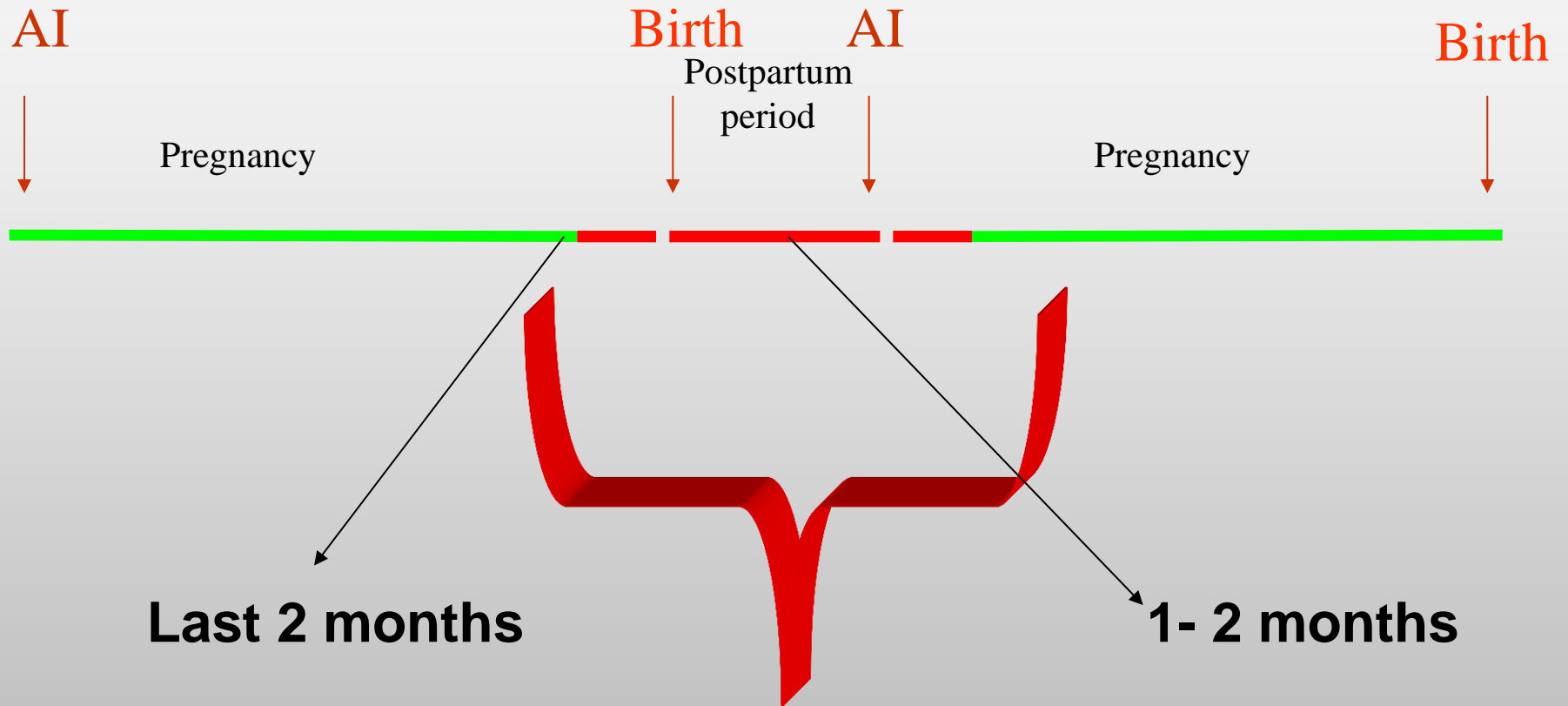




Most Crucial period in Pre & Postpartum



Sub-Clinical Hypoglycaemia is No.1 Problem during Transition Period

Energy Drain

- Lots of Energy is diverted for Colostrum Production Just after Parturition
- Energy Lost during Parturition Stress

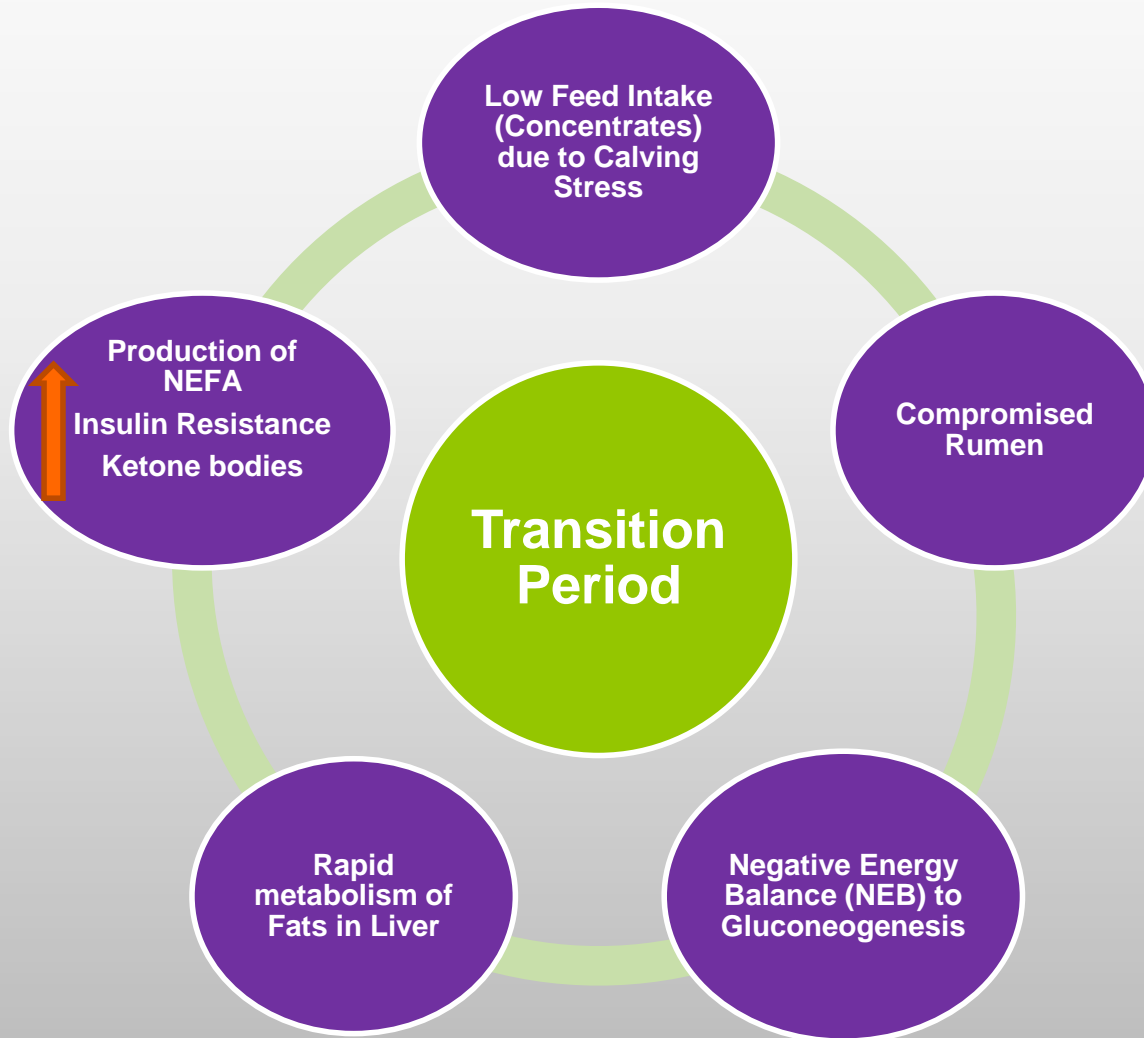
High Producers High Risk

- Generally, 50 gm of Glucose is required for 1 lit of Milk Production
- More Production Higher Risk of Ketosis

Compromised Feed Intake

- In last 30 days of Pregnancy due to compromised Rumen Size, feed intake reduces
- Supply of Energy inside body is compromised and Glucose level falls below 50mg/dl of blood

Transition Period and Hypoglycaemia



Ketosis Symptoms

- Sudden drop in milk production (2-3 Lt per day)
- along with 30- 40% drop in feed intake (Ignore Concentrate/Grains then Silage but will take paddy straw)
- Smell of Sweet Acetone from Urine and Breathe of animal

- Even after treatment with Ca therapy + Dextrose Inj. + Corticosteroids same problem remains (*30- 40% cases).
- Leads to huge economic loss to the farmers

Problem - KETOSIS

- We need a complete solution for this problem



NEB and Fertility Correlation

n, number of reasons

Pl. check Subclinical Ketosis -

- Negative energy balance increase interval from calving to the first ovulation (baller and smith et.al.1989)
- Increase risk of cystic ovarian diseases (dohoo and martin et.al.1984)

Low feed intake during late pregnancy and early lactation

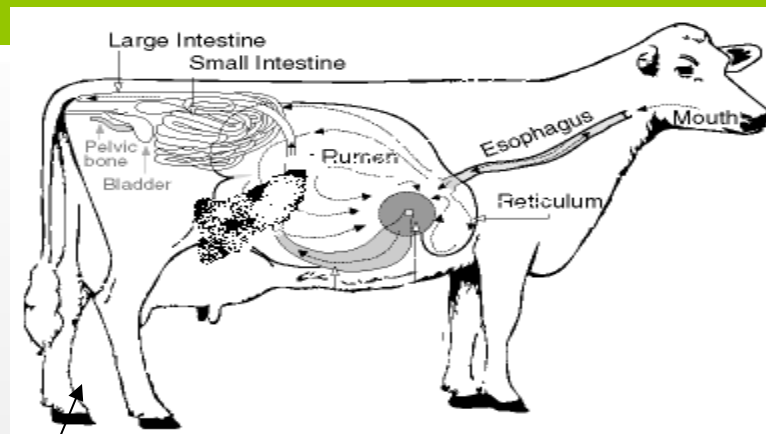
Negative energy balance in the body

Drop in blood glucose level

Decrease production of insulin from pancreas and liver enzymes

Excess fatty acids/other energy sources from body store will rush to Liver

Liver fails to convert the fatty acids completely into glucose thereby releasing NEFA (non-esterified fatty acids)



sudden low feed intake and drop in milk production

KETOSIS

Due to partial metabolism of body lipids, Ketone bodies are produced in liver

LOSSES DUE TO *KETOSIS*

1. Apart from the immediate cost of treatment, economic consequences include reduced milk output that may span the entire lactation.

Loss – daily 3lt. Drop in milk production @Rs.25 = $3 \times 25 \times 30 \text{days} = \text{INR } 2250 \text{ loss/animal / month.}$

2. Animals' Immunity get weak – chances of infection like Mastitis and Metritis is higher in the animals

3. Reproduction efficiency is decreased.

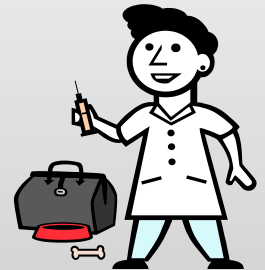
HENCE, SIGNIFICANT ECONOMIC LOSS TO FARMERS

Ketosis Management

Aim:

1. To re-establish normal blood glucose level above (50-60 mg/dl)
2. Reduce serum ketone body concentrations.

- Administration of 500 ml of 50% dextrose solution (IV) is a common therapy, but effective for only 2 hours.
- Not a permanent therapy because it will take care of aim.no.1 not the aim no. 2





Blend of Glucogenic and Gluconeogenic Precursors

Readymade Glucogenic Precursors

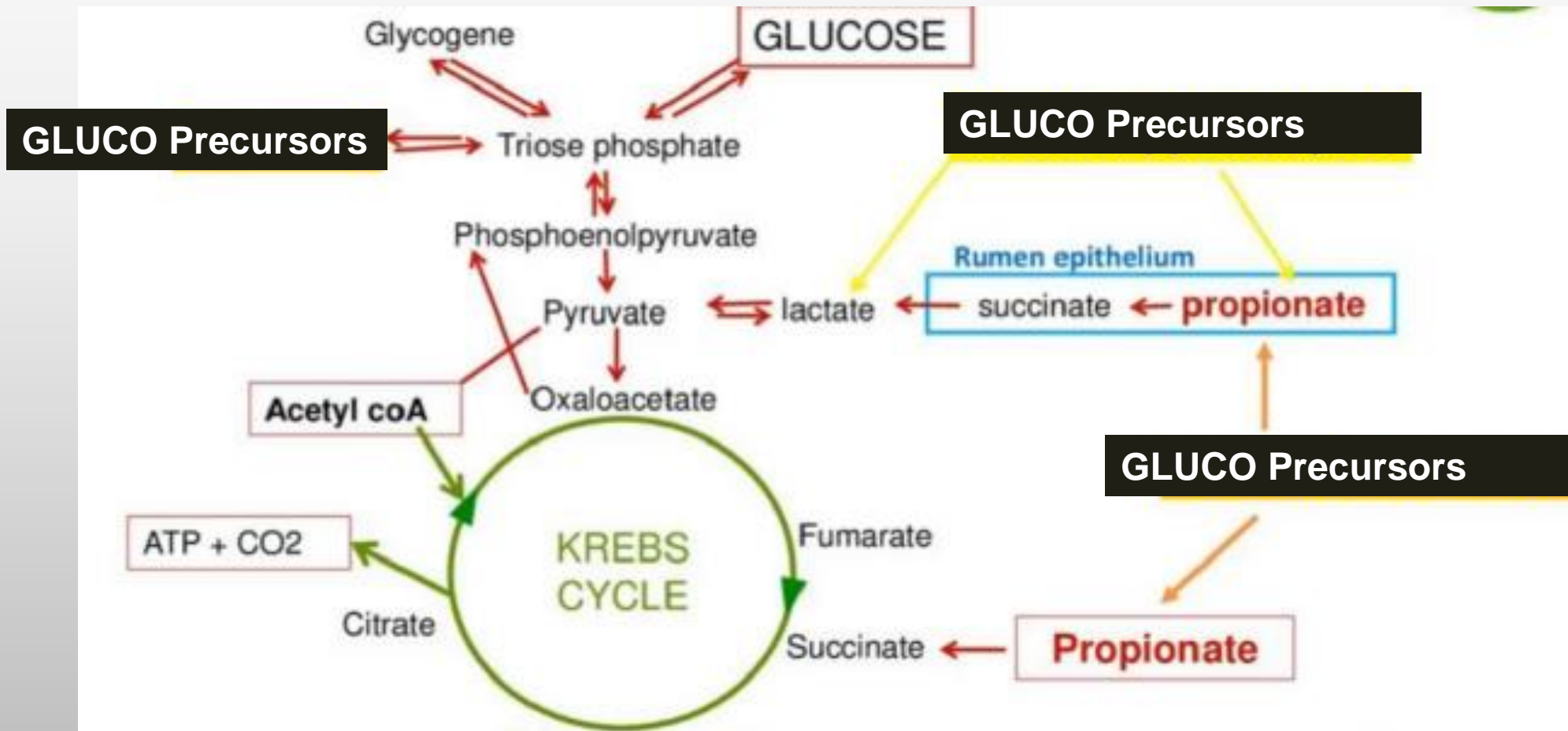
Bypass Choline

Bypass Nicotinamide

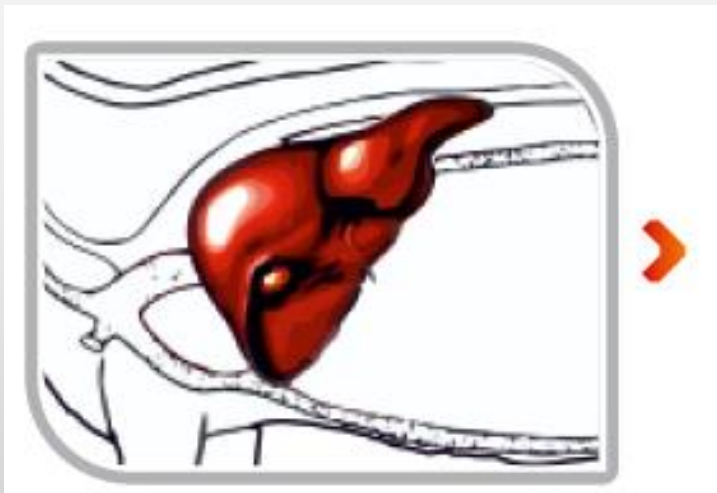
Cobalt and Calcium Propionate

Chicory extract and Jaggery base





Increase Production of Propionate and Hence Insulin Sensitivity



Lipolytic activity

**Breakdown of Fats to
provide instant Energy**

**Reduces incidence of Fatty
Liver**

Increase Breakdown of Fats by Liver

Acts as a Co-enzyme in Gluconeogenesis



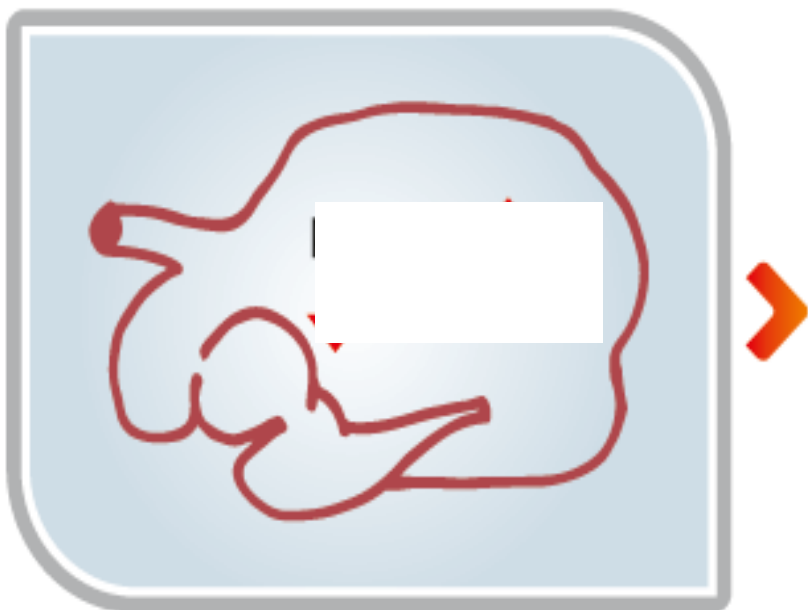
Complete breakdown of NEFA

Reduces burden of Liver

Reduction of Ketone Bodies

Increase Energy supply

Assistance in Gluconeogenesis

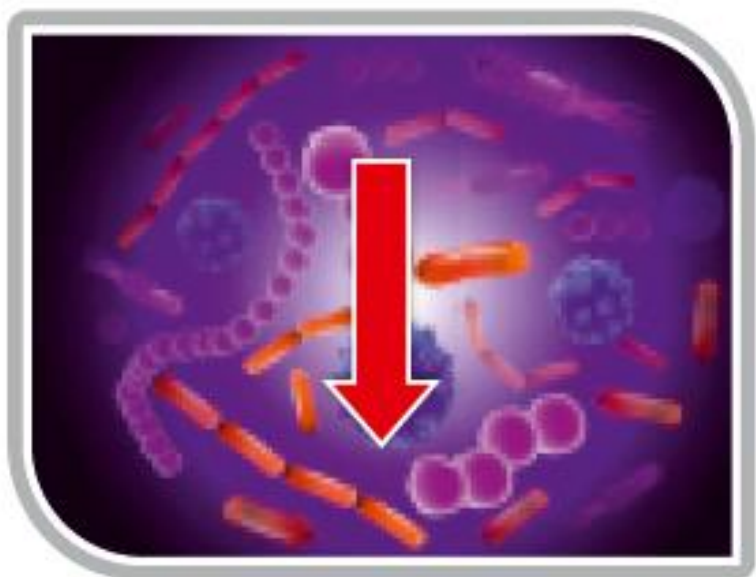


Cobalt is used by Rumen Microbes to produce Vit B-12 and increase VFA synthesis

Calcium Provides additional Calcium for Milk Production

Propionate provides instant Propionic acid which aids in Milk production

Increase in Volatile Fatty Acid (VFA) Production in Rumen



Chicory extract has Inulin and Flavonoids having Adsorbant and Anti-inflammatory property

Keeps the Rumen Microflora Healthy

Jaggery provides instant energy in the Rumen

Maintains Healthy Rumen Environment



Blend of Glucogenic and Gluconeogenic Precursors

Recommended Usage:

Transition Period:

*300 gm per animal per day during transition period
(10 days pre calving to 20 days post calving)*

Peak Lactation or Stress

- 100gm per animal per day

Can be used in Pelleted Feed as per Requirement





Blend of Glucogenic and Gluconeogenic Precursors

BENEFITS:

- Provides Instant Energy for High Yielders during their Lactation
- Reduces incidence of Ketosis and Sub clinical Hypoglycaemia
- Can help in reducing grain or concentrate feeding and thereby reduce incidence of Subacute Ruminant Acidosis
- Reduces incidence of Fatty Liver and has Lipolytic property
- Maintains Milk Production and retains Milk Quality





?

All is Well.