



Optimizing Reproductive Health for Maximum Productivity

Dr. Dickson Tayebwa

**Research Officer Animal Production
National Dairy Center of Excellence, Mbarara ZARDI, NARO**

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National Dairy center of excellence



Vision:

A leading hub of excellence in dairy innovation and sustainability, driving transformative growth in dairy production, value addition, and livelihoods in Uganda and Beyond

Key programs:

1. Research and innovations
2. Farmer training and extension
3. Processing and marketing support
4. Sustainability and policy advisory



Production efficiency of Dairy cattle



Farmers keep cattle for milk production

It's important to understand that reproduction is intertwined with production



Production efficiency of Dairy cattle

Efficient production in dairy is 1 calf per year

1 calf per cow per year



To achieve this goal, we must target the following.

- A cow must have been inseminated within 3 months after producing
- After Insemination, the farmer must be able to confirm the success of the AI to avoid waiting too long to discover that the cow did not get pregnant

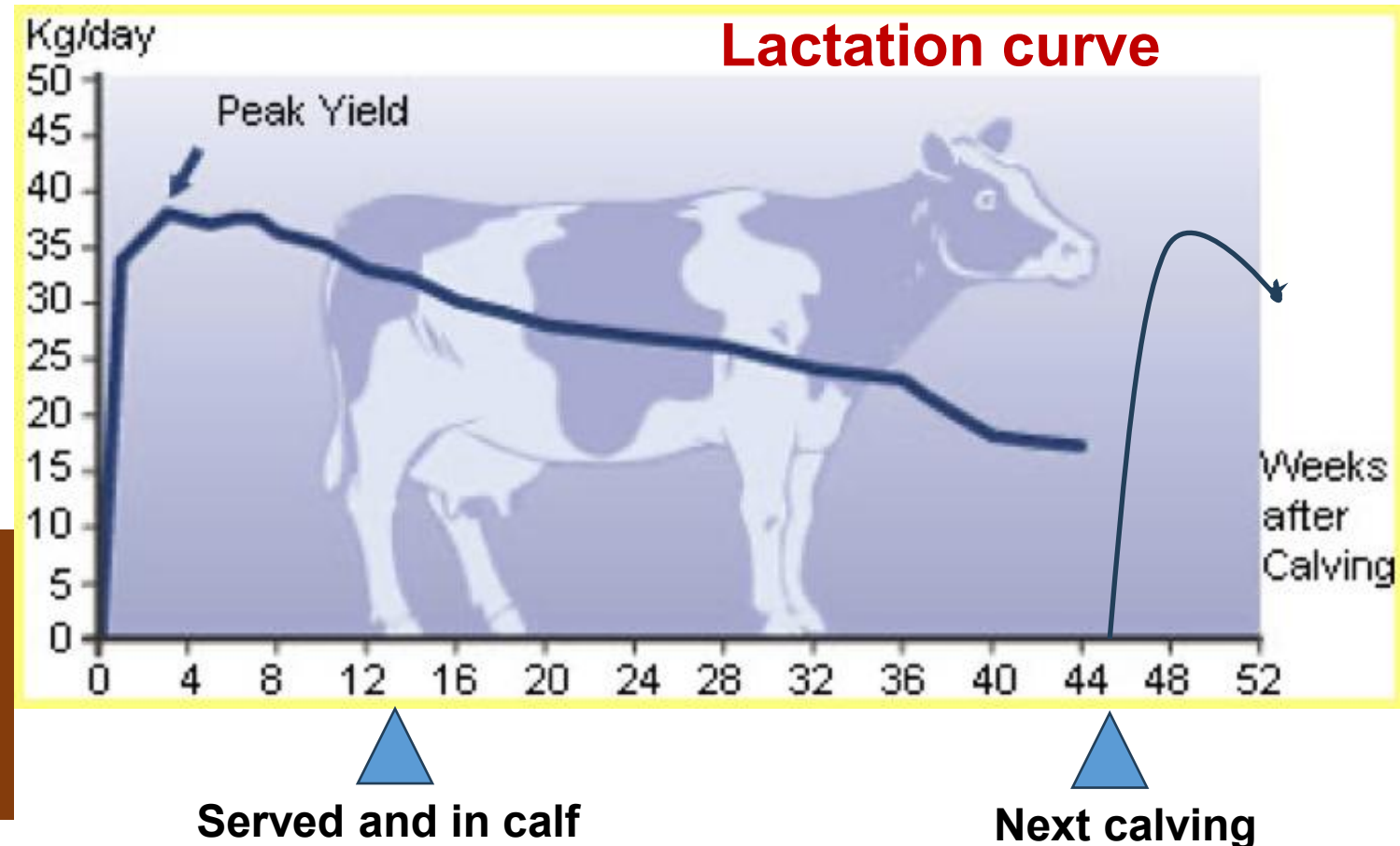
Production efficiency of Dairy cattle

What do you loose when you fail to inseminate a cow within 3 months postpartum

1. Longer calving interval
2. Reduced milk income
3. Higher feeding and maintenance costs
4. More breeding costs

A farmer loses about 15,000 UGX per day when they fail to meet this target

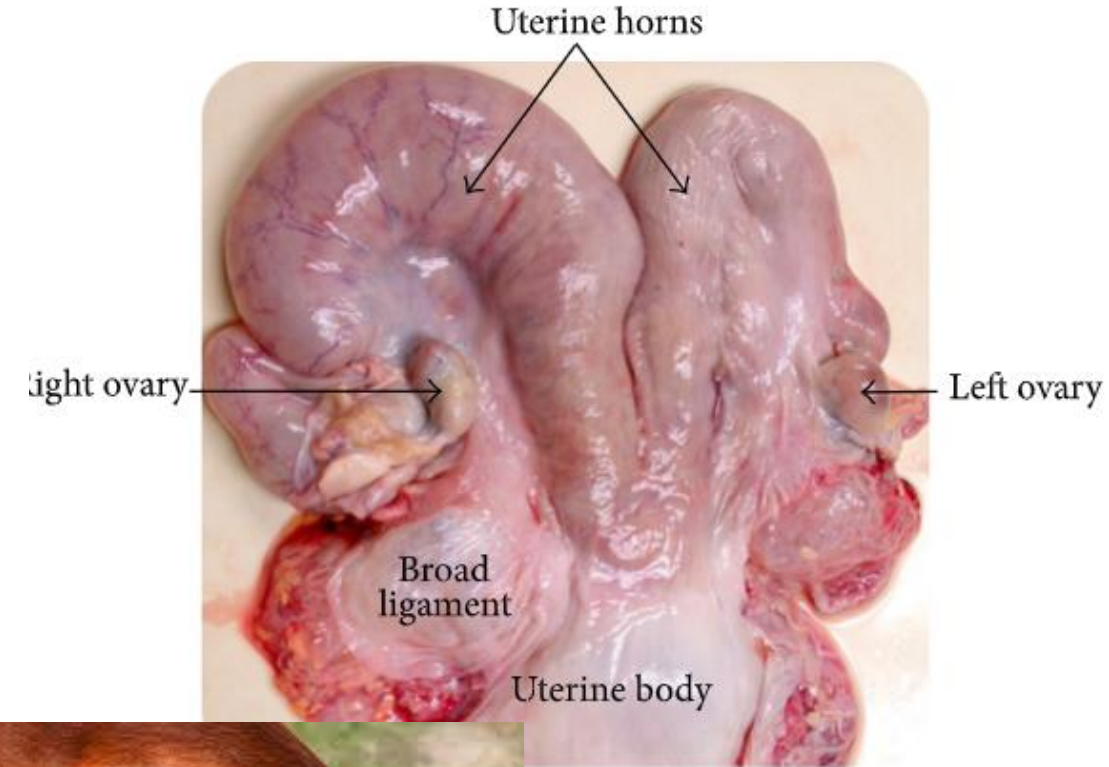
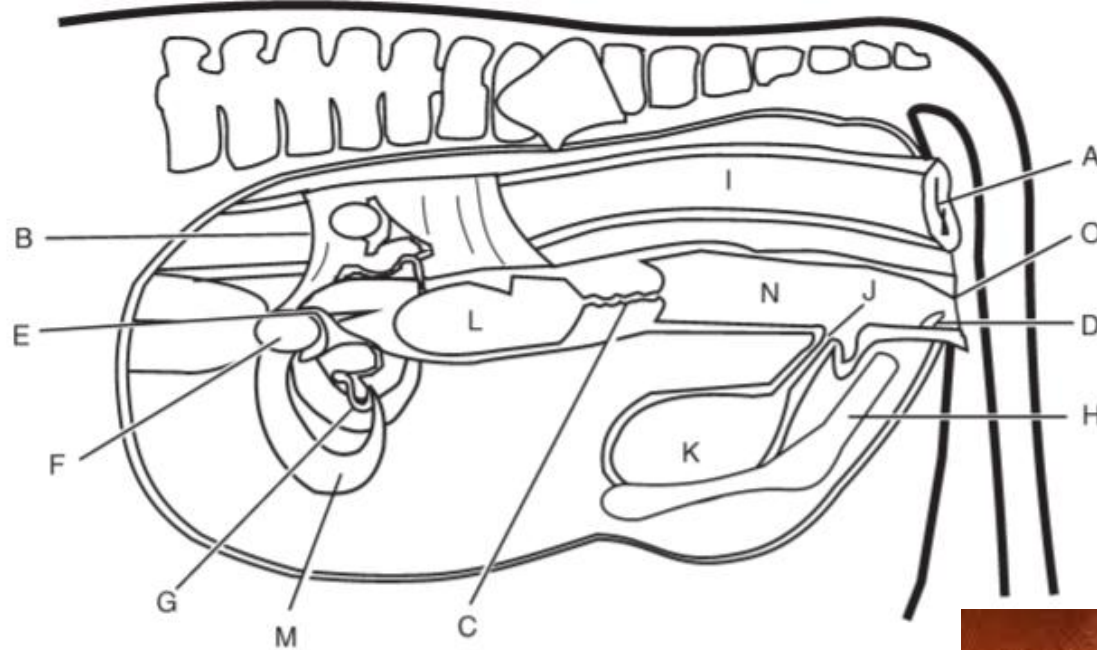
That is 4,575,000 UGX per cow per lactation cycle



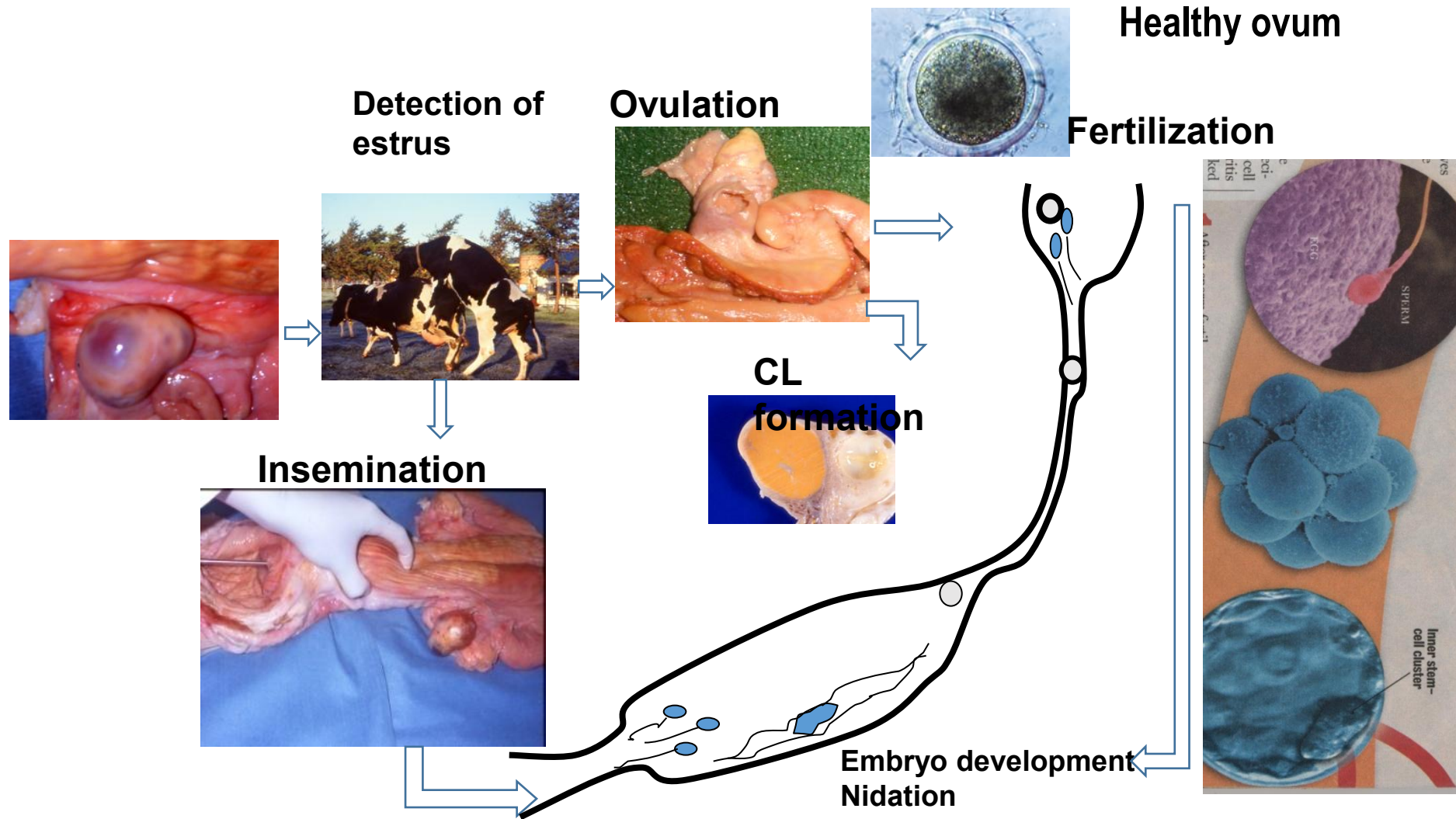
Reproductive health- focus on the female

FEMALE REPRODUCTIVE SYSTEM

- A. Anus
- B. Broad ligaments
- C. Cervix
- D. Clitoris
- E. Infundibulum
- F. Ovary
- G. Oviduct
- H. Pelvis
- I. Rectum
- J. Urethral opening
- K. Urinary bladder
- L. Uterine body
- M. Uterine horn
- N. Vagina
- O. Vulva

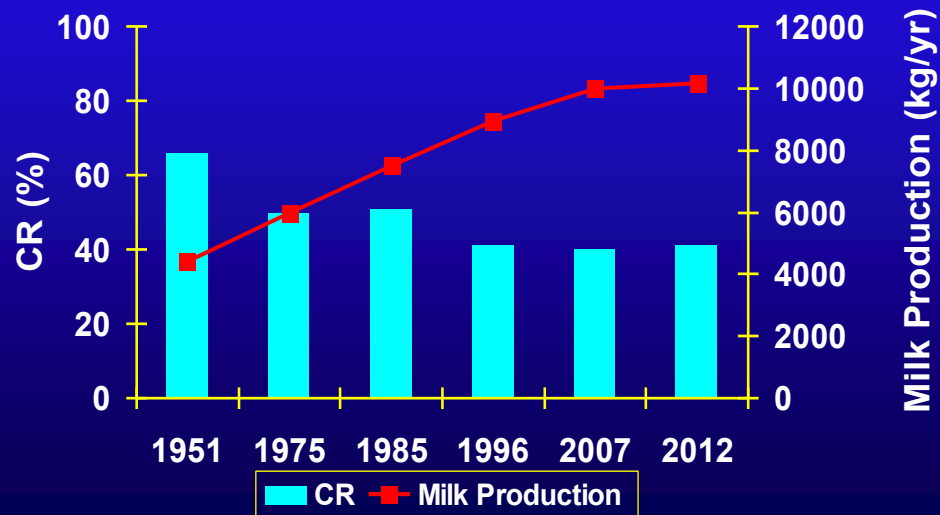


Reproductive health- focus on the female



Success of artificial insemination

Milk Production and Fertility in Dairy Cows (NE/USA)



In Uganda the success rate is expected to be between 35-60%

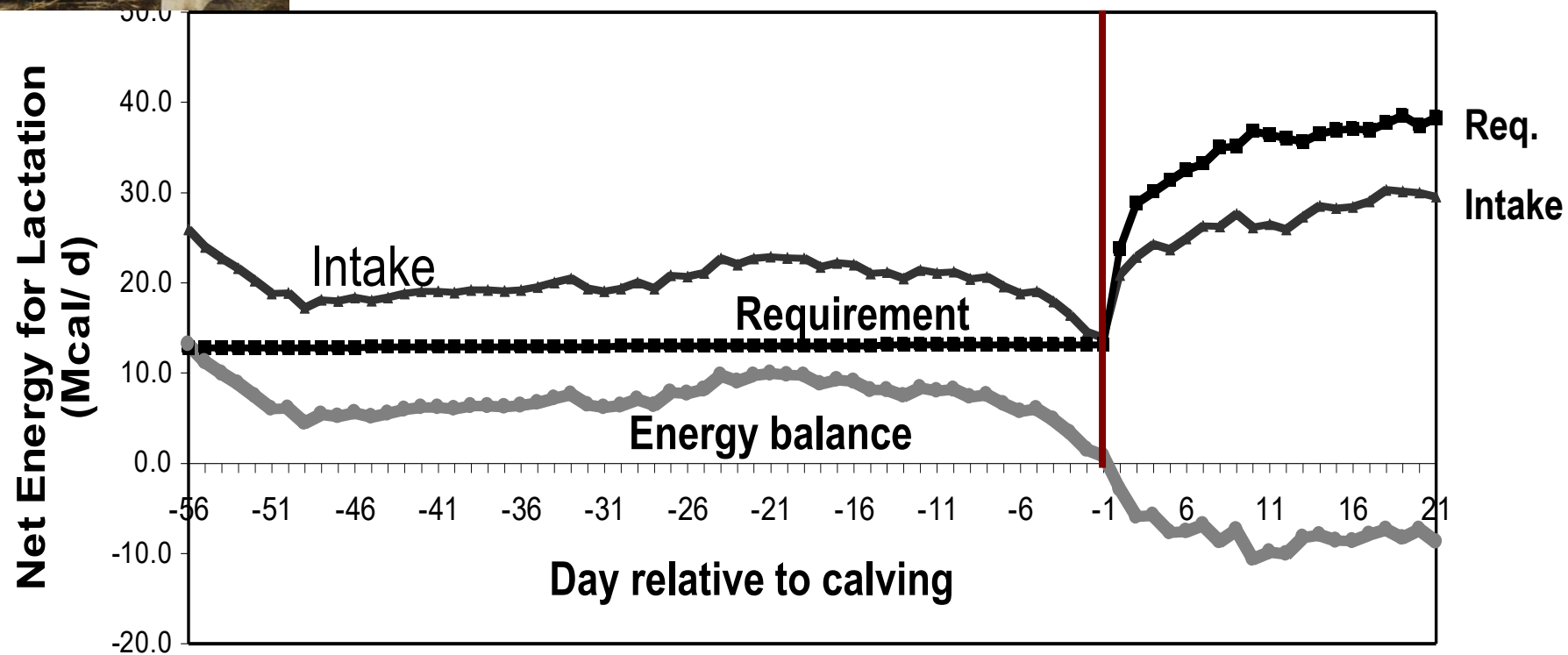
The success rate of AI ? → 40 % worldwide → Why so low ?



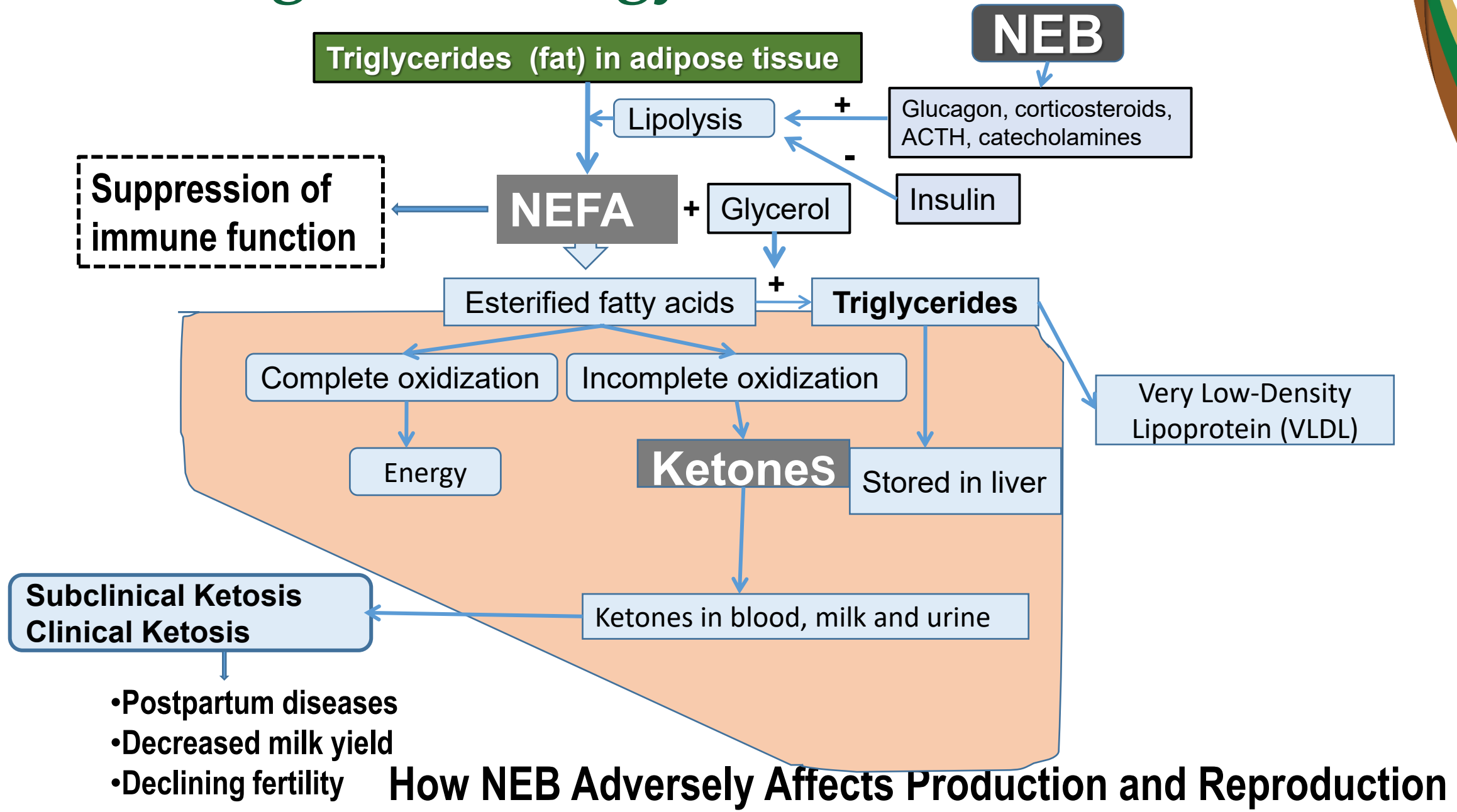
The critical transition period of a cow



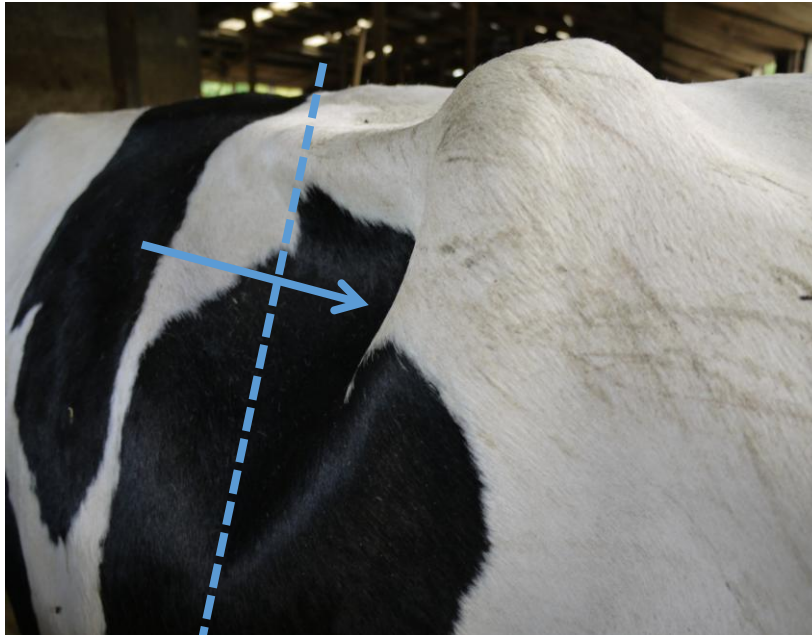
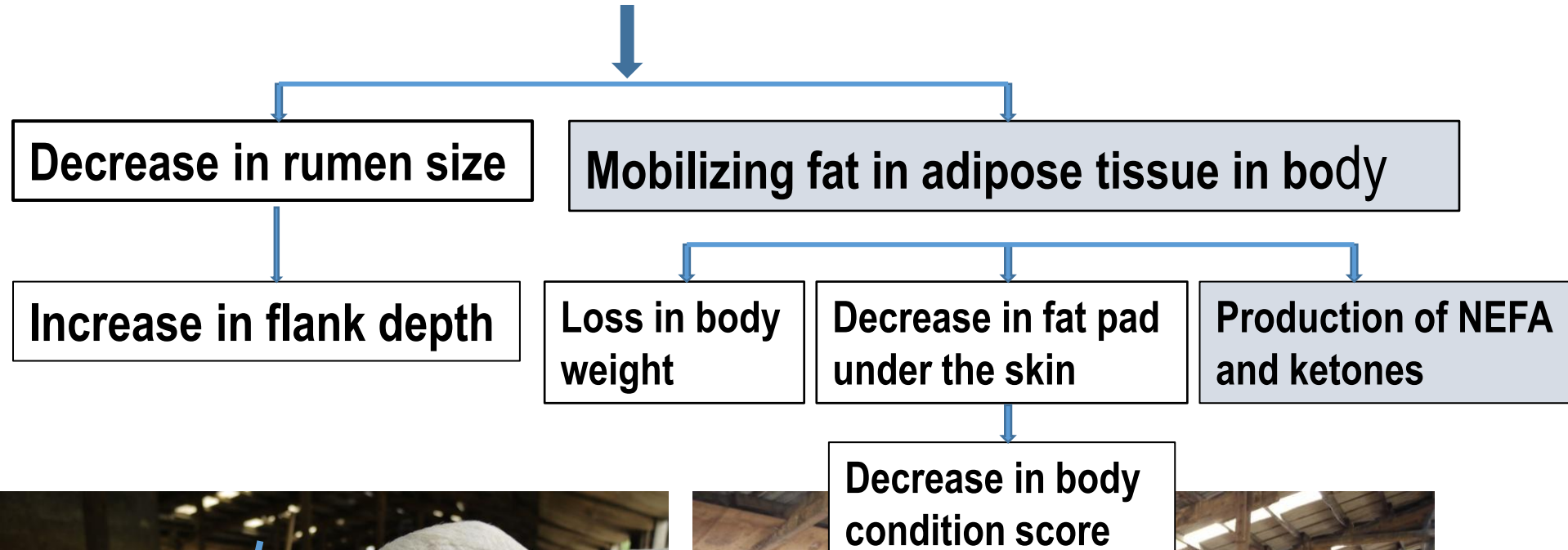
The biggest problem faced by people today is the management of the **TRANSITION** period



How Negative Energy Balances occurs



Indicators of Negative Energy Balance





Effects of negative energy balance

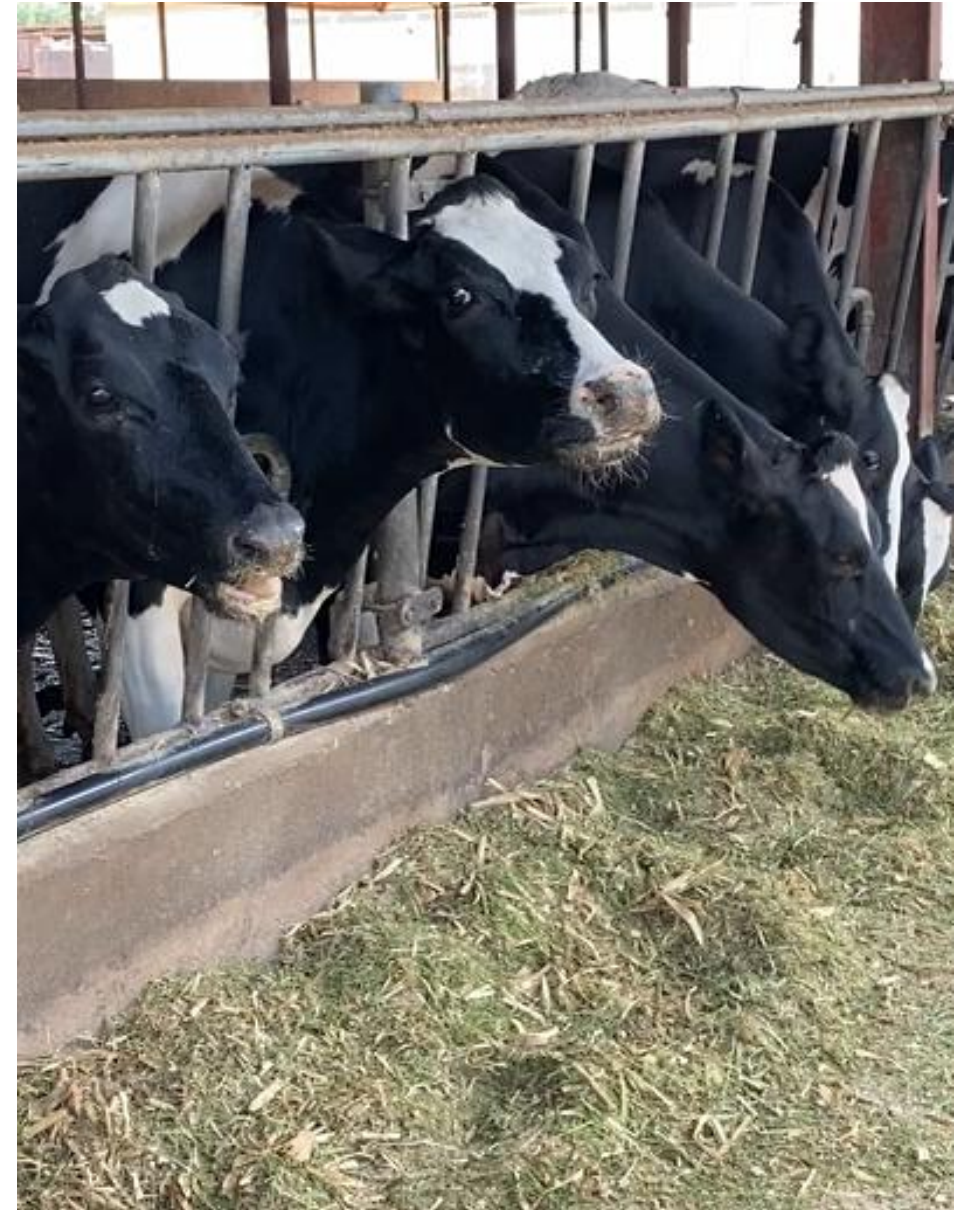
- Retention of fetal membranes x2
- Left displacement of abomasum x2 to 4
- Culling within 60 d postpartum x2
- Less milk production: 2.1 kg/d Reduced feed intake
- Prone to secondary infections





Management of NEB

- Stop milking and steaming at 7 months
- Isolate the cattle and place on close monitoring
- Boost nutrition with high energy and protein supplements
- Administer essential vaccines ie clostridial
- Deworm the cattle

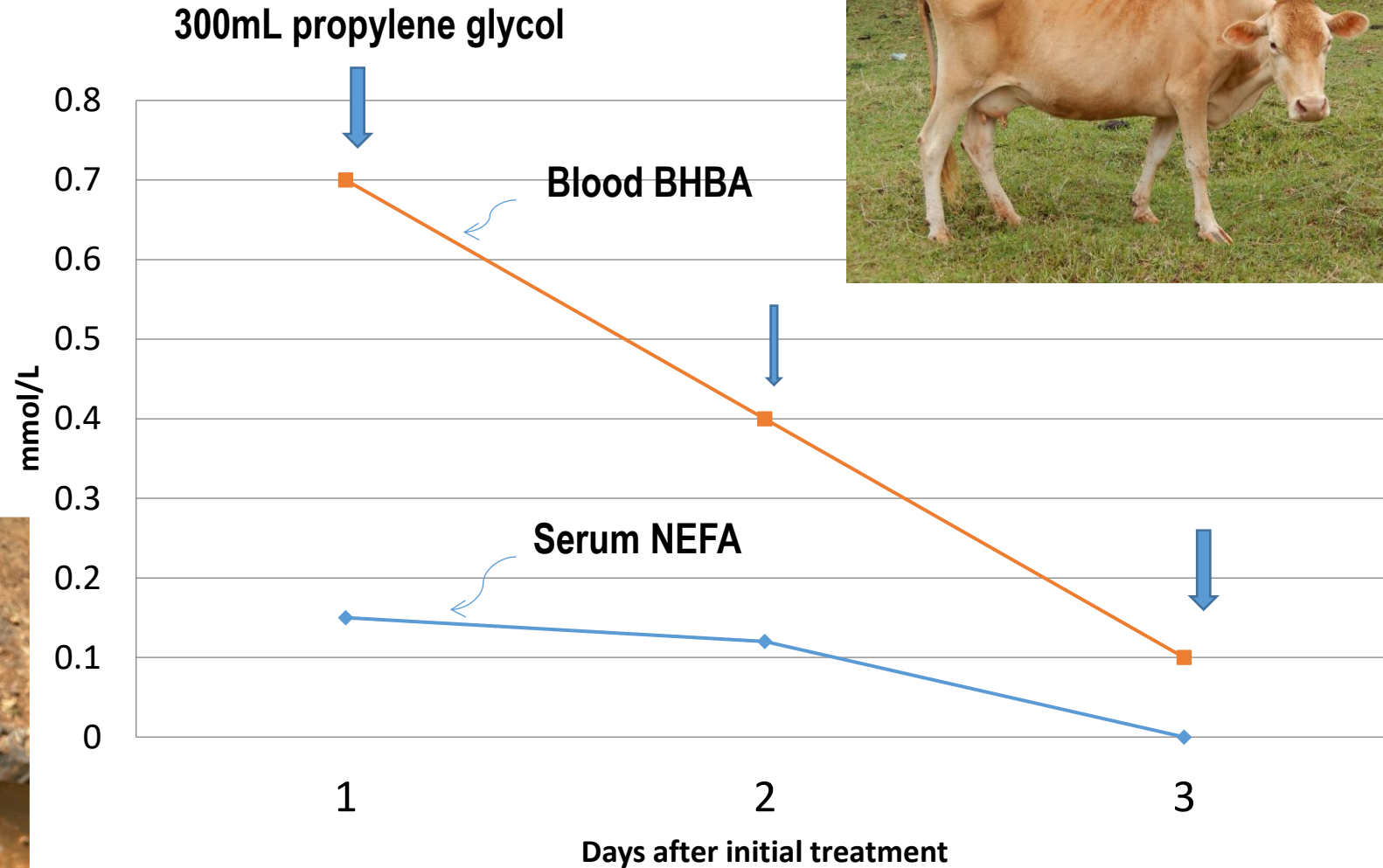




Treatment for NEB

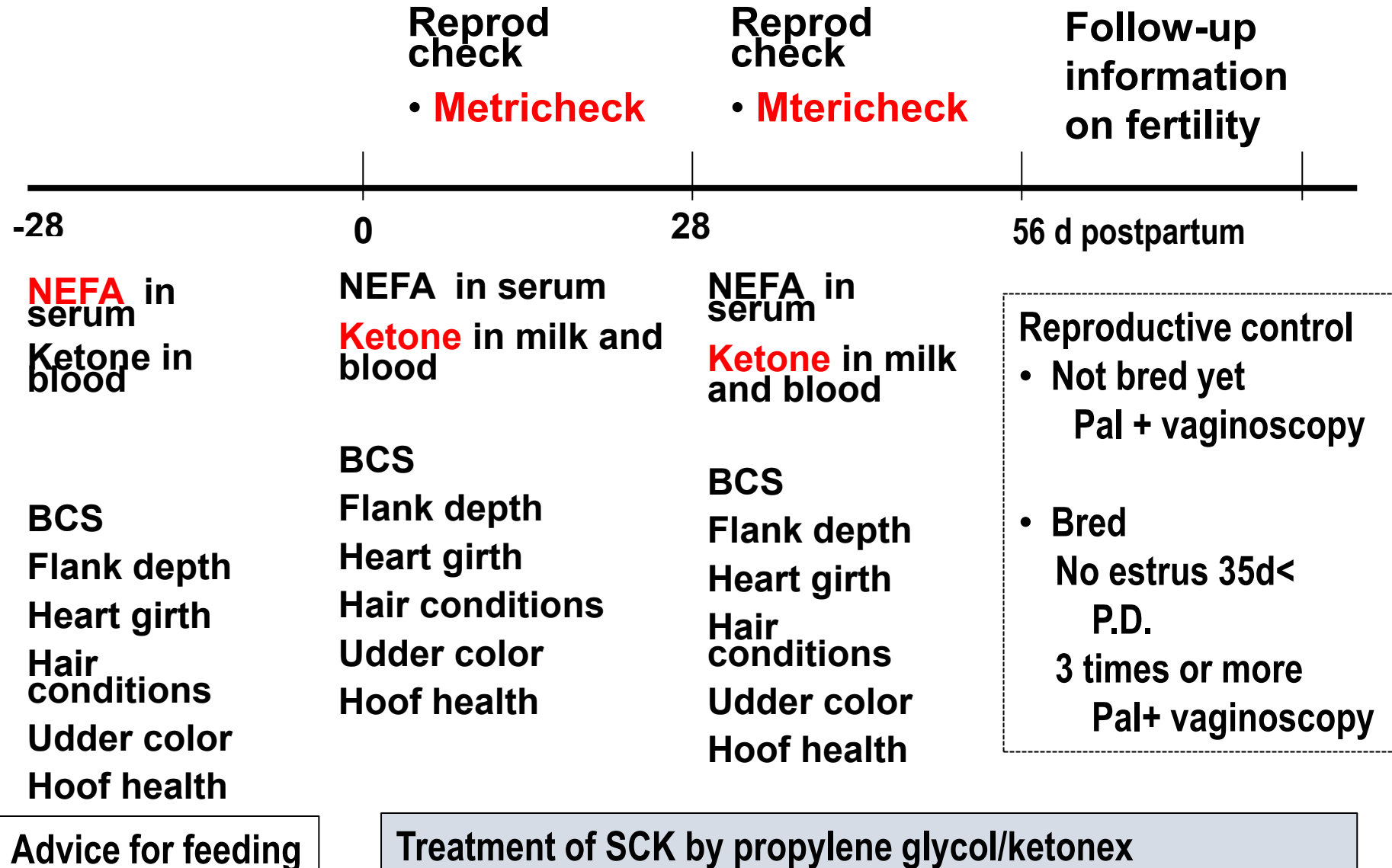


- Drench the animals with
1. Propylene glycol
 2. Ketonex



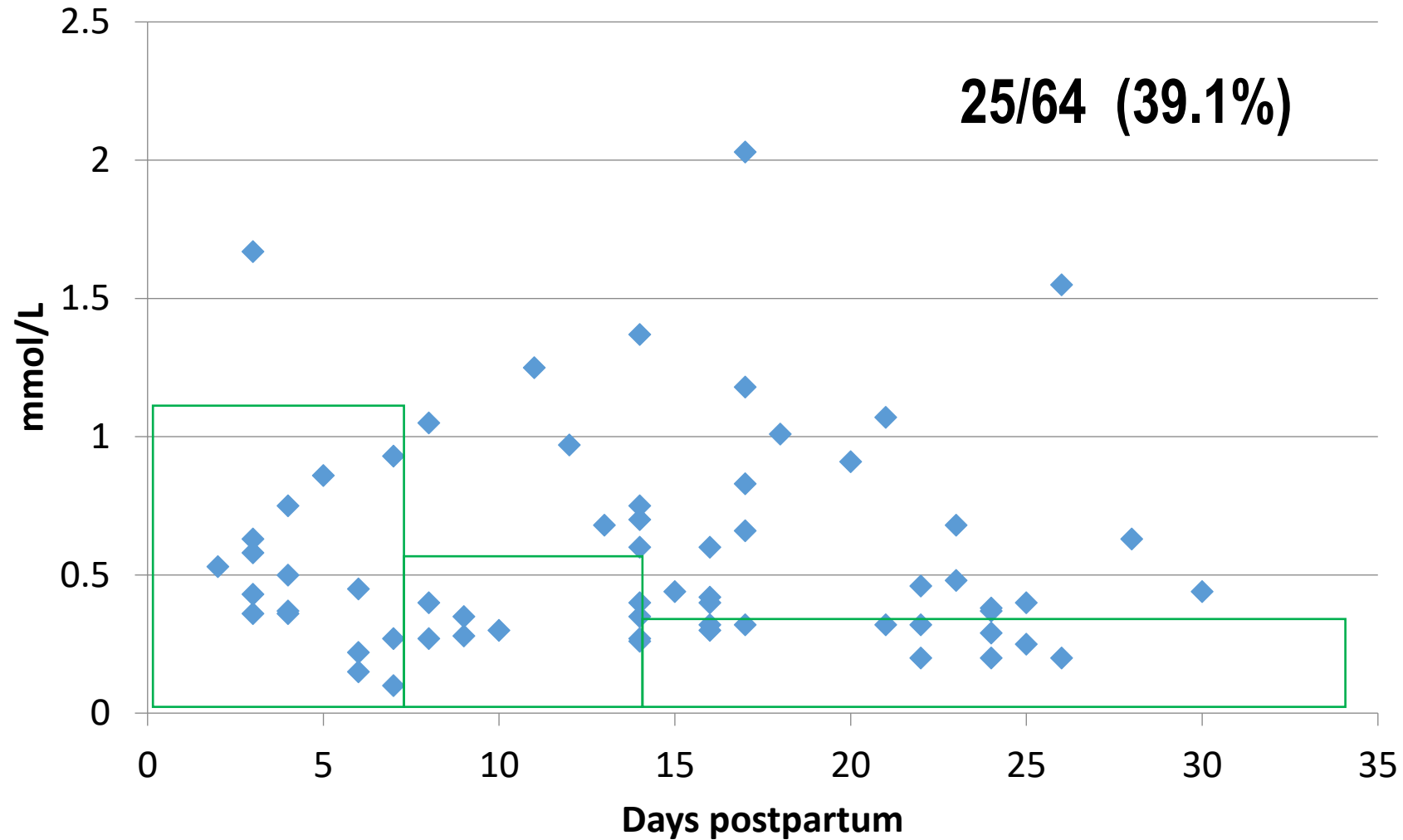


Metabolic and Reproductive Monitoring Program in Dairy Cows at 4 week Intervals



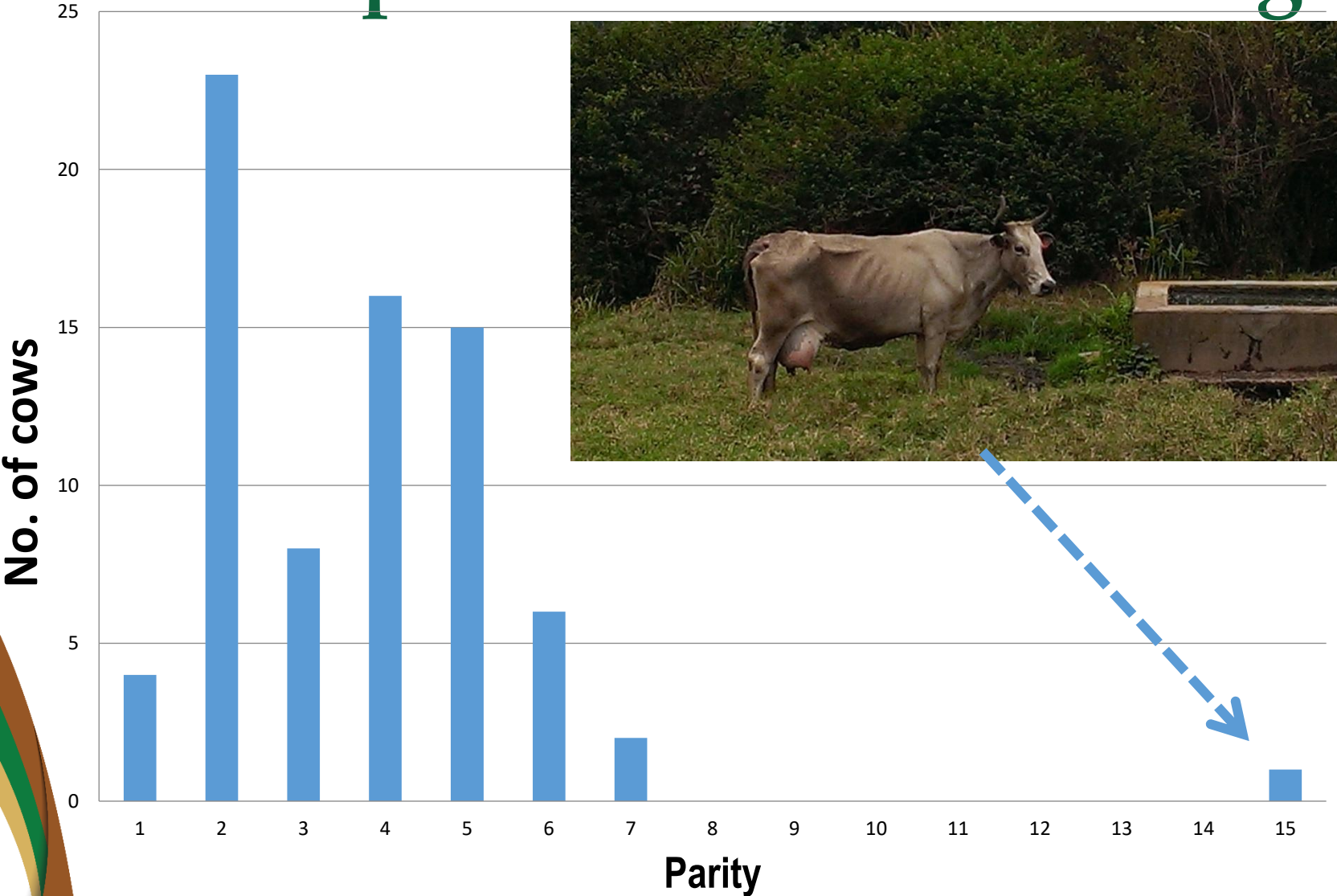


Prevalence of Negative Energy Balance in semi-intensive cattle





Key finding: Several farmers in Uganda Keep old cattle for breeding



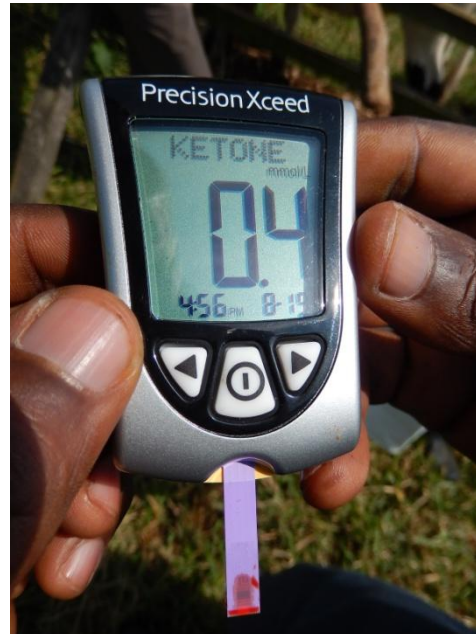
It is quite common to find very old, infertile and nonproductive cattle on farms.

Many farmers keep cattle as a ritual or prestige



Diagnosis of Negative Energy Balance

- Pen side diagnostic kit for blood
- There are ketone strips for milk



Other conditions: Position of pelvic bones

Morphological position of the pin bones (RAMP ANGLE) is an important factor for reproductive health



Cattle with poor slope /ramp angle

1. Retain lochia
2. Have retained placenta
3. Urovagina
4. Poor conception rate

Other condition: Endometritis



Uterine involution and healing should be within 2-3 weeks post parturition

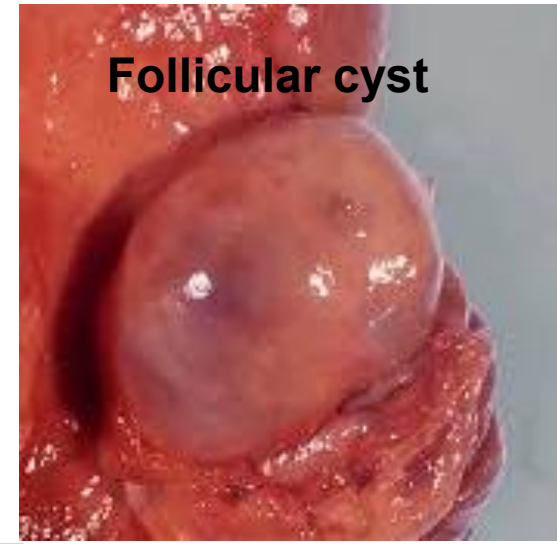
Management

- Apply intrauterine pessaries post parturition to prevent infection
- Early detection
- Observe the urine after parturition
- Check if the tail is matted
- Check the smell of the discharge

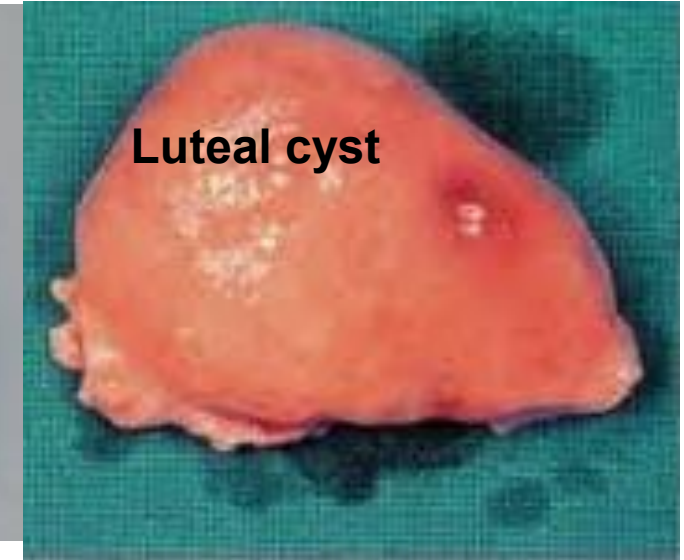
Where necessary,
Use a vaginal speculum or
metricheck to examine the vaginal
discharge

If infected
Intrauterine flushing is
recommended

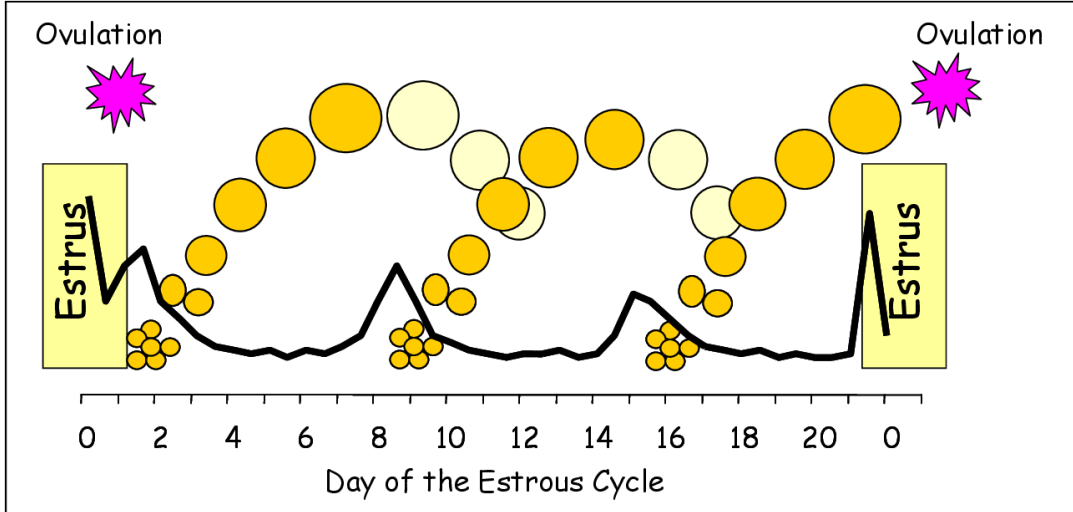
Other conditions: Ovarian cysts



Follicular cyst



Luteal cyst



Signs of cysts

1. Cow not coming on heat at all
2. Repeated heat despite service
3. Virilization (cow looks like a bull)

Management

1. Diagnosis
2. Hormonal therapy (Gnrh and PGF2 alpha)



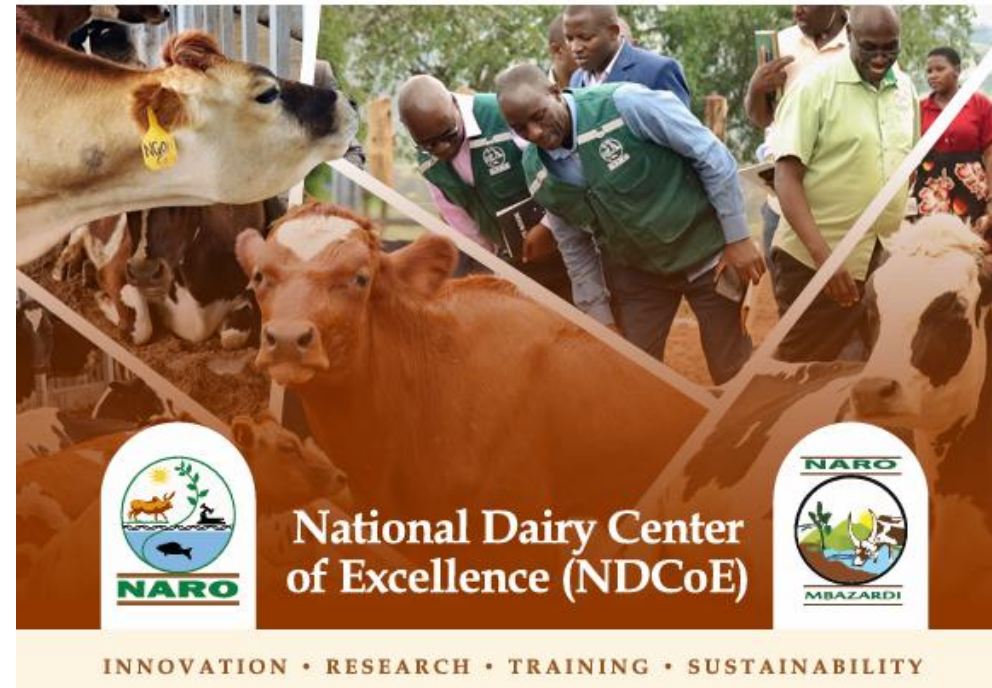
Future plans/Next steps

- Conduct a study to assess the prevalence of reproductive health challenges in the Southwestern Agro-Ecological Zone.
- Sensitize the farming community about the often-overlooked role of negative energy balance, which plays a key role in the production and reproductive challenges they face.
- Develop nutritional packages, feeding plans, and management protocols to assist farmers in feeding cattle during the transition period.
- Make available pen-side diagnostic tests for negative energy balance
- Develop a transition period checklist/guide for farmers



**Visit us at NDCoE, Mbarara
ZARDI, NARO**

Contact us
director.mbazardi@naro.go.ug



Thank you for your attention