Theme 9: Animal Health

KEY PERFORMANCE INDICATORS (KPIs) FOR MONITORING HEALTH STATUS OF DAIRY HERD (Level 1)

Topic	Training & information Content
9.1	Introduction to Animal health (Prevention vs curative health care)
9.2	Health signals
9.3	Biosecurity of dairy farms
9.4	Tick born diseases (Prevention and treatment)
9.5	Worm infections (Prevention and treatment)
9.6	Vaccination schedule and planning
9.7	Mastitis prevention and treatment
9.8	California Mastitis Test
9.9	Usage and storage of veterinary medicines on dairy farms
9.10	Administering of medicines to dairy cows
9.11	Instruction use of injectors into teat canal
9.12	Key performance indicators (KPIs) for monitoring health status of dairy herd



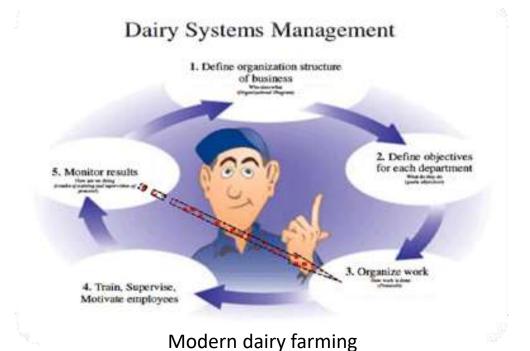
1. You will learn about (learning objectives):

- ☐ Key Performance Indicators (KPIs) and why we need them.
- ☐ How to determine KPI's.
- ☐ The importance of record keeping and ear tagging.



2. Introduction

- Key performance indicators (KPIs) help businesses to keep track and monitor their targets.
- Targets are made by prioritizing issues which are important for the business (KEY).
- If businesses become more complex and develop further, some issues demand more attention than others.
- So, to set a strategy, they choose to work on KPI's.







Healthy cattle in Uganda

3. What are KPIs?

- KPIs are a set of quantifiable measures that a dairy farm uses to gauge its performance; in this case, concerning dairy herd health status over time.
- KPIs are a way of measuring the effectiveness of the dairy farm and its progress towards achieving its goals.
- In other words, a parameter which tells you something about the health of your herd.

The average daily milk amount per cow is a key performance indicator. It tells you something about the level of milk production.

Is this specific for health? No.

 It tells more about how you feed and how much money you will earn. Of course you need healthy cattle for this.



4. KPIs are a tool

- A Key Performance Indicator is a management tool.
- It is a <u>number</u>; an indication to the farmer and its advisors (veterinarian and extensionist) on how the farm is performing on a goal.
- Following the number on time gives information if changes on management had an effect; and if the goal will be reached.

Example:

the goal.

A farmer wants to reduce the number of mastitis cases (the KPI) from 30 cases per month to 5 cases per month. He stops milking on muddy parlours. The number of cases go down to 20 per month. So it has effect but he or she needs to take further action to achieve



4.1 KPIs are a tool Cont'd...

Key Performance Indicators are not the holey grail, but can give strong management support.

- When dairy farming develops, improves and innovates, more and more issues have to be taken care of.
- Record files are hard to analyse and to interpret.
- KPI's give clear figures about the level the dairy farm works.
- It also gives the possibly to compare with other dairy farms or with benchmark figures.



5. KPIs do it together

- A dairy farmer has to run the farm by him or herself, but can acquire knowledge and advise from many experts (extension workers, veterinarians, contractors, neighbours).
- KPI's can help in monitoring progress.
- KPI's keep the discussion ongoing.
- KPI's forces one to look and work on solutions.



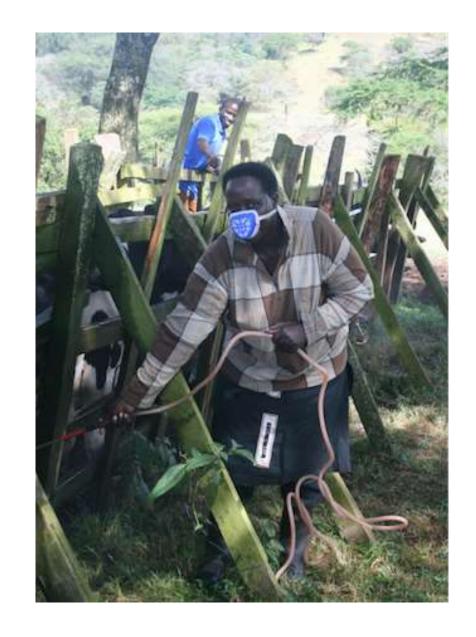


6. Why does a farmer need KPIs?

To set development targets and monitor progress in achieving them.

For instance: A farmer has problems with cattle dying from East Coast Fever (ECF).

- Every month, 5 cattle die or get sick.
- The farmer targets to have only 1 or no case per month.
- By slowly introducing the 10 golden rules on prevention tick borne diseases, he or she can monitor effectiveness or progress on the taken measures.
- It helps to make good decisions.



7. How to determine KPIs

- In animal health there can be specific targets a dairy farmer can look for.
- Often, items with issues on the farm hampers profitability. For instance;
 - Tick borne diseases
 - Mastitis
 - Fertility
 - Calf scours etc.

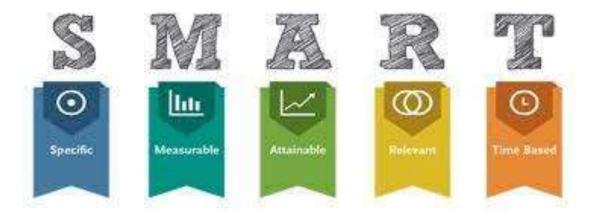


Due to mastitis on the farm, milk production will decrease and also the veterinary cost will increase. This can be a reason for a farmer to try to reduce the number of mastitis cases.

7.1 Important factors that determine KPIs

- **S** Specific
- **M** Measurable
- **A** Achievable
- **R** Realistic
- **T** Timeline





- In case of mastitis, milk volumes go down. Using milk volumes as a KPI will not help, the parameter is not specific. Number of mastitis cases per month are specific.
- Exact money loss due to mastitis would be a great KPI, but unfortunately it is not measurable.
- No cases of mastitis on the farm would be great, but unfortunately not achievable.
- To have all cattle pregnant after one service or insemination is not realistic.
- Changes take time, make a realistic timeline.

7.2 SMART Cont'd...

Specific Measureable Achieveable Realistic What is How will Is it in your Can you the Result you know realistically will it be power to accomplish when you achieve it accomplished achieved

8. Why record Animal health figures

- If asking a farmer what kind of animal health issues he/she has, the answers can vary hugely;
 - Cost of acaracides is too high
 - Many cattle die of ECF
 - Too much problems with mastitis
- When asking to quantify the problem, the answer is often less clear.
- When not knowing how many cattle died, how high the acaracide cost are or how many cattle have mastitis, the level of the problem is difficult to judge.

Acaracides are considered to be expensive.

When asking how expensive? Most farmers will know the price of a bottle, but the actual real cost for using them is often unknown.



8.1 How to make Animal health records

What kind of numbers can a dairy farmer write down to get more insights on the health of the herd?

- Book keeping is a possibility. By writing down all the costs incurred on veterinary (medicines and treatment), the issue can be quantified.
 - Advantage: It gives insights on the finance situation.
 - Disadvantage: Indirect costs like loss of production or dying animals are not included.
- Writing down disease cases and medicine use. So, the farmer writes down dates which animals are treated, with the specific quantity of medicine.
 - Advantage: The health history of the farm becomes visible.
 - Disadvantage: It requires discipline to do it.



Keep in mind:

- Low veterinary cost is not always good.
- Cost of preventive medicines like acaracides, vaccination and dry cow treatment are done to protect the herd and eventually to save money.
- Cost of treatment should be as low as possible.

8.2 Start simple

The basis for all registration is a herd book:

- Which animals are present on the farm?
- When were they born?
- Are they male or female?
- Which animals died and when (and what was the cause)?
- Which animals were sold or bought?
- Which animals were given away?



CONTINUOUS HERD RECORD

helters at	least 24 more	hs old
Heiters	Sucklers	Dairy

Date (a)	Total Cattle		Calves under 6 morths		All male cattle and heiters at least 6 months old but less than 24 months old		Suckler and dairy cove and all male cattle and heders at least 24 months old			
	Males (b)	Females (c)	Males (d)	Females (e)	Males (f)	Heiters (g)	Males (h)	Heiters (i)	Sucklers (i)	Dair (k)

9. Ear tagging

• To make records for cattle, identification of the animal is crucial.



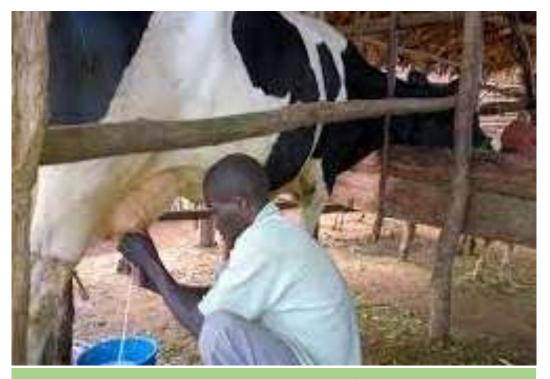
10. Calculating KPIs from the herd book

From the herd book possible KPI's can be calculated;

- Number of cattle (number of cattle in different age groups or in lactation).
- Number of calves born.
- Number of cattle that died.
- Number of calves that died.

Percentages help make the figures comparable;

- Mortality (percentage of cattle or calves) dying in a certain period).
- Percentage of cattle in lactation.
- Percentage of youngstock.



In a high producing herd, about 80% of the adult cattle are in lactation. If this number less, milk production will be lower and therefore income.

In many farms in Uganda, this figure is around 50%. Working to increase this figure will be profitable then. Therefore it can be a good KPI.

11. Take home messages

- 1. A Key Performance Indicator is (just) a figure.
- 2. It is a management tool and can help to achieve a target.
- 3. A KPI has to be chosen SMART.
- 4. Working together with experts to achieve the KPI helps.
- 5. Do not choose too many KPI's.
- 6. Good record keeping is a prerequisite to choose KPI's.
- 7. Simple record keeping already can give a lot of important information.

