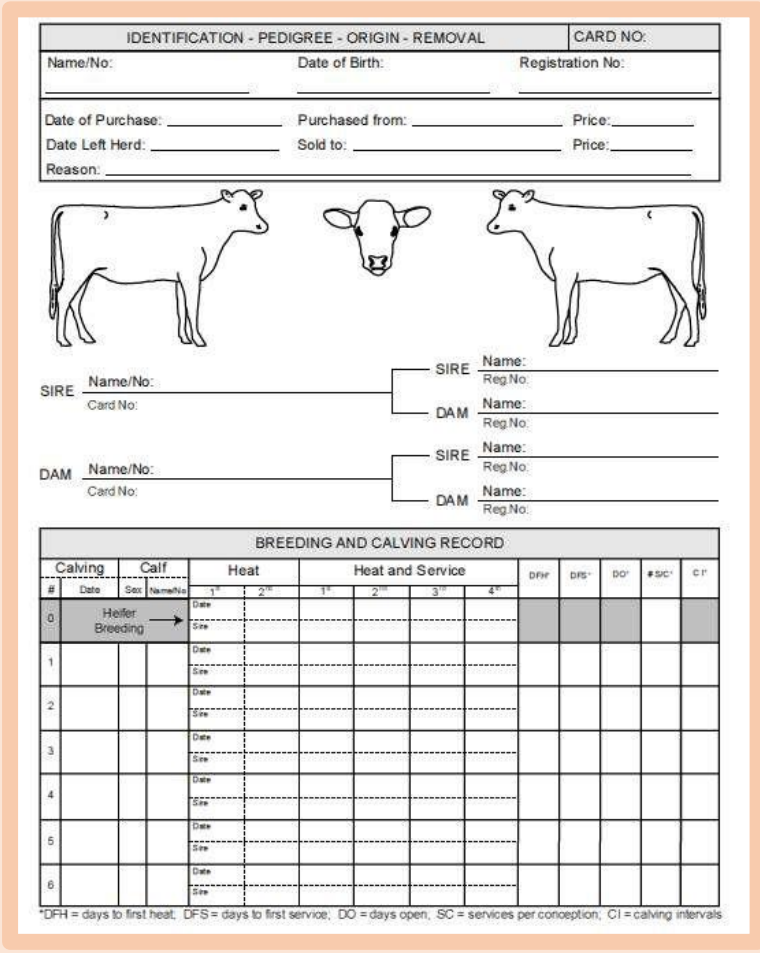
Theme 5: Fertility and Breeding

RECORDING

Level 3

Topic	Training & information Content
5.1	Dairy Cattle Breeds and Breeding
5.2	Breeding program for a dairy farm (medium & large)
5.3	Conformation, Type classification and judging
5.4	Cow handling
5.5	Milk production recording
5.6	Heat Detection
5.7	Artificial Insemination
5.8	Pregnancy Diagnosis
5.9	Fertility Management
5.10	Cows with abnormal discharge
5.11	Fertility disease recording
5.12	Calving recording
5.13	Use of Key Performance Indicators



IDENTIFICATION - PEDIGREE - ORIGIN - REMOVAL | CARD NO:

Name/No: | Date of Birth: | Registration No:

Date of Purchase: | Purchased from: | Price:

Date Left Herd: | Sold to: | Price:

Reason:

SIRE Name/No: Card No: — SIRE Name: Reg.No: / DAM Name: Reg.No:

DAM Name/No: Card No: — SIRE Name: Reg.No: / DAM Name: Reg.No:

BREEDING AND CALVING RECORD

Calving #	Calving Date	Calf Sex	Calf Name/No	Heat 1st	Heat 2nd	Heat and Service 1st	2nd	3rd	4th	DFH*	DFS*	DO*	#SC*	CI*
0	Heifer Breeding →			Date / Sire										
1				Date / Sire										
2				Date / Sire										
3				Date / Sire										
4				Date / Sire										
5				Date / Sire										
6				Date / Sire										

*DFH = days to first heat; DFS = days to first service; DO = days open; SC = services per conception; CI = calving intervals

1. You will learn about (learning objectives):

- ❑ How to keep records in a dairy farm from calving
- ❑ How to choose a suitable recognition/identification system for your animals

2. Introduction

- Well-kept data are the key to future success. A proper Recording system will help you do better in the future, because you can learn from what you did/recorded

- Administration of the daily milk production will help to adjust rations in time, very often the loss of milk is caused by nutritional issues.

- It is very important to train farm workers how to recognize certain cow signs and convince them about the importance of administration of cattle signs and abnormal observations.

3. Starting point

Where does it all start?

- Recording starts with recognition/identification of the animal

- Immediately after the calf is born, basic information can be documented. E.g.

  - Day of birth
  - Pedigree
  - Abnormalities
  - Gestation period
  - Proposed farm number/name.

Registration Chart				
Owner; D . Farmer Adress; Cattleroad 73s3 City. Bulltown.	Date of Birth. 15-08-2018	Gestation 278 days	Seks. Female	Reg number 642805458
	Name;			
	Farm Number. 545	Breed 100% HF	Colour B&W	Registration Yes
	Sire; Silveridge Album		22211159	
Remarks. Twins Red & White.	Dam; 211 Prinses		87452113	

4. Recognition/identification of the animal: Choosing a Recording System

How;	**++++/-----**
Ear tags	Can get lost. Only nearby. One colored animals.
Sketching	Will remain. Can get lost. Cheap Seen from Distance
Picturing	Reliable. Can get lost Cheap. Seen from Distance.
Naming	Unreliable.
Branding	Permanent Expensive. Hardly visible on light colored animals.

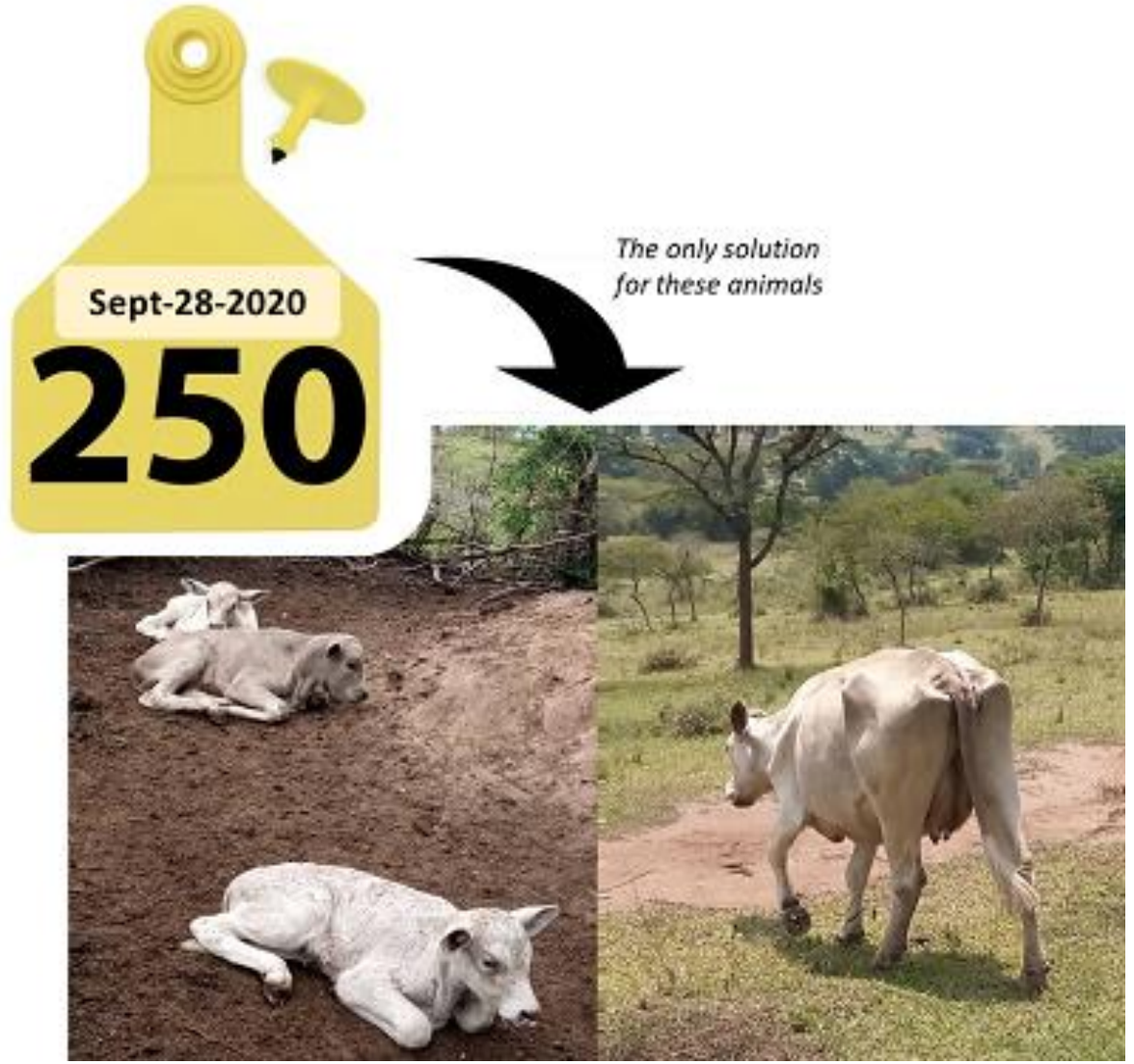
Registration Chart

Owner; D . Farmer	Date of Birth. 15-08-2018	Gestation 278 days	Seks. Female	Reg number 642805458
Adress; Cattleroad 73s3	Name;			
City. Bulltown.	Farm Number. 545	Breed 100% HF	Colour B&W	Registration Yes
	Sire; Silveridge Album 22211159			
Remarks. Twins Red & White.	Dam; 211 Prinses 87452113			

Combination of Ear tag (0545) and picturing + basics = Passport.

5. Sample of a Recording System

- This is a sample of a recording system



6. Naming alone is Unreliable

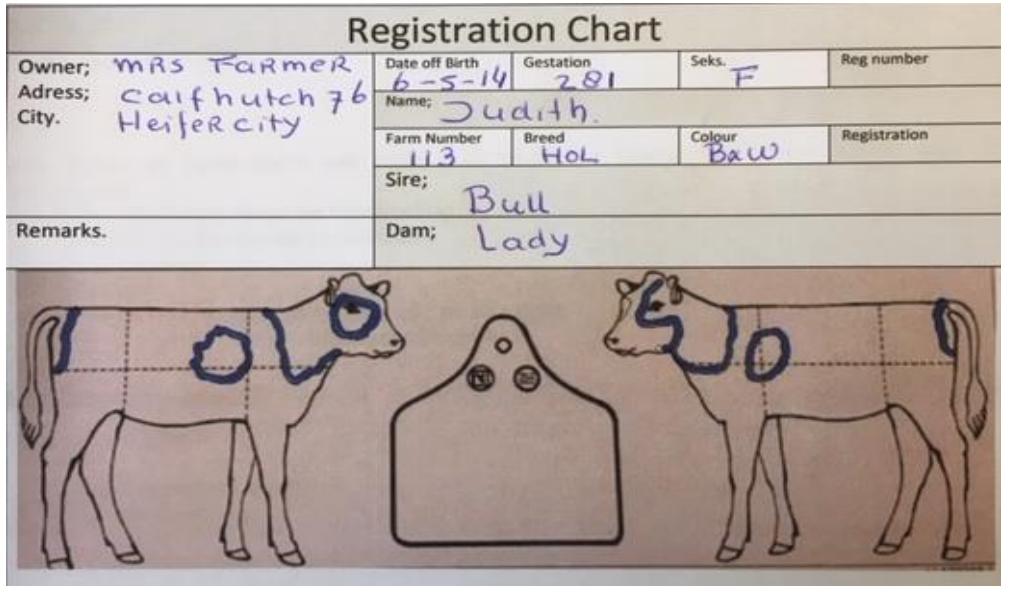
- It is not easy to locate Judith in this grazing herd/group of many cows

Where is Judith ??

7. Locating Judith in the herd

- Combination of Ear tag and picturing/sketching + basics

Where is Judith ??

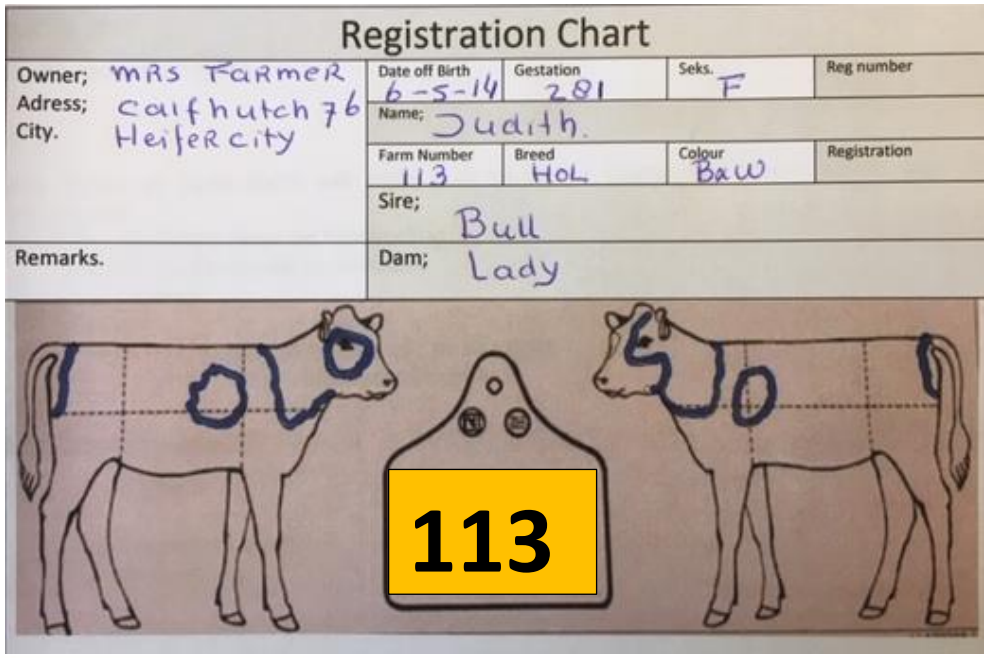


7.1 Locating Judith in the herd Cont'd…

- With the sketch (made on 6-5-2014) it is still possible for everyone to find the cow in a group of many other cows.

Where is Judith ??

Judith is here



8. Why recognition/identification is important

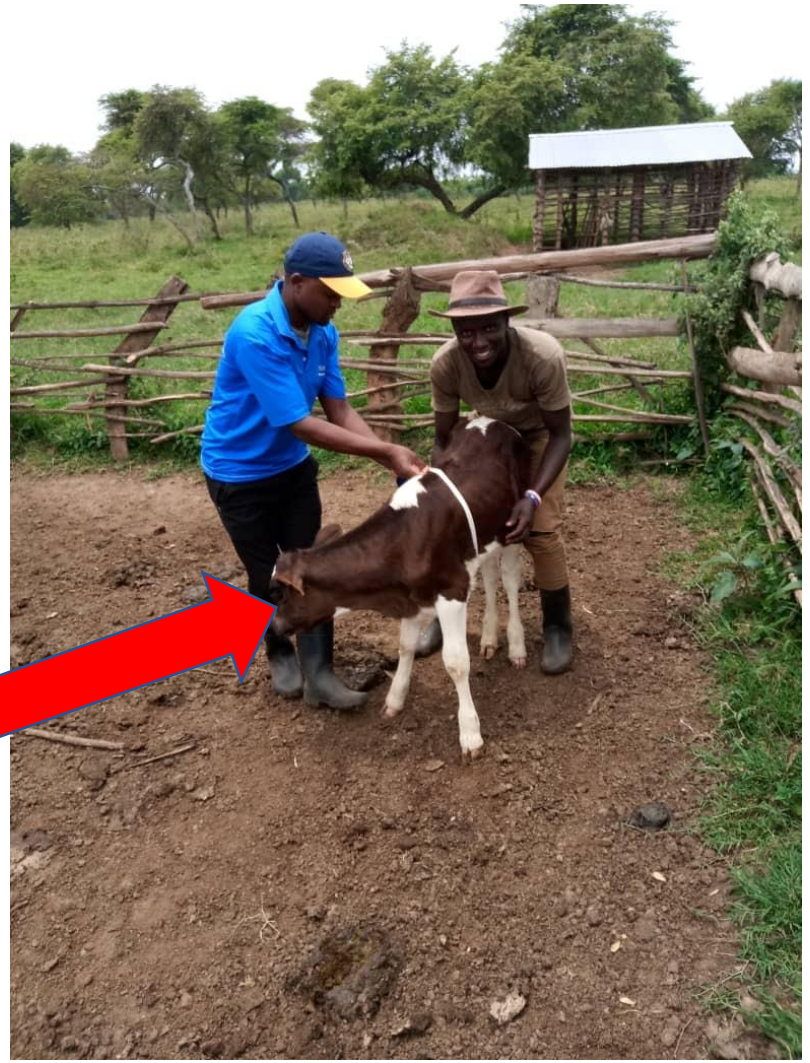
- Without recognition/identification, you can take measurements but not monitor the calf

Monitoring ……**NO**

Hearth Girth……YES

Growth rate ……**NO**

No Eartag----No Data….. No conclusions



8.1 Why recognition/identification is important Cont'd…

- With proper recognition/identification, you can take measurements and monitor the calf

Monitoring ……YES

Hearth Girth……YES

Growth rate ……YES

With Eartag….Reliable Data….Conclusions & Decisions

9. Records make Management easy

- Records are useful and necessary to evaluate how several management decisions/objectives worked out

Female calves born in 2012															
Calf Nu;	Sire	Dam	Date of Birth	Birth Weight	Weaning Date	Weaning Weight	Age in days	Growth/day	1st A.I.	Interval birth/1st A.I.	Calving Date	Interval birth/calving	Interval1st A.I/Calving	BCS 1st calving	ody weight 1st calving
801	Mike	558	4-1-2008	40	28-3-2008	90	84	**595**	5-3-2009	426	3-12-2009	699	273	2,5	565
803	Classic	239	7-1-2008	40	28-3-2008	78	81	**469**	3-3-2009	421	23-11-2009	686	265	2,8	576
804	Canvas	602	10-1-2008	38	28-3-2008	100	78	**795**	8-3-2009	423	29-12-2009	719	296	3,2	570
805	Olympic	552	15-1-2008	44	28-3-2008	100	73	**767**	5-2-2009	387	3-12-2009	688	301	3,5	643
806	Paramoun	519	24-1-2008	44	4-4-2008	100	71	**789**	14-5-2009	476	1-4-2010	798	322	3	554
807	Dominator	454	26-1-2008	43	4-4-2008	86	69	**623**	9-4-2009	439	20-1-2010	725	286	3,2	608
808	Dominator	458	26-1-2008	48	4-4-2008	94	69	**667**	18-5-2009	478	29-6-2010	885	407	4	632
809	Talent	50	4-2-2008	43	4-4-2008	90	60	**783**	21-5-2009	472	25-2-2010	752	280	3	586
810	Dominator	510	13-2-2008	42	18-4-2008	80	65	**585**	22-4-2009	434	21-10-2010	981	547	4,5	647
811	Talent	332	15-2-2008	43	18-4-2008	92	63	**778**	21-5-2009	461	22-4-2010	797	336	2,8	628
813	Lightning	420	24-2-2008	40	16-5-2008	110	82	**854**	16-5-2009	447	23-2-2010	730	283	3	578
814	Mike	612	28-2-2008	**39**	16-5-2008	94	78	**705**	6-5-2009	433	6-3-2010	737	304	2,8	568
815	Olympic	525	6-3-2008	44	16-5-2008	82	71	**535**	12-5-2009	432	11-2-2010	707	275	2,8	573
817	Mike	613	11-3-2008	40	16-5-2008	80	66	**606**	12-6-2009	458	17-3-2010	736	278	3,2	598

- Four(4) Management aspects are targeted:

1. Weaning within 85 days
2. Growth from birth till weaning > 650 gr/day
3. 1st insemination within 430 days
4. Body weight at first calving 575 kg

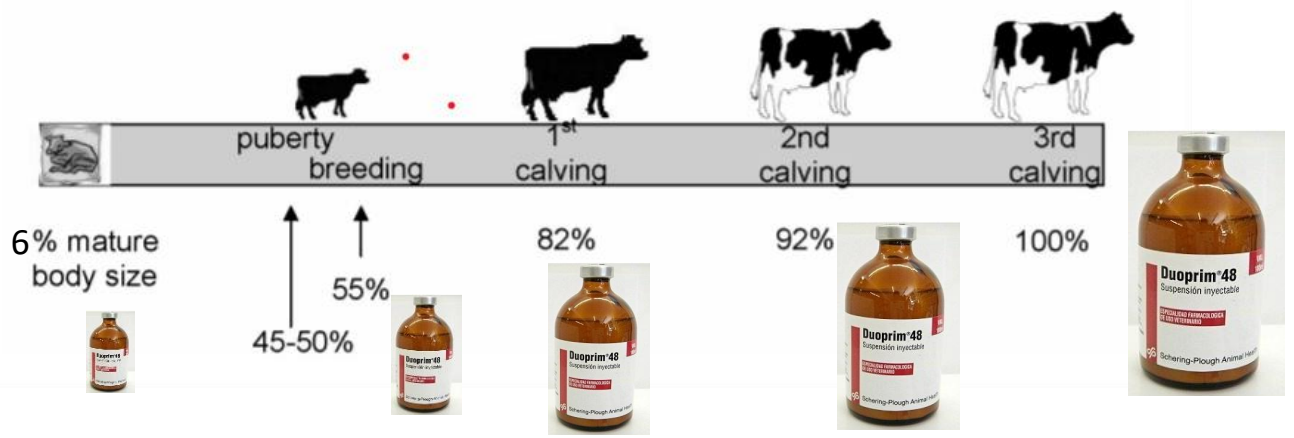
Note: *For these four (4) management targets, the data above will tell us whether we did okay/on the right track*

10. Records: Treatment

- Records are also useful during <u>treatments</u>

- Example:

Small calves require **low dosage**



- The Dosage increases by size ,weight & age.

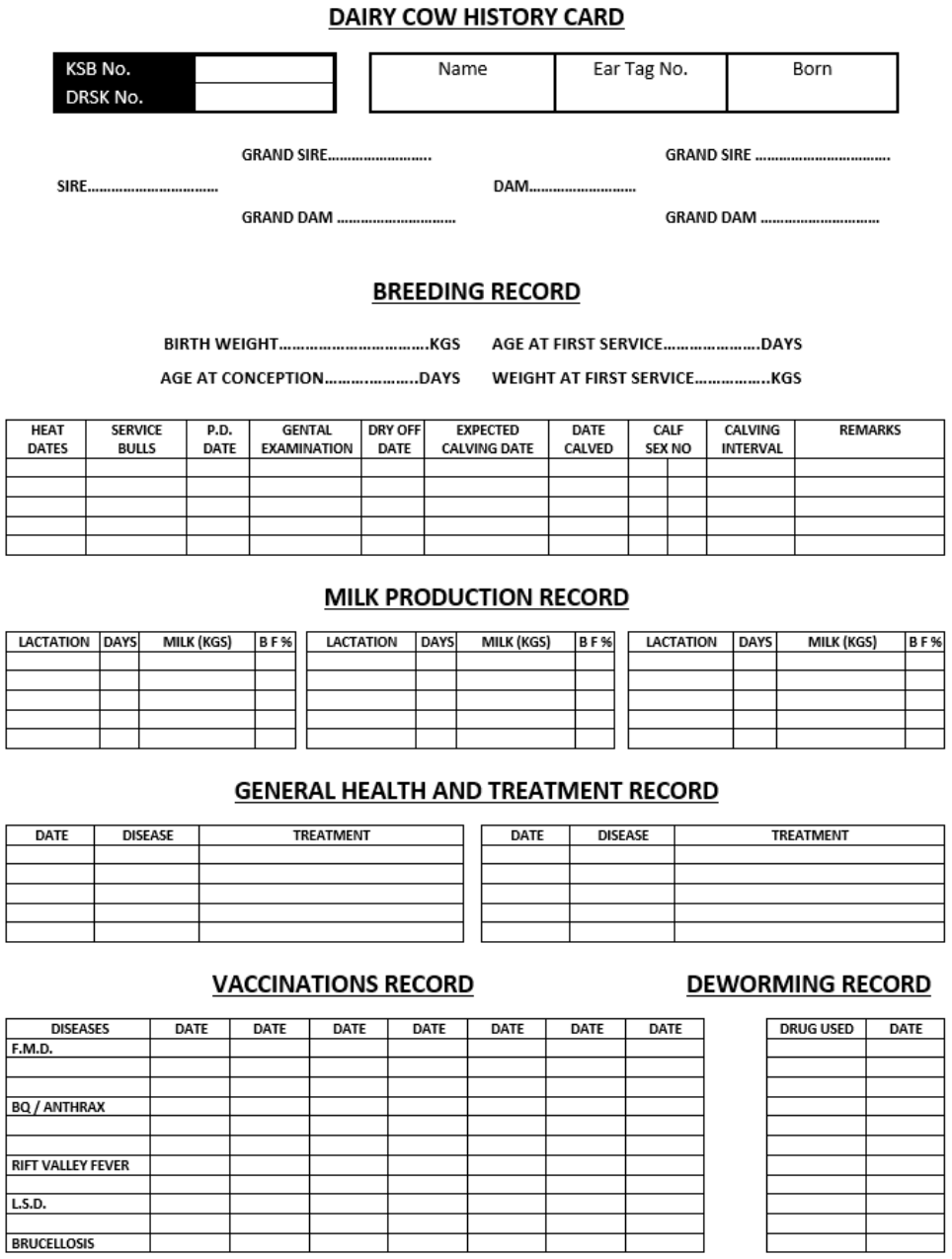
Where there's **No data?**

- There are possibilities of;

- overtreatments …(*leading to*).....-/- effect
- undertreatments…(*leading to*).....resistance

11. Why Recording is important

- Recording of farm facts will help you to make better decisions about your farm management. Without reliable data it is very difficult to make decisions.
- Information from barn records must be transmitted to “office” records.
- Dairy Cow History Card is an example of “office” recording



DAIRY COW HISTORY CARD

KSB No. / DRSK No.	Name	Ear Tag No.	Born

GRAND SIRE..... GRAND SIRE .....

SIRE..... DAM.....

GRAND DAM ..... GRAND DAM .....

BREEDING RECORD

BIRTH WEIGHT.....KGS AGE AT FIRST SERVICE.....DAYS

AGE AT CONCEPTION.....DAYS WEIGHT AT FIRST SERVICE.....KGS

HEAT DATES	SERVICE BULLS	P.D. DATE	GENTAL EXAMINATION	DRY OFF DATE	EXPECTED CALVING DATE	DATE CALVED	CALF SEX NO		CALVING INTERVAL	REMARKS

MILK PRODUCTION RECORD

LACTATION	DAYS	MILK (KGS)	B F %

LACTATION	DAYS	MILK (KGS)	B F %

LACTATION	DAYS	MILK (KGS)	B F %

GENERAL HEALTH AND TREATMENT RECORD

DATE	DISEASE	TREATMENT

DATE	DISEASE	TREATMENT

VACCINATIONS RECORD

DISEASES	DATE	DATE	DATE	DATE	DATE	DATE	DATE
F.M.D.							
BQ / ANTHRAX							
RIFT VALLEY FEVER							
L.S.D.							
BRUCELLOSIS							

DEWORMING RECORD

DRUG USED	DATE

12. “Barn” Recording

- Entails records taken in the barn and close to the cows.
- This recording is often adequate and immediate
- It is therefore Very efficient.

Production/Reproduction /Health Chart . 		Cow number /name; 113 --Judith Calving date;25-07-2020. Remarks;	
Date;	**Milk Production**	**Reproduction**	**Health issues**
01-08-2020	Mo; 9,8 litres	Pink discharge	Tempr 38,3°C
	Eve; 8.1 litres		
02-08-2020	Mo;9,5 litres	Discharge a bit whitish	Tempr 38.9°C
	Ev; 7.4 litres		
03-08-2020	Mo; 9,3 litres	Discharge more white	Low appetite . poor rumen filling < 2.
	Ev ;7,2 litres		Tempr; 39.4°C
			Endometritis !!!
			Antibiotics 5ml rypzho

Example chart; “ Direct administration” of the “ Observation” close to the cows.

12.1 “Barn” Recording:
Fertility chart

- The <u>fertility chart</u> is a very important example of a barn record.
- Recording is done <u>immediately</u> after an observation is made

FERTILITY CHART;.....202...../.....202.....

	Calving date	Calving details	Calf sex+ nnumber	Milkfever	Retained-placenta	Reproductive Disorder. 1,Endometritis 2.CysticOvaries 3.Others.	1st Heat	2nd Heat	Bull name	AI technician	1st Service date	2nd Service date	3th Service date	4th Service date	5th Service date	6th Service date	PD Date +/-	Exp Calv date	Dry off date	Remarks

12.2 “Barn” Recording: Milk record

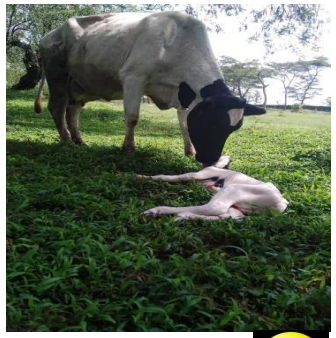
- Cow Judith has calved on 10-01-2020
- Every 15th of the month milk recording takes place
- On the 29th of May cow is in lactation for 139 days
- Till 29th of May cow has produced 1465 kg’s milk
- Averaging 1465;139 = 10,5 kg/day.

Milk record	Judith	calved 10-01-20			
10-01	5				
15-01	9 kg’s milk	5 + 14 = 19 days	19	19 x9 = 171 kg’s	171 kg’s
29-01	14		+	+	
29-01	17				
15-02	11 kg’s milk	17=14 = 31 days	50	31 x 11= 341 kg’s	512 kg’s
01-03	14		+	+	
01-03	14				
15-03	11,5 kg’s milk	14 +14 = 28 days	78	28 x 11,5 = 322 kg’s	834 kg’s
29-03	14		+	+	
29-03	17				
15-04	10,5 kg’s milk	17 + 14 = 31 days	109	31 x 10,5 = 325.5 kg’s	1159,5 kg’s
29-04	14		+	+	
29-04	16				
15-05	10.2 Kg’s milk	16+14 = 30 days	139	30 X 10,2 = 306 kg’s	1465,5 kg’s
29-05	14				

13. Records are important in Cattle Breeding

01-10-2019

300 days



CI= 365 days

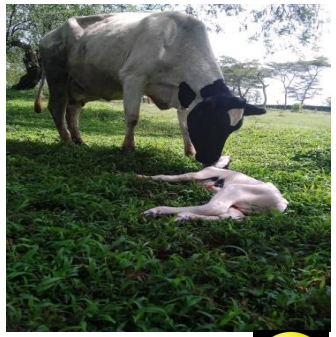
01-10-2019

360 days

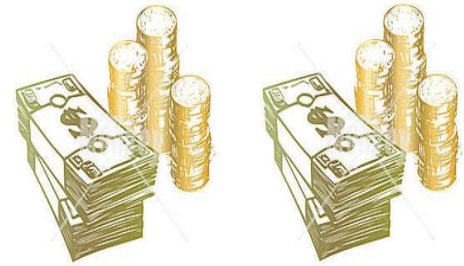
CI = 425days

01-10-2019

400 days



CI = 465days



Shortening the calving interval will increase the profit/day.

- More calves.
- More milk/day.

13.1 Records are important in Cattle Breeding Cont'd…

- The more information/data available, the easier it is to select <u>your best cow</u>

Good to know!

More data available is good for:

- Direct selection
- General Breeding
- Bull-mother selection

Cow	Parity	Milk production		lactation Length		Calving interval	
A	3th lact	3850 kg	3e	390 = 9,9/day	2e	450 = 8,55 /CI day	2e
B	1st lact	3975 kg	2e	415 = 9,6/day	4e	485 = 8,20/CI day	4e
C	4th lact	3620kg	4e	375 = 9,65/day	3e	430 = 9,65/CI day	1e
D	4th lact	4125 kg	1e	400 = 10,1/day	1e	495 = 8,33/CI day	3e

What is your best cow ?

14. Financial records

- Financial records are Not unimportant part of recording
- They are used to tell what “comes in” and what “goes out.”
- Alongside is an example of financial record; monthly overview

	sep	okt	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	remark
Income/Revenue													
sales of milk													
sales of animals													
Bull service													
Sales of dung/slurry													
Sales of feed/seeds													
Total income/revenue													
Feed.													
Veterinarian costs													
Breeding Services													
Hired Labor.													
Construction													
Interest payment													
Total Expenditure													

15. Take Home Messages

1. Reliable recording depends a reliable identification system
2. Records are necessary to manage/improve your farm results
3. There different types of records
   - Barn records Technical records
   - Office records Financial records
4. Most used technical records
   - Young stock management
   - Fertility management
   - Milk production management
5. Every farm must try to select a registration system that fits into the management system. This depends on the people working in the farm
6. It's the farmers task to make the workers aware of the importance of all the agreed recording aspects

Remember: It's all about efficiency!

- END -