

Cattle Herd Health

Herd Nutrition Management

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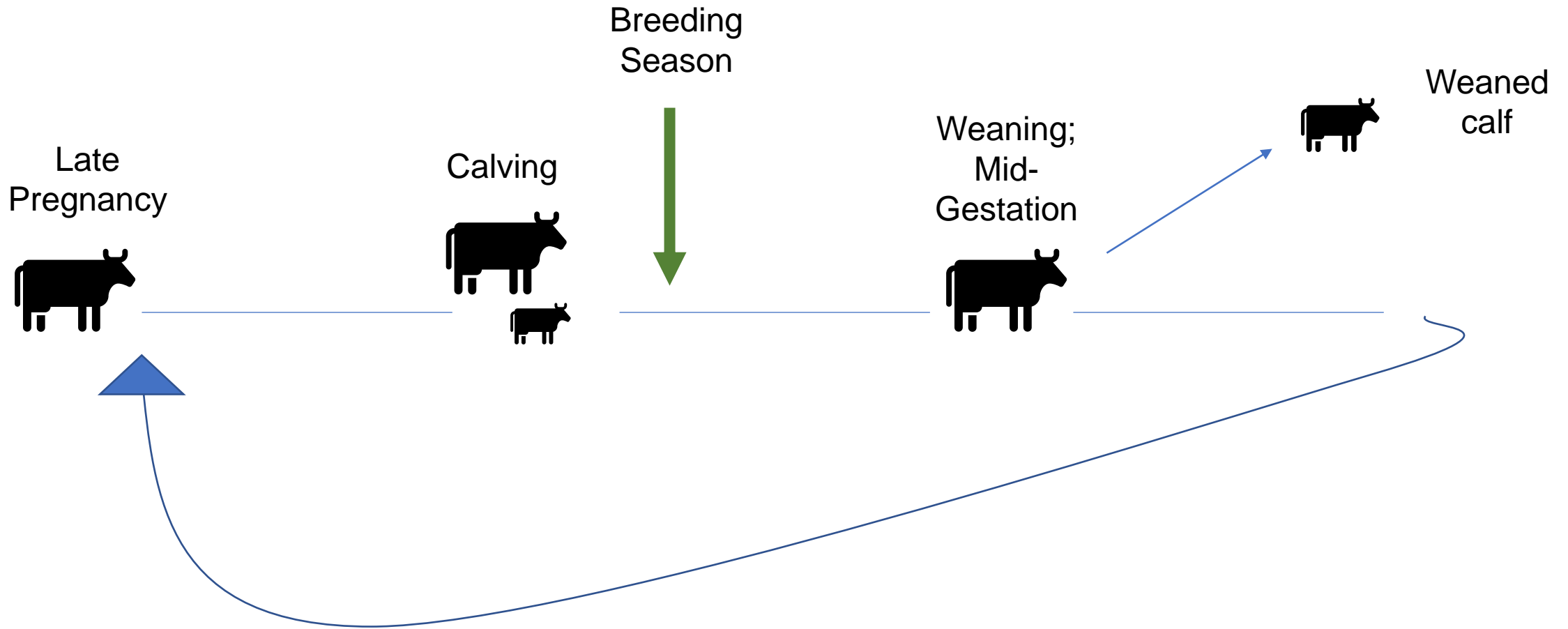


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Herd Health – A Systems Approach

Annual Cow Production Cycle



Health and Dry Matter Intake Are Related



Increasing
Forage Quality
= Increasing
Intake



Decreasing
Forage Quality
= Decreased
Intake Potential



Decreasing
Intake = Greater
Risk For Health
Problems

Early to Mid Pregnancy

- Dry, pregnant cows (gestating)
- Up to ~60 days prior to calving
- Lower nutritional requirement
- Pregnancy check and cull list



Culling, Nutrition, and Herd Health

Feet and legs = harder to walk to feed trough in winter, move through mud, not willing to move as much as needed for grazing

Won't hold body condition = teeth, maybe this cow doesn't match production environment

Udder = hard for calf to latch; milk production fluctuation



Prior to Calving (~60 days)

- A time where body condition can be added more economically
- Warm-season forage systems will maintain body condition during this time; add supplement for greater gain potential



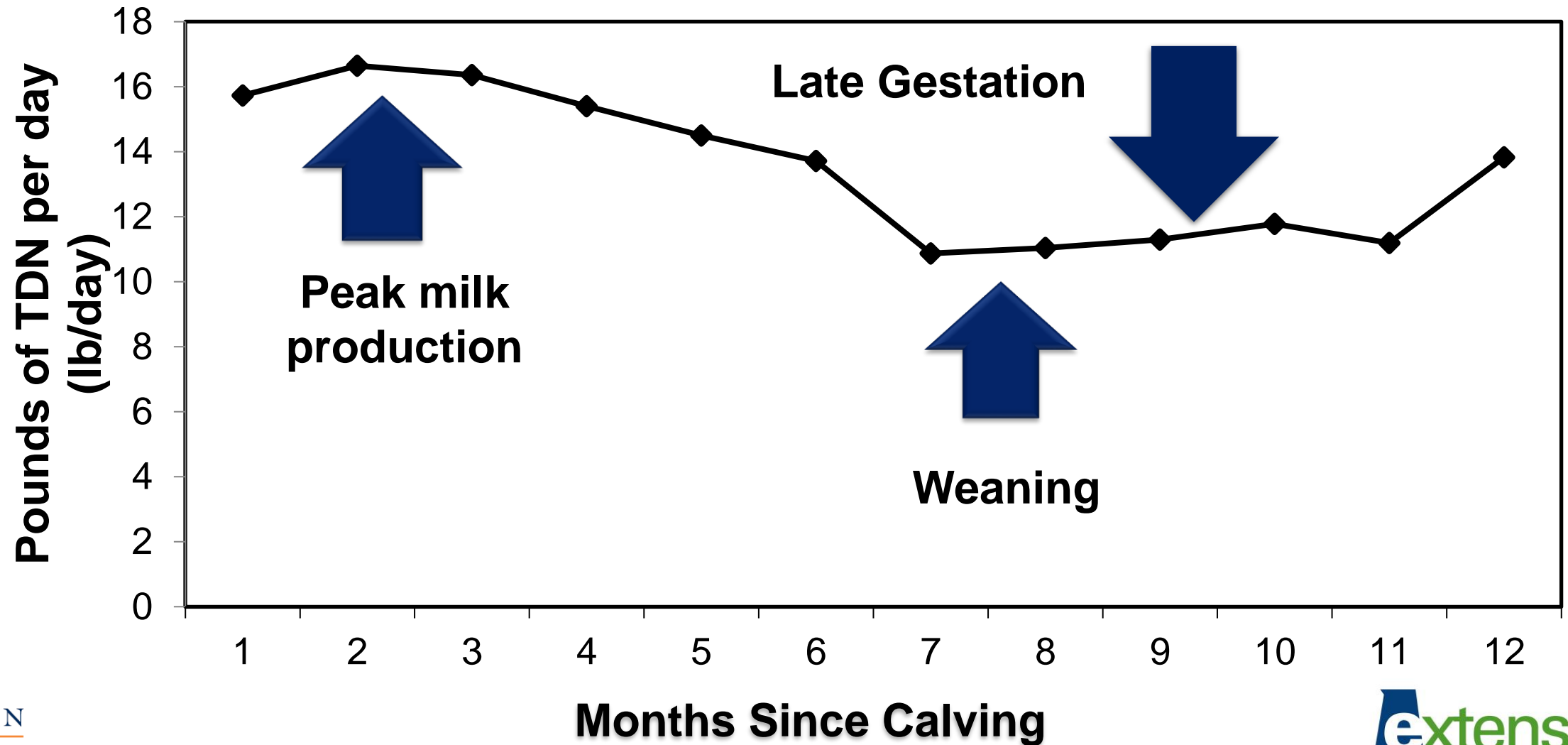
Calving



- Energy and protein needs increase to support lactation and reproductive repair
- Often coincides with decline in bahiagrass availability and dormancy
- Energy supplementation generally required

60 days Post Calving

Energy Followed by Protein



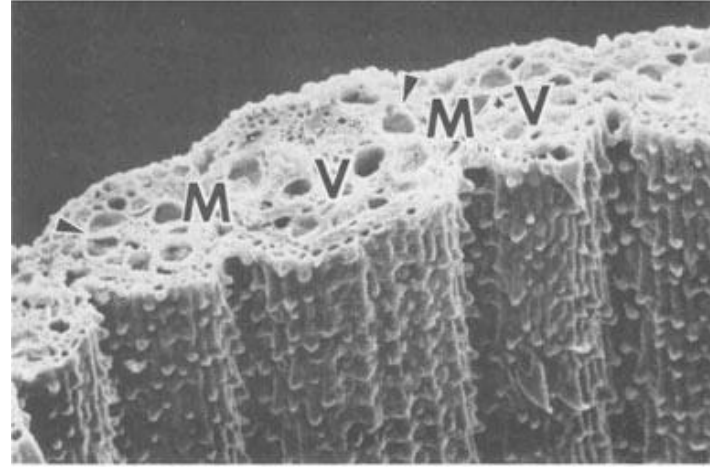


Conditions During Fall 2022
Dry and “Early” Frost

Fiber Digestion by Rumen “Bugs”

Bermudagrass

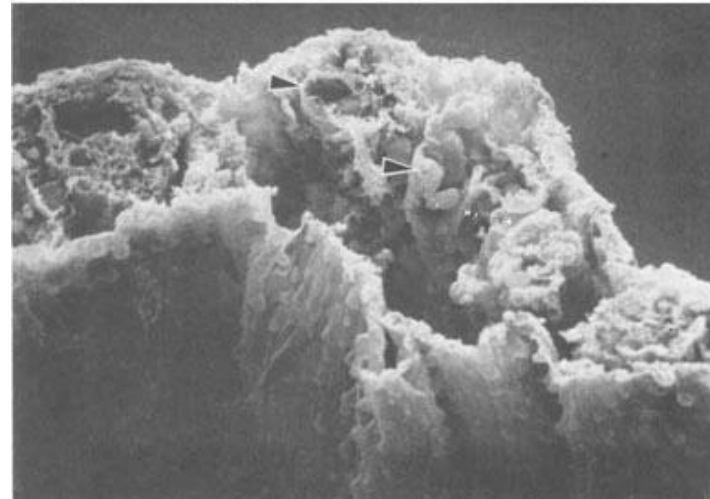
Undigested



M = Mesophyll
V = Vascular
bundles

Arrow =
parenchymal
bundle sheath

Digested by Rumen Microorganisms



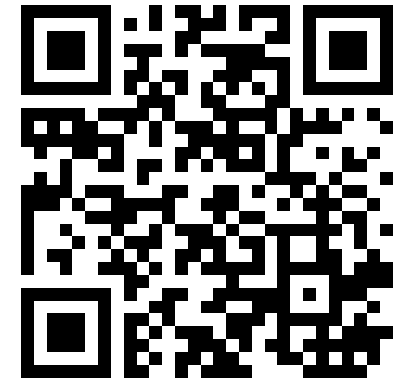
Forage Quality – Animal Intake

| Hay Quality | Class of cattle | Dry matter capacity, % of BW |
|--|-----------------|------------------------------|
| Low quality (less than 52% TDN, 8% CP) | Dry cows | 1.5 |
| | Lactating cows | 2.0 |
| Average quality (52 to 56% TDN, 9 - 12% CP) | Dry cows | 2.0 |
| | Lactating cows | 2.3 |
| High quality (> 56% TDN, 12% CP) | Dry cows | 2.5 |
| | Lactating cows | 2.7 |



Forage Quality

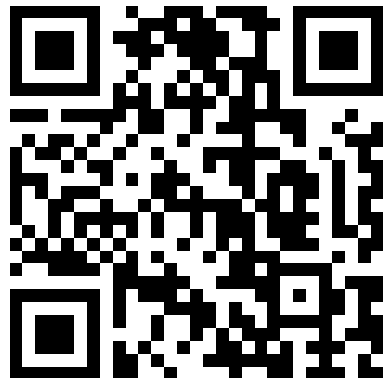
| Nitrate Nitrogen (NO ₃ -N), ppm | Nitrate Ion (NO ₃), ppm | Level of Risk |
|--|-------------------------------------|--|
| 0 to 1,500 | 0 to 6,500 | Generally safe |
| 1,500 to 5,000 | 6,500 to 22,000 | Limit to ½ of dry matter intake |
| 5,000 + | 22,000 + | Toxic – Use no more than 15% of total ration |



*A sample that contained 1,000 ppm NO₃-N would contain 4,430 ppm NO₃
 Nitrate-NO₃ = 4.4268 x Nitrate-N (mg/L)



Understanding Forage Quality = Better Supplementation Strategy

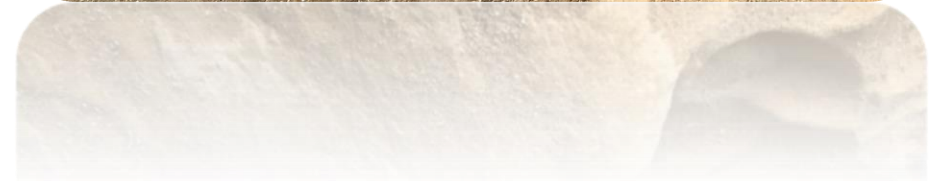


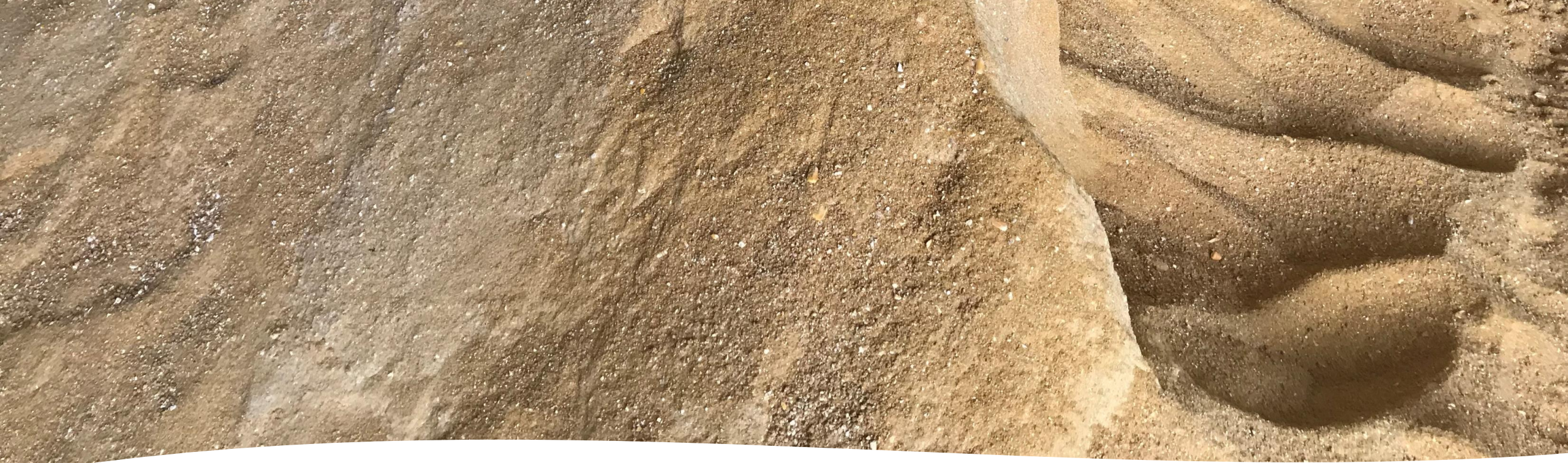
| | | | 4-wk regrowth Coastal bermudagrass hay (62% TDN, 12% CP) | 8-wk regrowth Coastal bermudagrass hay (52% TDN, 8% CP) |
|---|---|--|--|---|
| Stage of Production | TDN Required (% in diet needed per day) | CP Required (% in diet needed per day) | Supplement Needed? | |
| Dry Pregnant | 48 | 7 | No | No* |
| Peak Lactation (0 to 90 days after calving) | 60 | 12 | No | Yes |
| Late Lactation | 55 | 9 | No | Yes |



Supplementation Strategies and Rules of Thumb

- TDN to CP Ratio
 - Less than 8 – adequate protein to match energy in the forage
 - Better quality hay – when both TDN and CP percentages are high (i.e. 60% TDN and 12% CP)
 - If needed, supplemental energy
 - High ratio (greater than 8)
 - Indicate that there is a deficiency of protein relative to energy (i.e. TDN = 54% and CP = 6%)
 - Protein supplementation





Evaluating Supplement Types

- Energy, protein or both?
- How much do I need?
- Supply and consistency
- Is there a “cap” on how much I can use?
- Is the product designed to only deliver a certain amount?

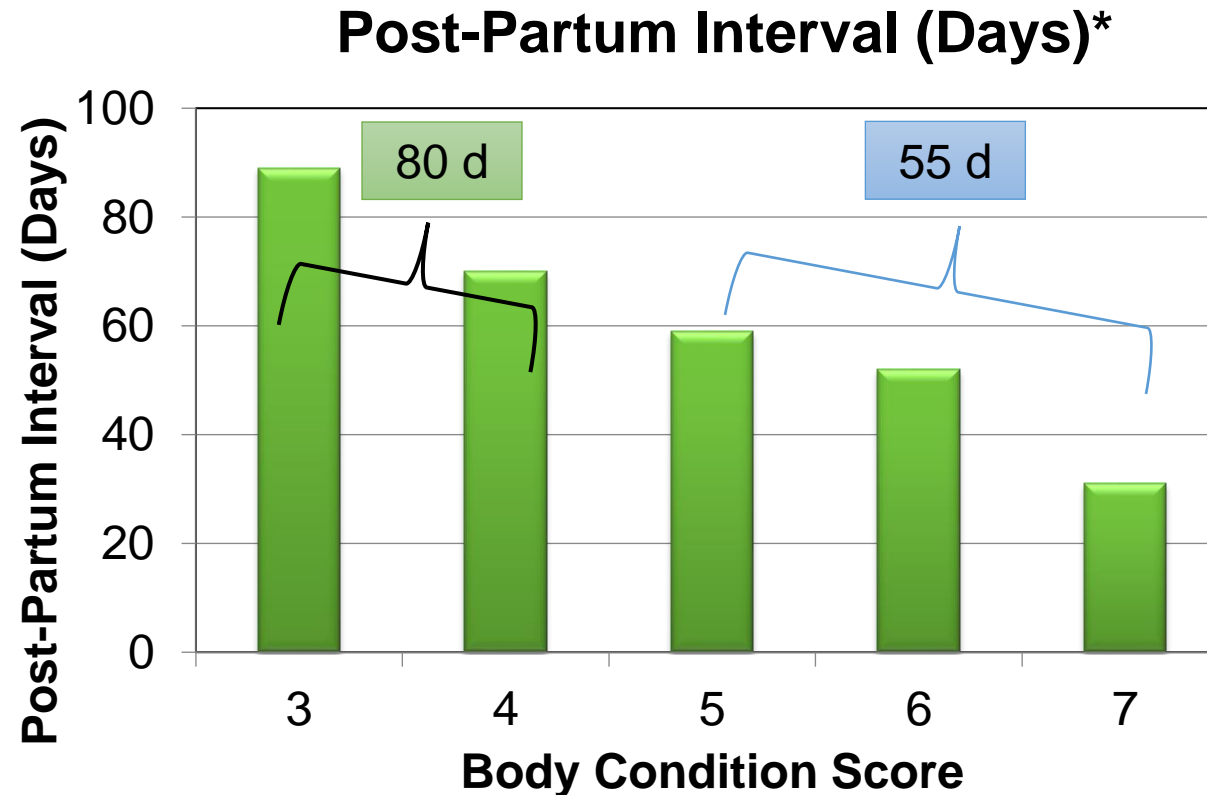


Breeding

- Provide quality forage and supplement as needed
- Now isn't the time to make up losses
- Excessive protein and energy supplementation can negatively impact reproduction



Thin cows become pregnant later in the breeding season



*Time from calving to estrus



**December
Shakes
Them
January
Breaks Them
February
Takes Them**



Dr. Bob Carson
Auburn University College of Veterinary
Medicine



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Dealing with Cold, Wet Conditions

- Mud
- Increasing energy requirements
- Supplementation before and after cold snaps





Calf Health



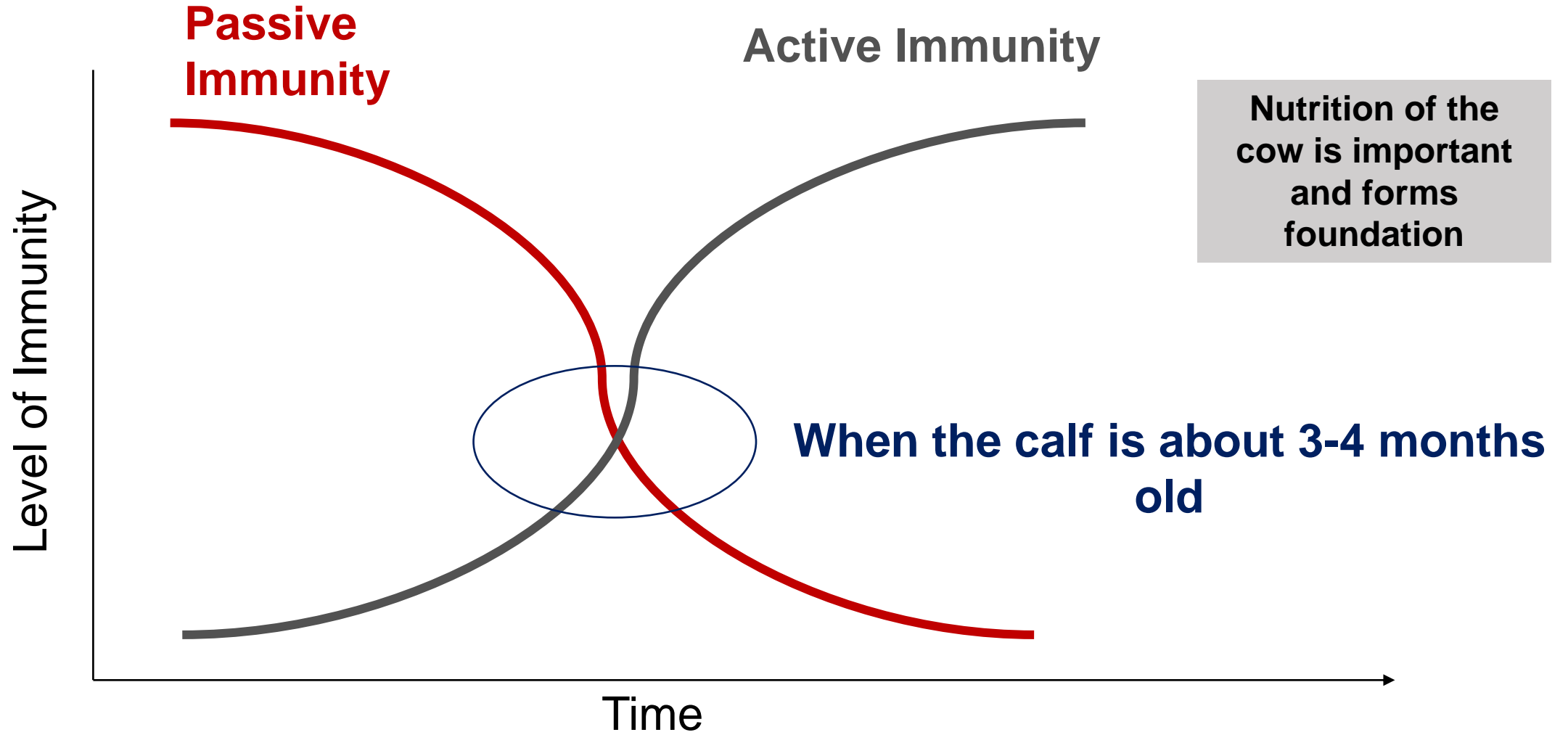
**Where does
a newborn
calf first get
its
immunity?**



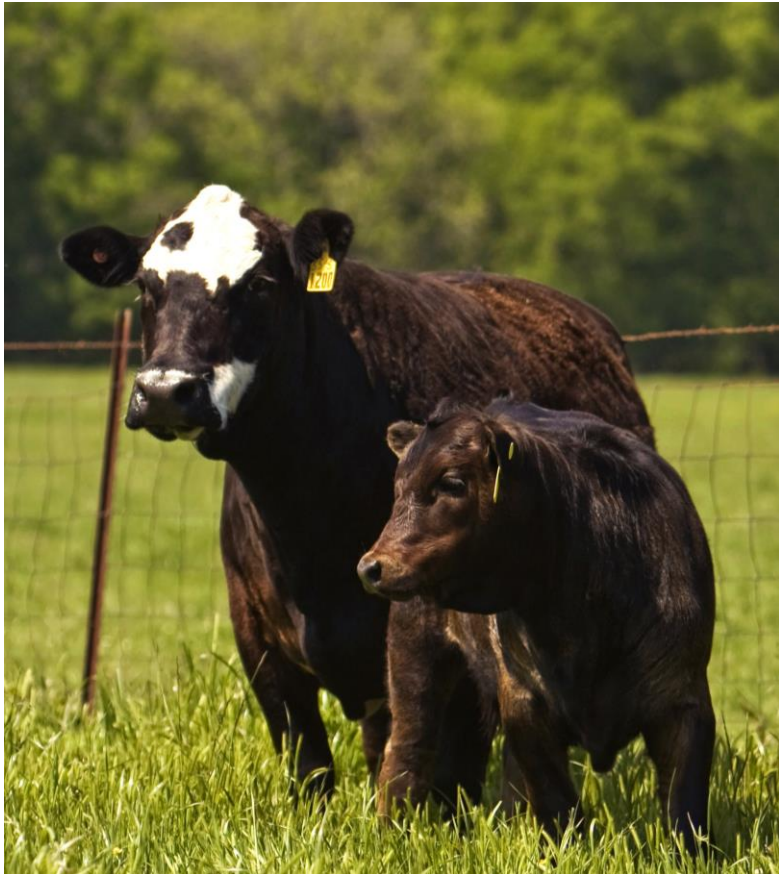
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Passive vs. Active Immunity

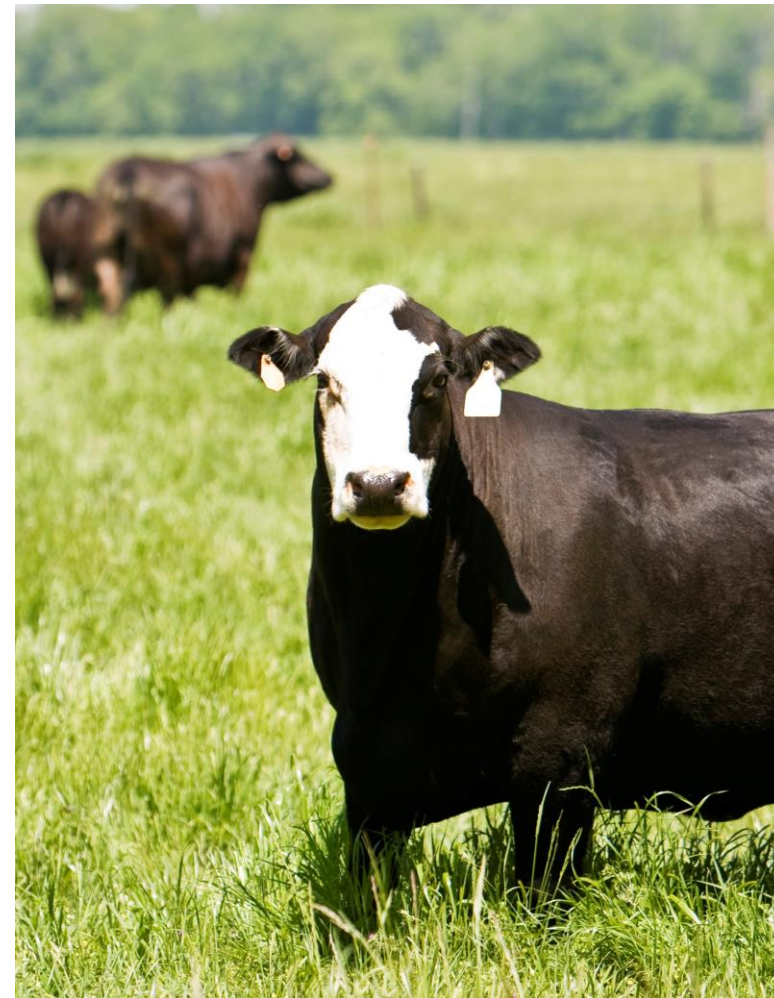


Learned Behaviors



Dietary Requirements of Growing Calves

Milk → Milk + Forage → Forage



Weaning Methods

Abrupt
Fenceline
Nose-flap





Nutrition Builds a Strong Foundation for Health

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information,
visit:**



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