

FROM WEANING TO FIRST CALVING (PREGNANCY) - Level 1

| Topic | Training & information Content |
|-------|--|
| 6.1 | Selection of bulls, use of sexed semen, feeding management of dry cows |
| 6.2.1 | The calving process |
| 6.2.2 | Use of equipment around calving |
| 6.2.3 | Care of cow and calf after calving |
| 6.2.4 | Colostrum management |
| 6.3 | Milk (replacer) feeding schedule |
| 6.4 | From birth to weaning |
| 6.5 | From weaning to pregnancy |
| 6.6 | Disease and health management |
| 6.7 | Handling of calves after difficult birth |
| 6.8 | Young stock rearing info and Key Performance Indicators |



1. You will learn about (learning objectives):

- Management from calf /heifer from weaning till first calving.
- The importance of feeding a young animal according to their needs.
- How to prepare a pregnant heifer during the period before calving.



2. Background

- Your weaned calf soon will become a milking cow.
- It is important that 'the newly calved heifer' is in good shape to start her new job as a future milking cow. All these preparations must take place before calving.
- As a farmer, you must decide what you expect from calves/heifers; setting objectives are crucial for future successes.

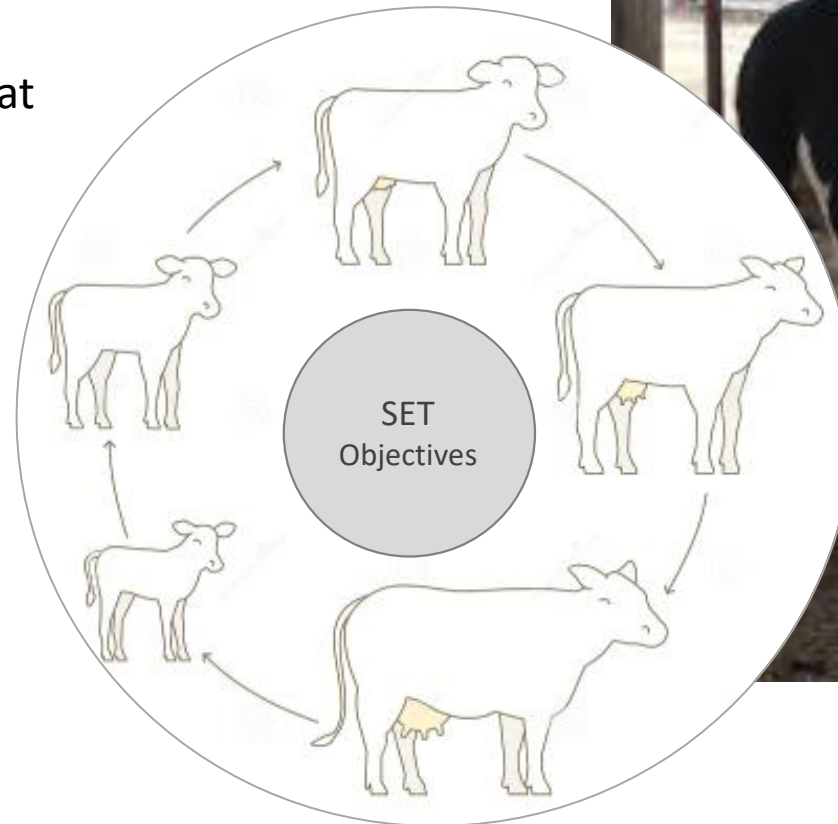
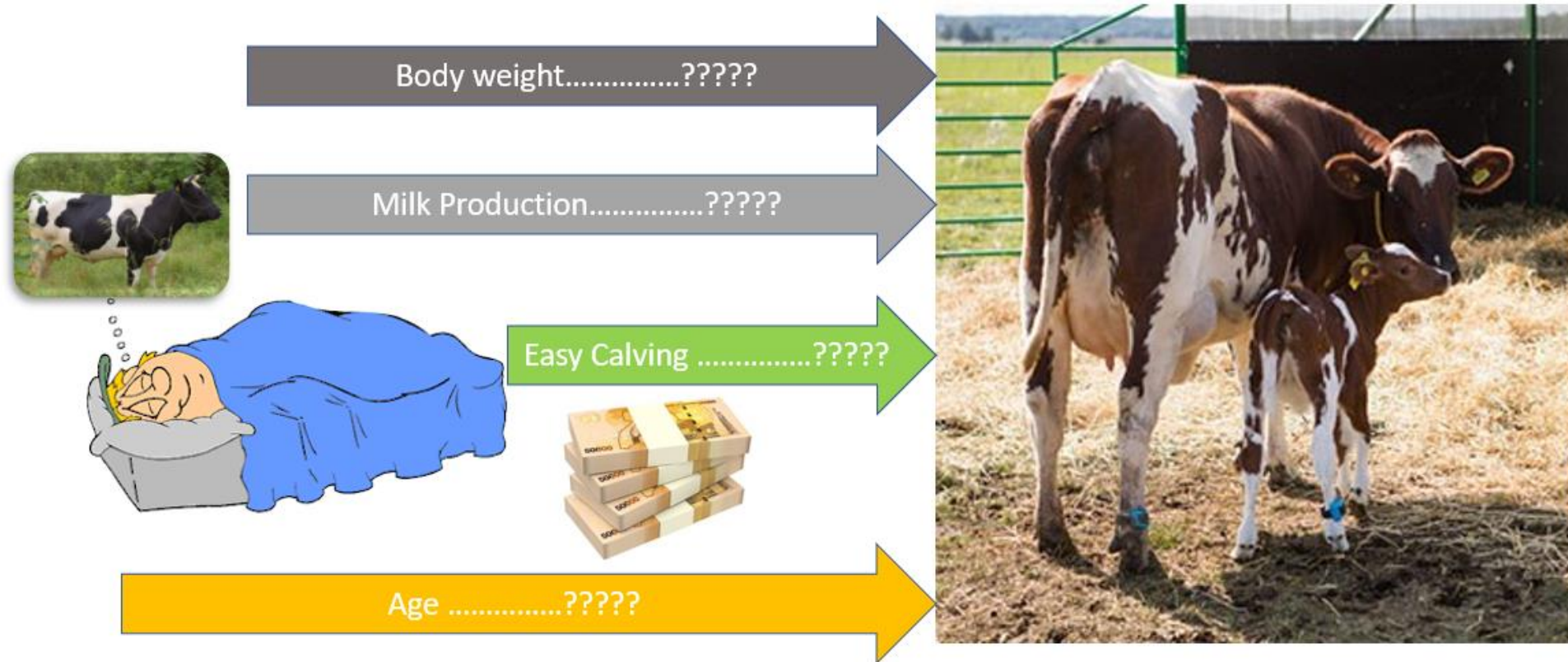


Photo: Felix Opinya | Courtesy: Eric Kimani

3. Setting Objectives

- There are a number of objectives/factors to be worried about when managing calves/heifers from weaning to first calving i.e. body weight, age etc.

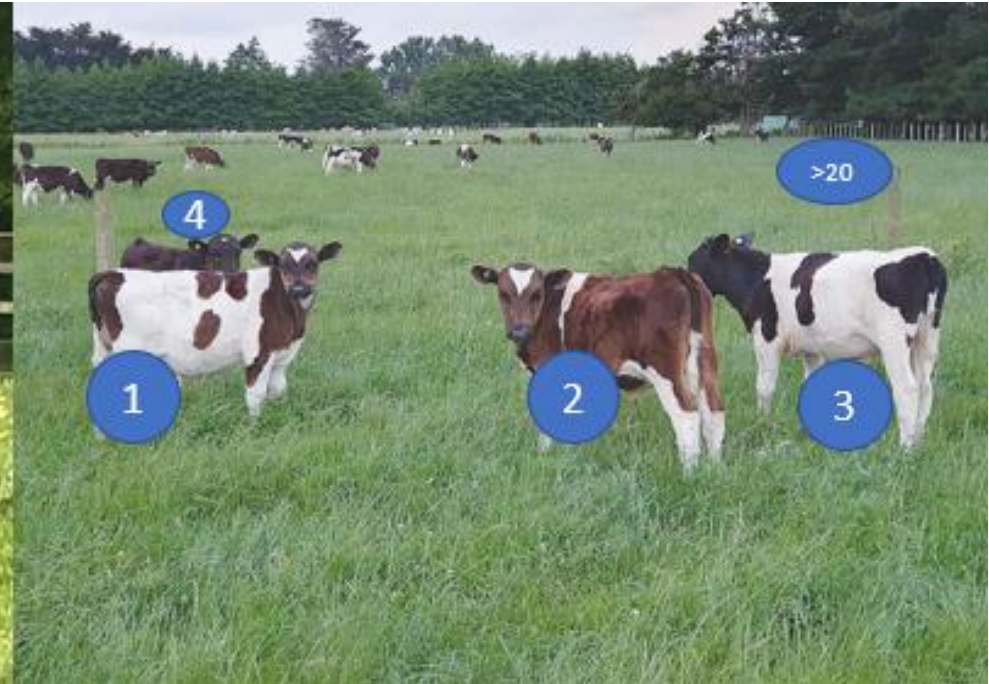


4. Rearing calves post-weaning



After weaning

- Small group: 3-4 calves.
- Small area: for continuation of growth.
- Recognizable places where they can eat and drink, similar as before weaning.



After weaning

- Group size is too big: > 20 calves.
- New food, new environment, new herd mates.
- Losing energy and growth because of long walking distances.



5. Growth/weight gain in calves

| AGE: | January 0 | February 1 | March 3 | April 4 | May 5 | June 6 | July 7 | August 8 | September 9 | October 10 | November 11 | December 12 |
|------|--------------|---------------|------------|------------|----------|-----------|-----------|-------------|----------------|---------------|----------------|----------------|
|------|--------------|---------------|------------|------------|----------|-----------|-----------|-------------|----------------|---------------|----------------|----------------|



- Monitor calf's growth rate regularly.

Objective: Daily weight gain of 700 grams per day (gr/day)

Tape measuring



| | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|
| Weight: | 32 kg | 41 kg | 57 kg | 85 kg | 115 kg | 137 kg | 160 kg | 180 kg | 200 kg | 245kg | 265 kg | 290 kg |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|

5.1 Growth/weight gain in calves Cont'd...

Examples:

98 cm = 85 kgs
 128 cm = 180 kgs
 151 cm = 290 kgs
 186 cm = 500 kgs

| Cm's | Kg's | Cm's | Kg's | Cm's | Kg's | Cm's | Kg's |
|------|------|------|------|------|------|------|------|
| 75 | 41 | 108 | 114 | 142 | 236 | 176 | 435 |
| 76 | 42 | 109 | 117 | 143 | 240 | 177 | 440 |
| 77 | 44 | 110 | 120 | 144 | 245 | 178 | 445 |
| 78 | 46 | 111 | 123 | 145 | 250 | 179 | 452 |
| 79 | 48 | 112 | 126 | 146 | 255 | 180 | 460 |
| 80 | 49 | 113 | 129 | 147 | 260 | 181 | 467 |
| 81 | 51 | 114 | 132 | 148 | 268 | 182 | 474 |
| 82 | 53 | 115 | 135 | 149 | 276 | 183 | 480 |
| 83 | 54 | 116 | 139 | 150 | 283 | 184 | 487 |
| 84 | 56 | 117 | 142 | 151 | 290 | 185 | 493 |
| 85 | 58 | 118 | 145 | 152 | 295 | 186 | 500 |
| 86 | 60 | 119 | 148 | 153 | 300 | 187 | 508 |
| 87 | 62 | 120 | 151 | 154 | 305 | 188 | 516 |
| 88 | 64 | 121 | 154 | 155 | 310 | 189 | 523 |
| 89 | 66 | 122 | 158 | 156 | 315 | 190 | 530 |
| 90 | 68 | 123 | 162 | 157 | 320 | 191 | 538 |
| 91 | 70 | 124 | 166 | 158 | 325 | 192 | 546 |
| 92 | 72 | 125 | 170 | 159 | 330 | 193 | 554 |
| 93 | 74 | 126 | 173 | 160 | 335 | 194 | 562 |
| 94 | 77 | 127 | 176 | 161 | 340 | 195 | 570 |
| 95 | 79 | 128 | 179 | 162 | 345 | 196 | 578 |
| 96 | 81 | 129 | 183 | 163 | 350 | 197 | 586 |
| 97 | 84 | 130 | 187 | 164 | 357 | 198 | 594 |
| 98 | 86 | 131 | 191 | 165 | 364 | 199 | 600 |
| 99 | 88 | 132 | 195 | 166 | 370 | 200 | 608 |
| 100 | 91 | 133 | 198 | 167 | 377 | 201 | 616 |
| 101 | 93 | 134 | 202 | 168 | 384 | 202 | 624 |
| 102 | 96 | 135 | 208 | 169 | 390 | 203 | 632 |
| 103 | 99 | 136 | 212 | 170 | 397 | 204 | 640 |
| | | 137 | 216 | 171 | 404 | 205 | 645 |
| 104 | 102 | 138 | 220 | 172 | 410 | 206 | 650 |
| 105 | 104 | 139 | 224 | 173 | 417 | 208 | 654 |
| 106 | 107 | 140 | 228 | 174 | 424 | 209 | 657 |
| 107 | 110 | 141 | 232 | 175 | 430 | 210 | 660 |

6. Growth/weight gain in heifers

| | | | | | | | | | | | |
|---------------|----------------|-------------|-------------|-----------|------------|------------|--------------|-----------------|---------------|----------------|----------------|
| January 13 | February 14 | March 15 | April 16 | May 17 | June 18 | July 19 | August 20 | September 21 | October 22 | November 23 | December 24 |
|---------------|----------------|-------------|-------------|-----------|------------|------------|--------------|-----------------|---------------|----------------|----------------|



- Monitor heifer's growth rate regularly.

Objective: Daily weight gain of 670 grams per day (gr/day)

Tape measuring



| | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 300 kg | 310 kg | 320 kg | 340 kg | 360 kg | 380 kg | 400 kg | 425 kg | 445 kg | 470kg | 490 kg | 510 kg |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|

7. Feed/ration calculation

- Every age group needs a different ration to accomplish objectives.



Maximum

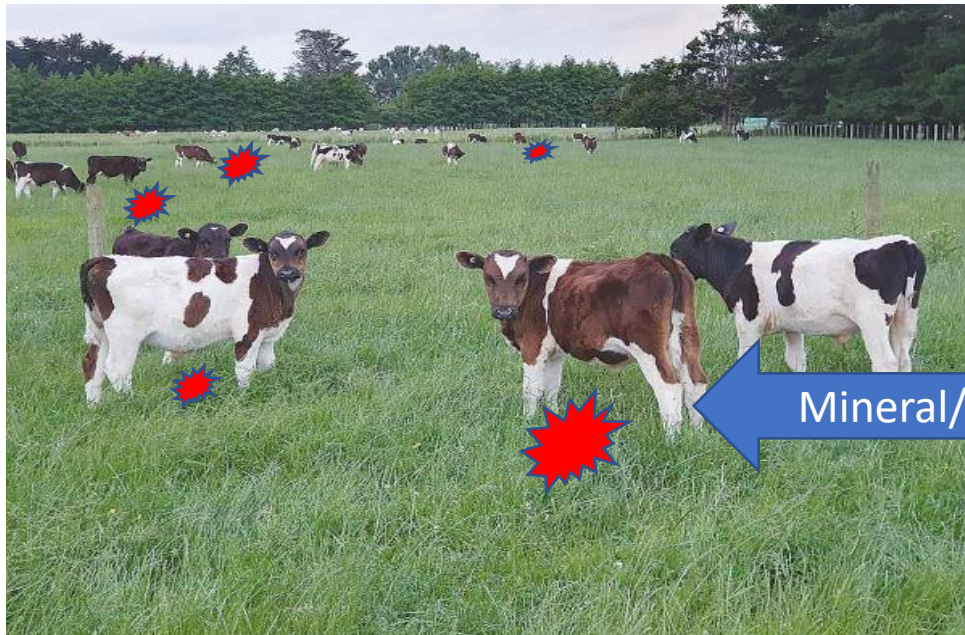


12,5 Kilo



8. Minimum Energy requirements for young calves and heifers

- Shortage of vitamins and trace minerals in pastures can be solved by supplementing the animals with mineral supplements or some concentrates.



125 Kilogram

Mineral/Vitamin deficiencies

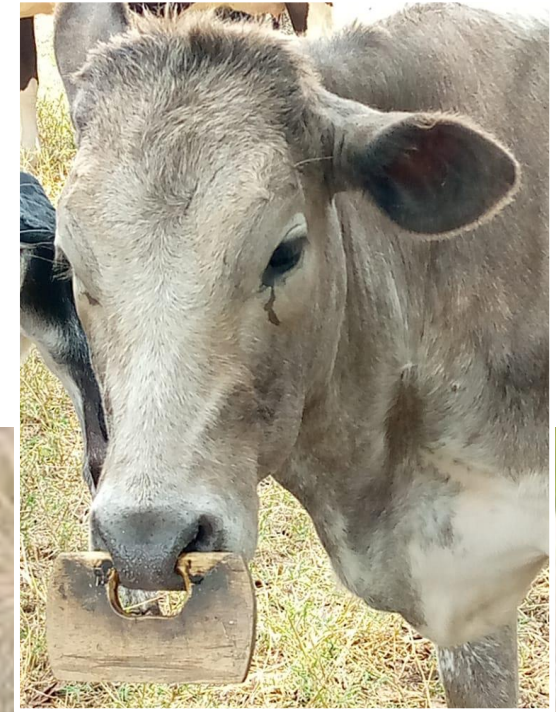


Red stars are a 'reliable' indication of copper shortage.

9. Suckling vice in heifers

This:

- Is a deviant behaviour.
- Causes mastitis.
- -/- (reduces) milk production.

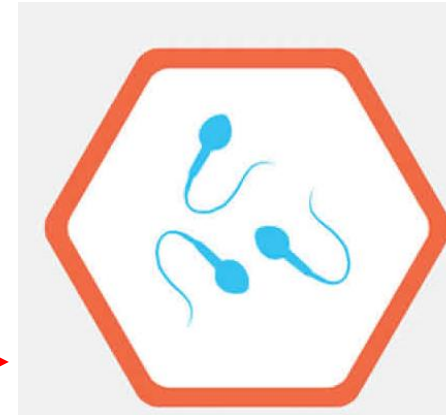
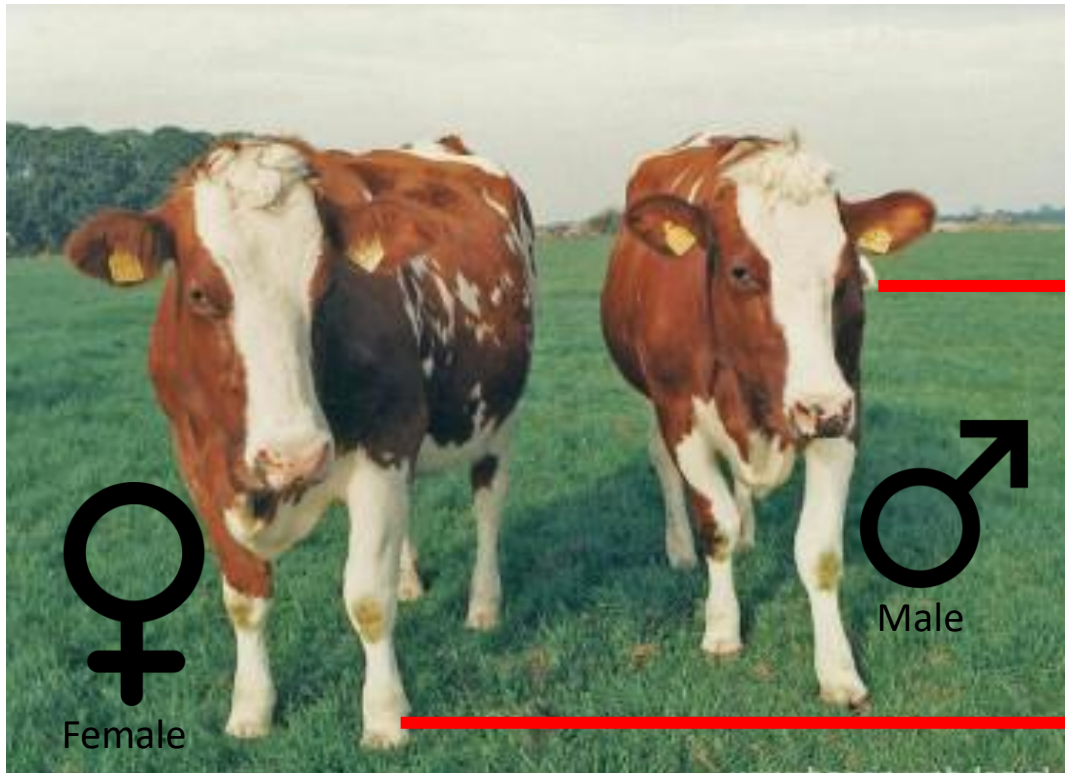


Watch video:

<https://www.youtube.com/watch?v=bo03cqGK58M>

10. Twins: Freemartins

- Sometimes “heifers” come in heat, but cannot become pregnant.



- Not suitable for AI.
- In case of natural mating, there are very low conception rates.

CULL!



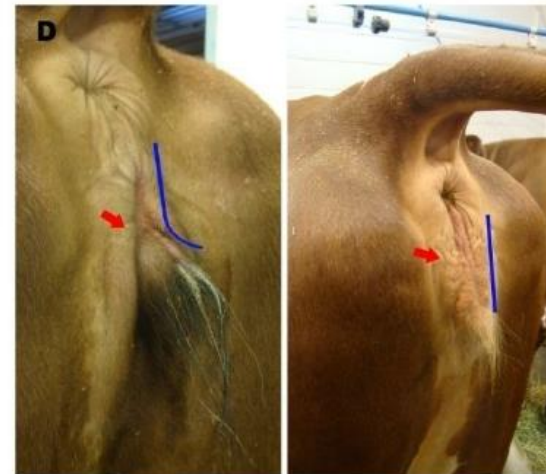
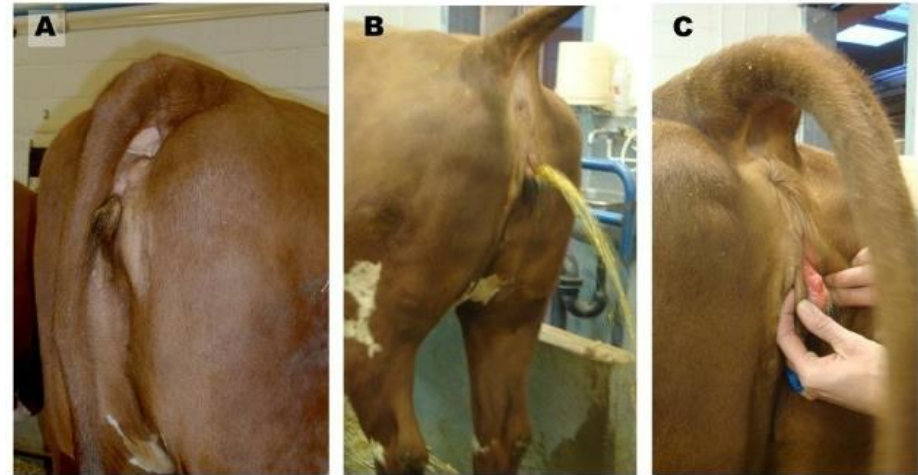
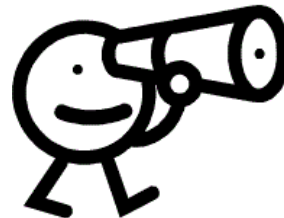
10.1 Twins: Freemartins Cont'd...



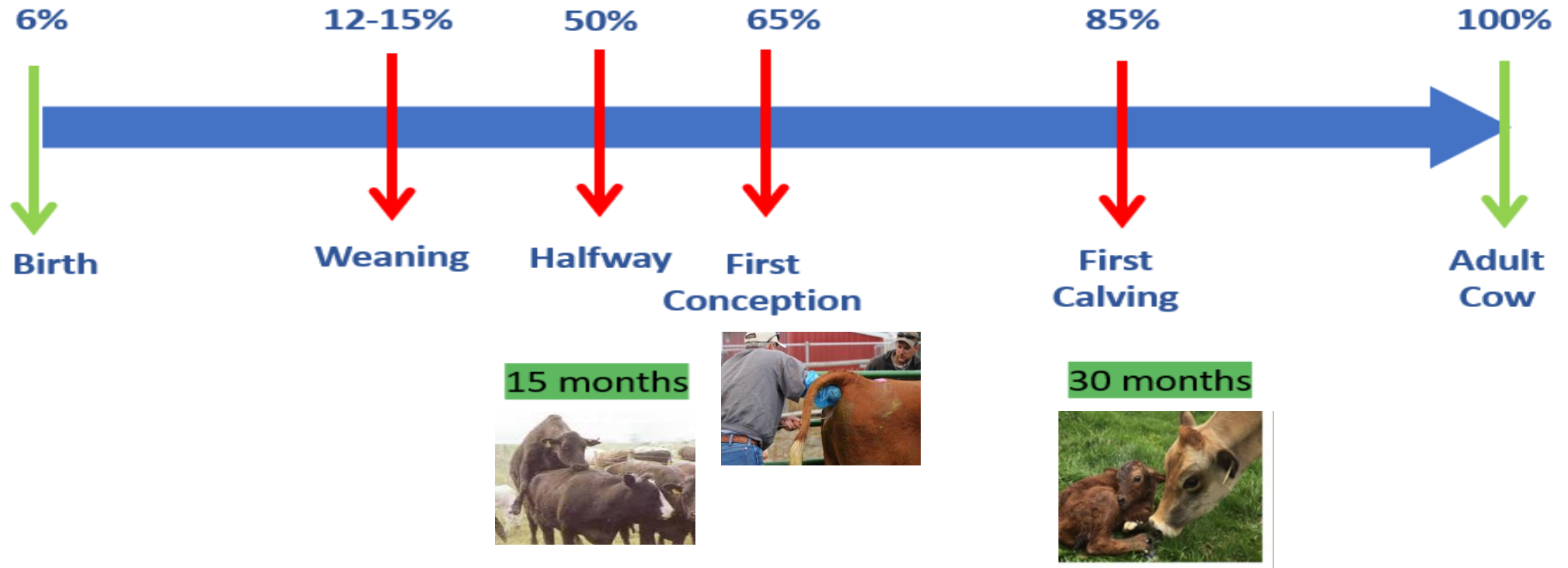
Freemartins

Bull calves have poor fertility/infertile.

Heifer calves: 98 % deviant reproductive tract.
Thickened clitoris (see pictures alongside).



11. Pathway: Growth from mating to first calving



12. Bull selection for natural mating or Artificial Insemination (AI)

Mating



Bull Selection

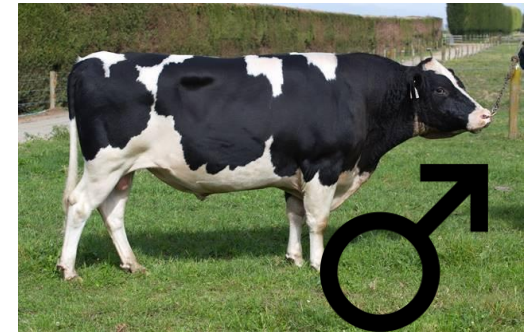
The very first selection criteria for an AI bull is Sire Calving Ease. Always make sure that the chosen AI bull gives either lighter calves or easy births with relative short gestation periods (< 280 days).

525HO00091 MALKI

| 04/2021 | CDCB SUMMARY MACE | | | NM\$ +76 |
|---------|-------------------|--------|------------------------------------|----------|
| Milk | -184 | 92%R | Fluid Merit \$ | +58 |
| Fat | -3 | +0.01% | Cheese Merit \$ | +84 |
| Protein | -1 | +0.02% | Grazing Merit \$ | +62 |
| SCS | 2.94 | 90%R | Gestation Len. +0 Fert. Index +0.6 | |
| PL | +2.0 | 90%R | Livability +2.4 Mastitis +0.5 | |
| DPR | +0.8 | 89%R | EFI 5.0% gEFI 5.4% | |
| HCR | -0.1 | | | |
| CCR | -1.8 | | 10343 Dtrs 2632 Herds 0% US | |

| 04/2021 | CALVING SUMMARY | | | SCE 2.4 % |
|-----------------------|-----------------|------|-----------|-----------|
| Sire Calving Ease | 2.4% | 88%R | 25885 Obs | |
| Daughter Calving Ease | 3.0% | 78%R | 2 Obs | |
| Sire Stillbirth | 6.3% | 70%R | 37408 Obs | |
| Daughter Stillbirth | 6.1% | 78%R | 2 Obs | |

| 04/2021 | HA TYPE SUMMARY | | | TPI +2019 |
|----------------------|-----------------|-----------|---|-----------|
| PTAT | -0.69 | 90%R | UDC+0.00 FLC+1.14 BSC-0.14 2532 D / 781 H | |
| Stature | -1.69 | Short | | |
| Strength | -0.44 | Frail | | |
| Body Depth | -1.12 | Shallow | | |
| Dairy Form | -1.59 | Tight | | |
| Rump Angle | -1.19 | High Pins | | |
| Thurl Width | -0.56 | Narrow | | |
| Rear Legs-Side | -0.70 | Posty | | |
| Rear Legs-Rear | +1.05 | Straight | | |
| Foot Angle | -0.96 | Low | | |
| Feet & Legs Score | +0.74 | High | | |
| F. Udder Attachment | -0.25 | Loose | | |
| Rear Udder Height | -0.23 | Low | | |
| Rear Udder Width | -0.49 | Narrow | | |
| Udder Cleft | -0.40 | Weak | | |
| Udder Depth | -0.29 | Deep | | |
| Front Teat Placement | -1.45 | Wide | | |
| Rear Teat P. Rear | +0.19 | Close | | |
| Teat Length | +0.22 | Long | | |



14. Pregnant cow

- Pregnancy check confirms pregnancy.



Maximum



62,5 Kilo



15. Stress prevention

- One month before the expecting calving date, the pregnant heifer moves into the milking herd to get acquainted to the new environment and to avoid various stress moments around calving.

250 days



16. Take home messages

Remember;

1. The calf of to day is the cow of tomorrow.
2. Seeding (**rearing**) must take place before harvesting (**milking**).
3. Youngstock rearing is very expensive.
4. Managing youngstock is an art.

NEVER
allow yourself
to get into this
MESSY
situation!

Calves that are poorly managed after weaning are disadvantaged for life.

