous improvement of milk quality.



Methodology:

1. Find your participants

The QBMPS-pilot participants:

Dairy Development Authority (DDA)

Three dairy processors

- Pearl (Powder, UHT)
- Lakeside (Yoghurt)
- Sanatos (Cheese)

10 milk collectors.

- Cooperatives
- Private milk traders

Methodology: 2. Find enthusiastic processors

All processors were invited by the DDA and SNV to a meeting to discuss a possible pilot about milk quality improvement and a quality based milk payment system.



Methodology: 3. Organize a team

Involve representatives of all stakeholders to have regular meetings:

DDA

Dairy Processors

Milk collectors

SNV





Methodology: 4. Create awareness and sensitize

Principles of QBMPS were mostly unknown.

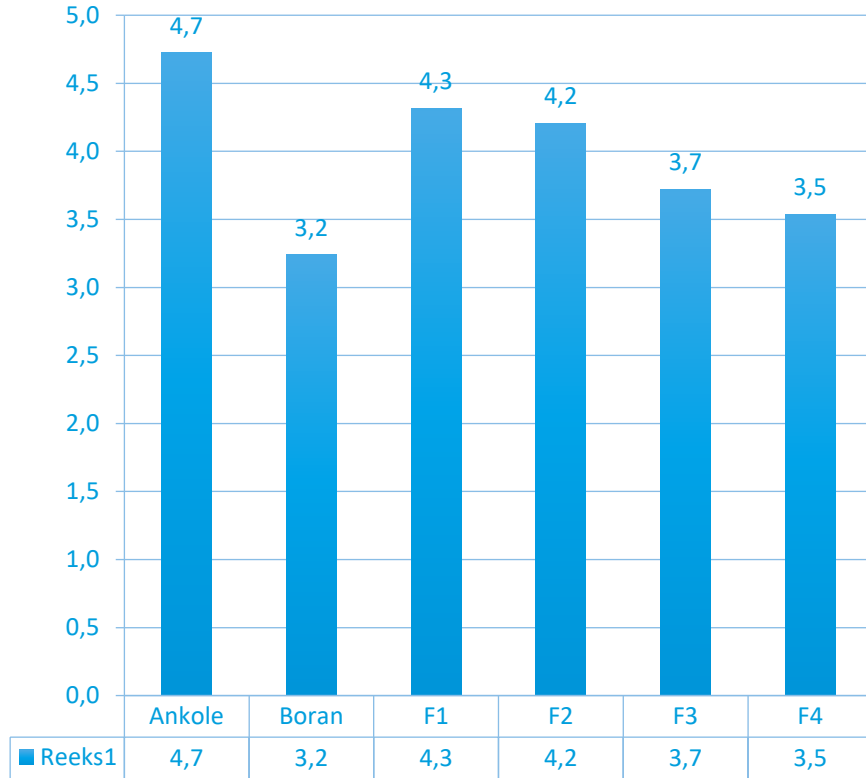
Basic quality parameters needed explanation.

Why to do it?

How to do it?

What are the consequences?

Fat % per breed



Methodology:

5. Perform a baseline study, do a zero setting

What is the real quality of milk?
How does quality change from farm to factory?
Which results can be expected of implementation of QBMPS?



Methodology:

6. Procure necessary equipment

Make an inventory first

Use KISS approach (keep it simple & smart)

Make sure all utensils are available (plungers, sample cups, alcohol guns, lactometers, etc.)

Make sure you have supply of cleaning detergents (acid, lye, deionized water)

Agree on payments (sign MoU's with stakeholders)

Methodology: 7. Train staff and farmers

What is the real quality of milk?
How does quality change from farm to
factory?
Which results can be expected of
implementation of QBMPS?



Methodology: 8. Develop a payment system

Choose parameters:

Easy and understandable

In the pilot a simple grading system was used.

Grade A bonus

Grade B normal price

Grade C rejected

Now changing into a unit system for fat and solids non fat. Advantage is:

You pay for what you get.

No payment for adulterated water

Budget neutral

3. Responsibility

- Head of Milk Extension & Head of QC or his/her designee for co-ordination the implementation of this SOP and Plant manager.
- Plant Manager shall ensure that this SOP is implemented.
- Head of each Department shall ensure compliance of this SOP and shall maintain training records annually.

4. Accountability

- Department Head of Milk Extension and QC Head shall be accountable for the implementation of this SOP and Plant manager.

5. PROCEDURE

1. SECURITY

1. Truck arrival
2. Truck is registered accordingly to where it is coming from – Kiboga or Western regions.
3. Two separate queuing system is implemented – Trucks for Kiboga are registered under their own separate lines accordingly to their arrival times.
4. A ticket is issued to the driver to note their arrival at the queue
5. Upon entry into the premises shall be allowed by way of receiving the purchase order and ticket number, if they pass.
6. At the end of the day – a report shall be compiled and handed over to the M&E Officer

7 MILK EXTENSION & DEVELOPMENT

Upon arrival for duty in the morning – Extension officer shall

1. Enquire as to the progress of the previous loading schedules and check for left over trucks.
2. Upon finding any truck that has more than 24 hrs in the queue will immediately liaise with quality controller on duty to have these trucks given priority and duly instruct production

Methodology: 9. Work on record system and develop Standard Operating Procedures (SOP's)

Record systems and SOP's make procedures transparent and it gives the possibility to monitor and manage the work done.

Digital recording has advantages, but written records will do.

Methodology:

10. Introduce and implement the system

Do not introduce the system overnight. Calculate its consequences. Therefore, the system was operational for a few payment periods. In this period the financial consequences were analysed and the milk suppliers can be informed about the consequences.

After implementing the results were closely monitored. Milk collection centres were supported by the extension workers to achieve A-grade milk or when falling back to B-grade milk or even after rejection of milk to come back to A-grade milk again.



Results

At the end of the pilot 9 out of 10 of the participating milk collectors were able to deliver A grade milk.

Already before implementation the milk quality improved as a result of awareness sessions and trainings.



Discussion

Milk analysers were very important to achieve results

Test results are clear: The farmer immediately has the result in writing

Issues

Calibration (ring testing)

Maintenance and service

Handling the equipment

(Importation)



Discussion

The chosen system

Choose your parameters carefully.

In case of the pilot fat and SNF

- Easy to test
- Improves composition
- Improves microbiology

In case of the pilot a grading system

- It is simple and understandable
- Now the processors want to change to a unit system
 - No longer paying for water
 - You pay for what you get (budget neutral)
 - No need to pay bonuses



Discussion

Payment to farmers

The pilot did not include direct QBMPS payments to farmers but just to the collectors.

Direct QBMPS payment to farmers is wanted, but to achieve first results not absolutely necessary.

It complicates the system, it was not introduced as a first step.

Status now

2 years of corona and a milk war
hampered progress

But now:

The biggest processor started to pay on
butterfat percentage

Test runs are made to go for individual
payment to farmers

Five more processors are interested

Conclusion and tips



- A QBMPS works (worldwide)
- Get everyone committed
 - Do it together
- Keep it smart and simple
 - (KISS approach)
- Keep talking
- Have support (extension) in the field



**Thank
you
for
your
attention**