



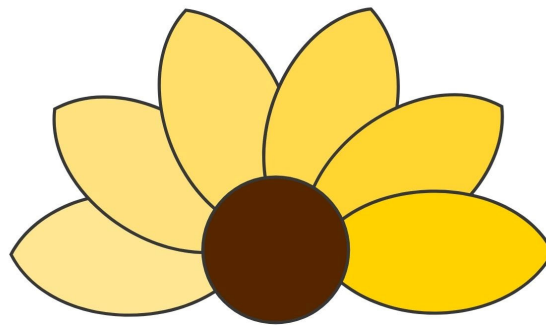
# Calving Management

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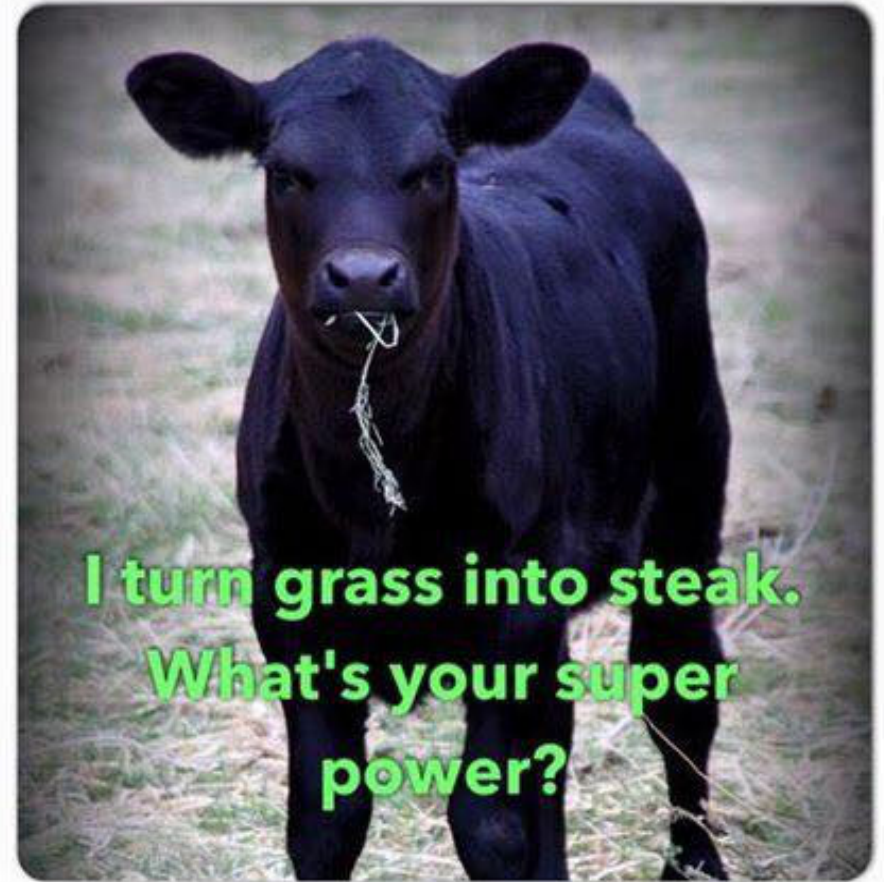
# CFSEK/Bill House Grant helped support this years Calving School Series



**community**foundation  
*of* SOUTHEAST KANSAS

# Keys to Successful Calving Management

- Nutrition
- Environment
- Genetic Selection
- Stress management
- Vaccination
- Delivering healthy calf



# Cow Nutrition=Calf Nutrition

- Fetal Programming
  - Energy- muscle/fat cell development
  - Protein- Feedlot/Repro performance
  - Mineral- Immune Function
- Calving/Colostrum
  - BCS 4 and under=
    - less volume and quality of colostrum
    - Increase time to breed back
    - Dystocia?
      - Don't want them too fat or too skinny!



# Skinny cows=Dystocia

Energy level of ration	Birth weight	Dystocia
Low (10.8 pounds TDN)	58.0 pounds	26 percent
Medium (13.7 pounds TDN)	61.5 pounds	17 percent
High (17.0 pounds TDN)	63.9 pounds	18 percent



# Environment

- Time of year
- Shelter
- Dry lot?
- Sandhills Calving System

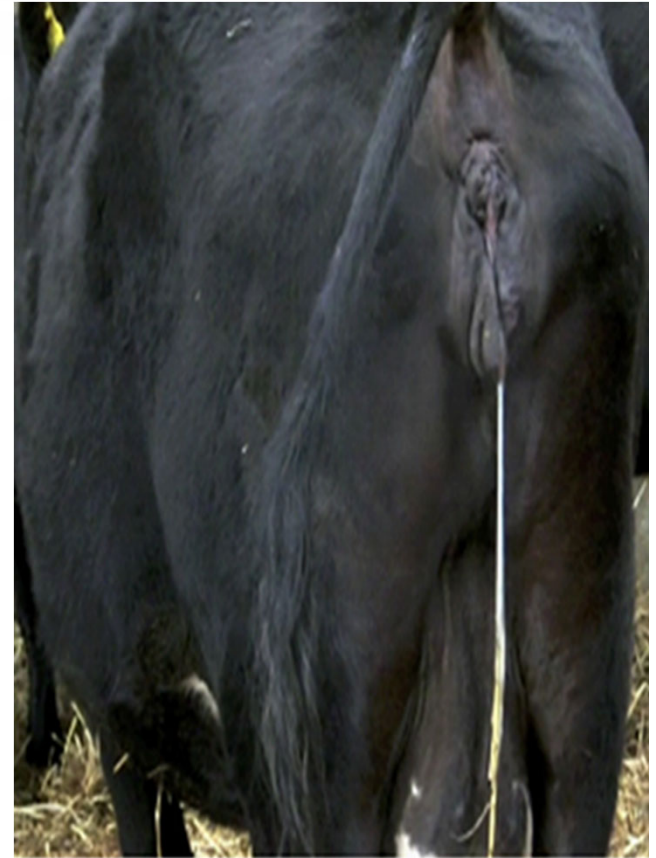


# Understanding The 3 Stages of Parturition

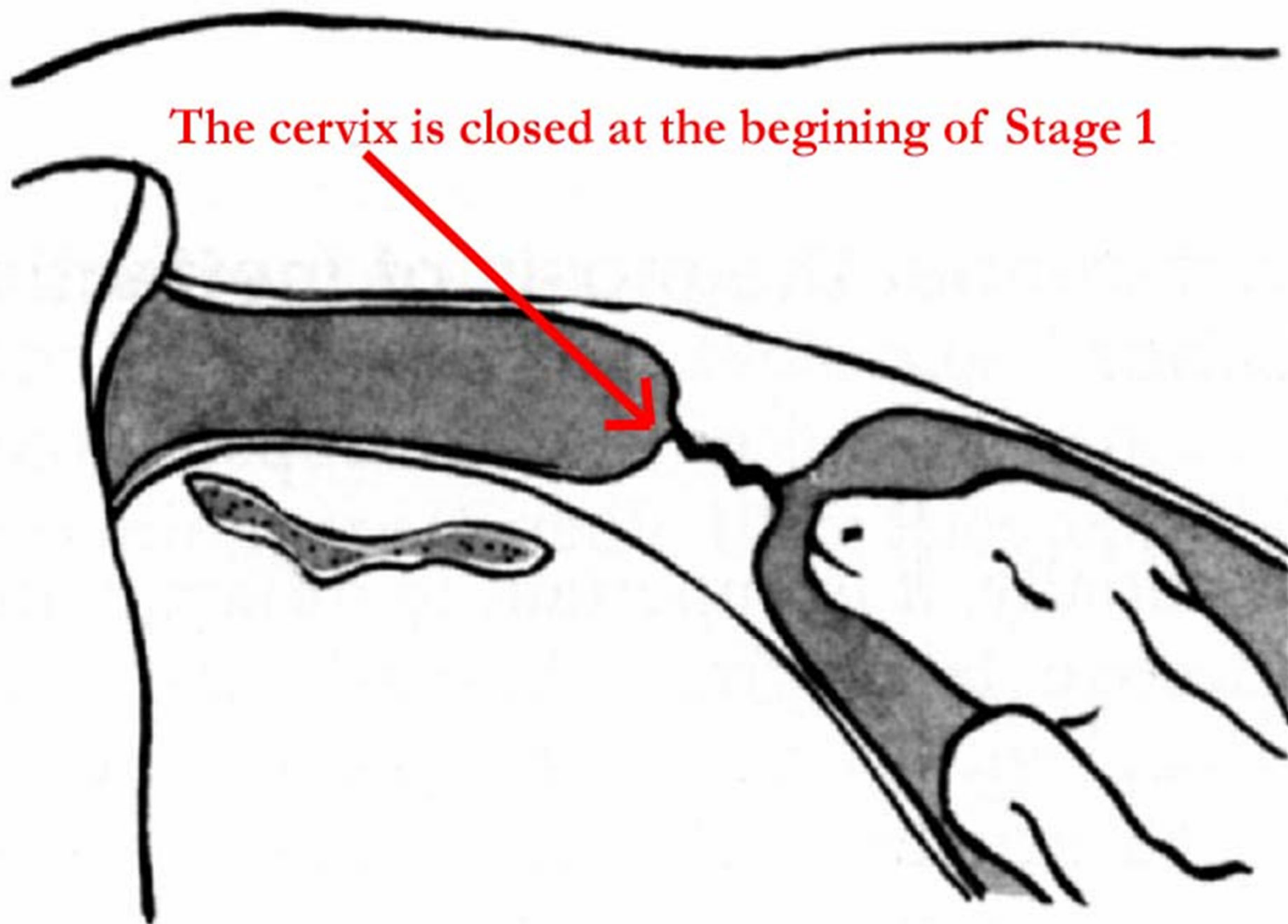


# Stage 1 Parturition

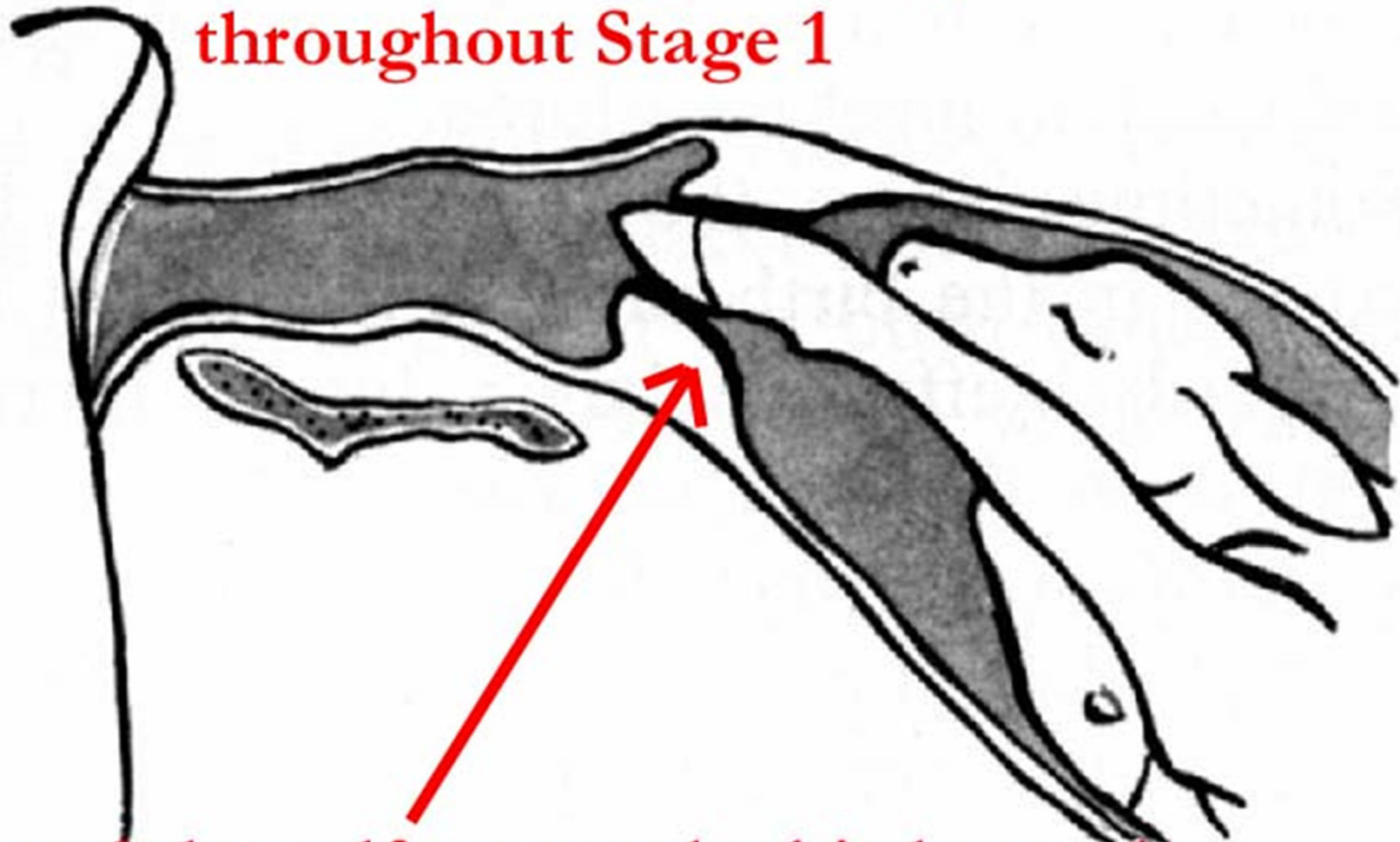
- Relaxation and dilation of the cervix
  - Hormonal initiation
  - Uterine contractions
    - Fetus rotates
    - **Mechanical** pressure of legs and head
    - **Hydraulic** pressure of water bag
  - Complete when water bag breaks
    - Usually takes a few hours
    - May see discomfort, off feed, separation







The cervix begins to open  
throughout Stage 1



and the calf enters the birth canal.





# Stage 2 Parturition

- Delivery of calf
  - Starts with breaking of water bag
  - Is complete with delivery of calf
  - Usually lasts 30 minutes to 2 hours
  - Examine if no progress:
    - 2 hours on heifers
    - 1 hour on cows





# Stage 2 Parturition

- What happens inside?
  - Water bag breaks
  - Uterine contractions increase
  - Calf enters birth canal
- What does it look like outside?
  - Dam lays down
  - Obvious straining and contractions
  - Expulsion of water bag
  - Appearance and delivery of the calf



# Stage 3 Parturition

- Passing of placenta
  - Starts following delivery of calf
  - Ends with expulsion of placenta





# Stage 3 Parturition

- What happens inside?
  - Uterine contractions
- What does it look like outside?
  - Dam focused on new baby
    - “Mothering-up”
  - Placenta passes
    - ½ to 8 hours
- Management of retained placenta
  - Time
  - Control infection
  - Think about breed back



# Post-Partum Considerations

- Calf Care
  - Immediate
    - Breathing
  - Colostrum
    - Antibodies, fat, vitamins, and WBC
    - 10% BW by 24 hrs (~3-4L)
    - Absorption time limited
      - Closure starts at 6 hours
      - 50% by 9 hours
    - Lifetime performance
      - 6.4 X likely to get sick as neonate
      - 3.2 X likely to get sick pre-weaning
      - 5 X likely to die
    - Dairy colostrum???
    - Replacer vs Supplement??



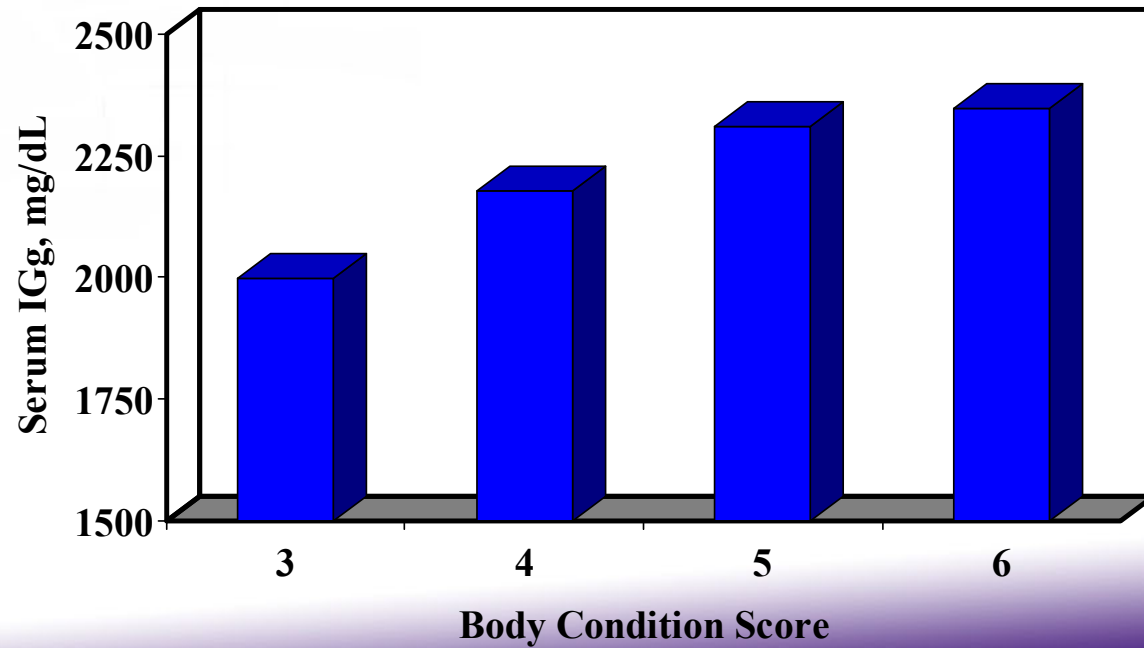
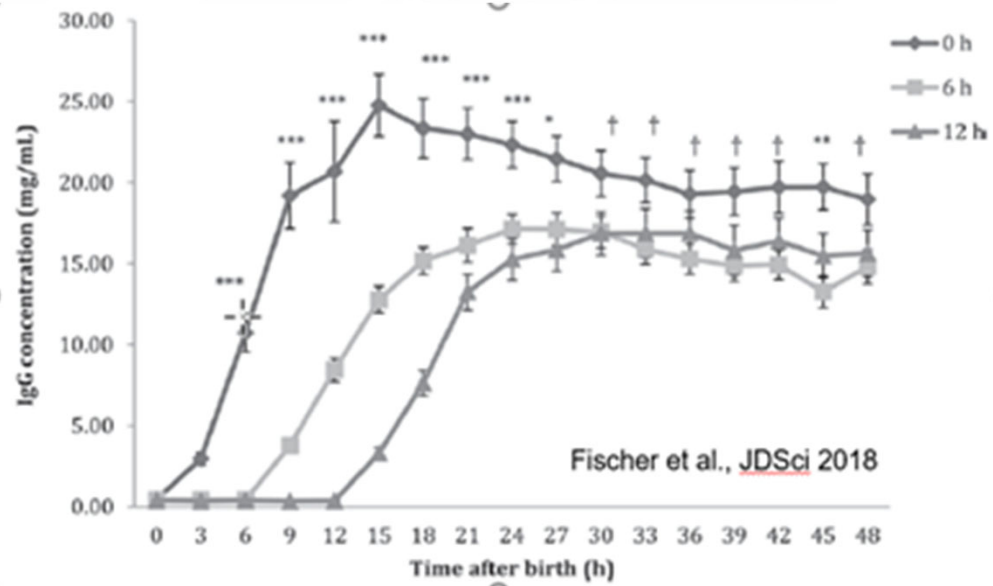


# BCS Matters!!

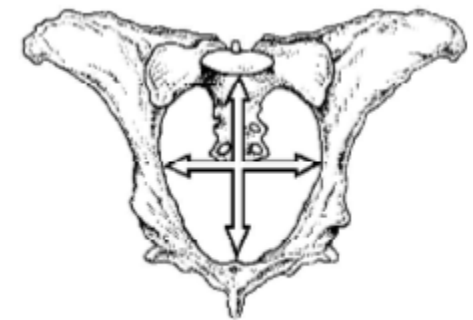
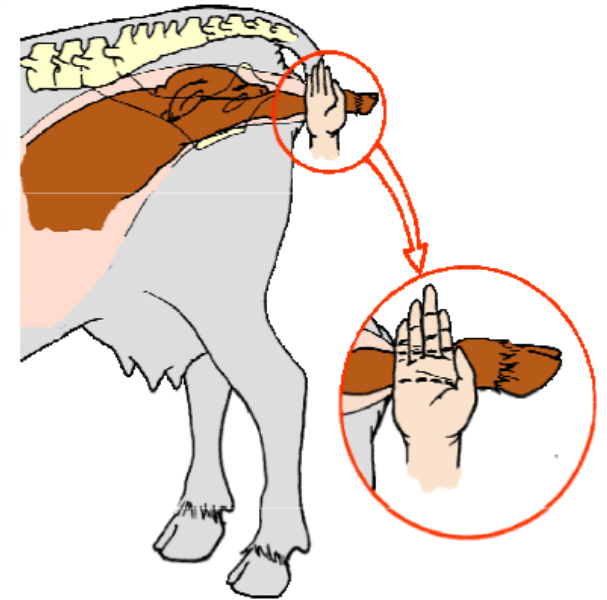
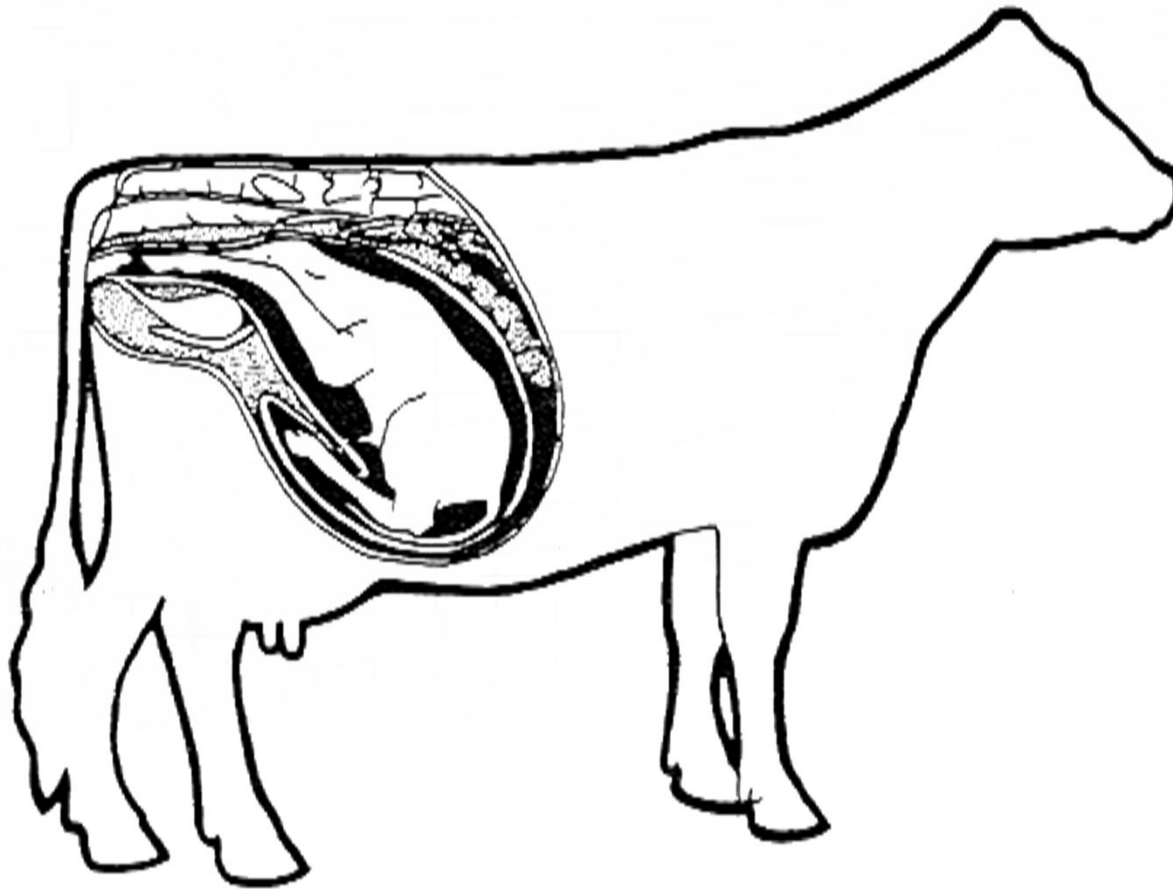
Effect of BCS at Calving on Calf Vigor and Colostrum Quality

Item	2	3	4	5	6
Interval, calving to standing, min	- -	60	64	43	35
Colostrum production, liters/day	750	1525	1111	1410	- -
Calf serum IgG1, mg/dl	1788	1998	2179	2309	2349
Calf serum IgM, mg/dl	159	146	157	193	304

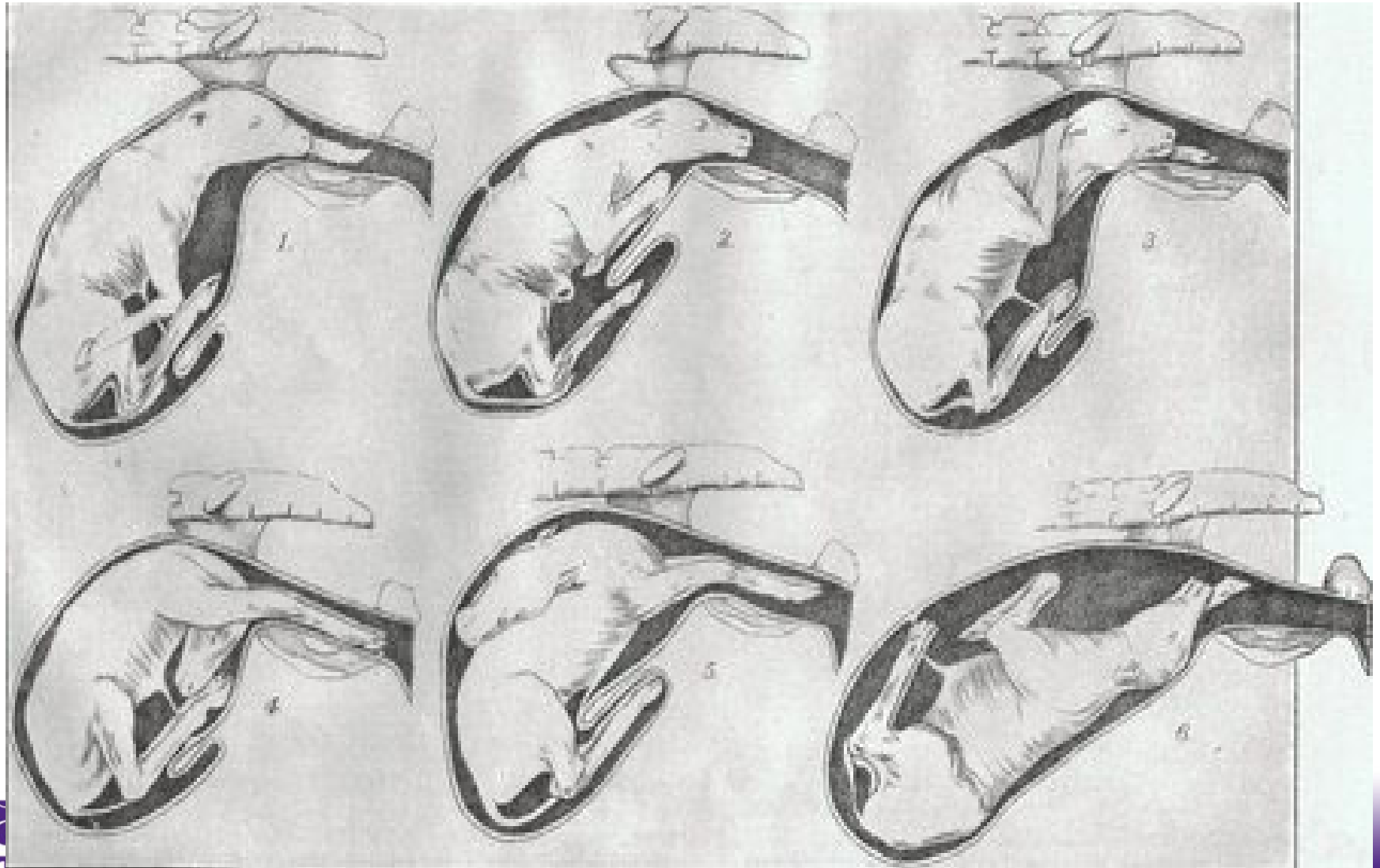
Colorado State, 1986



# Normal Presentation

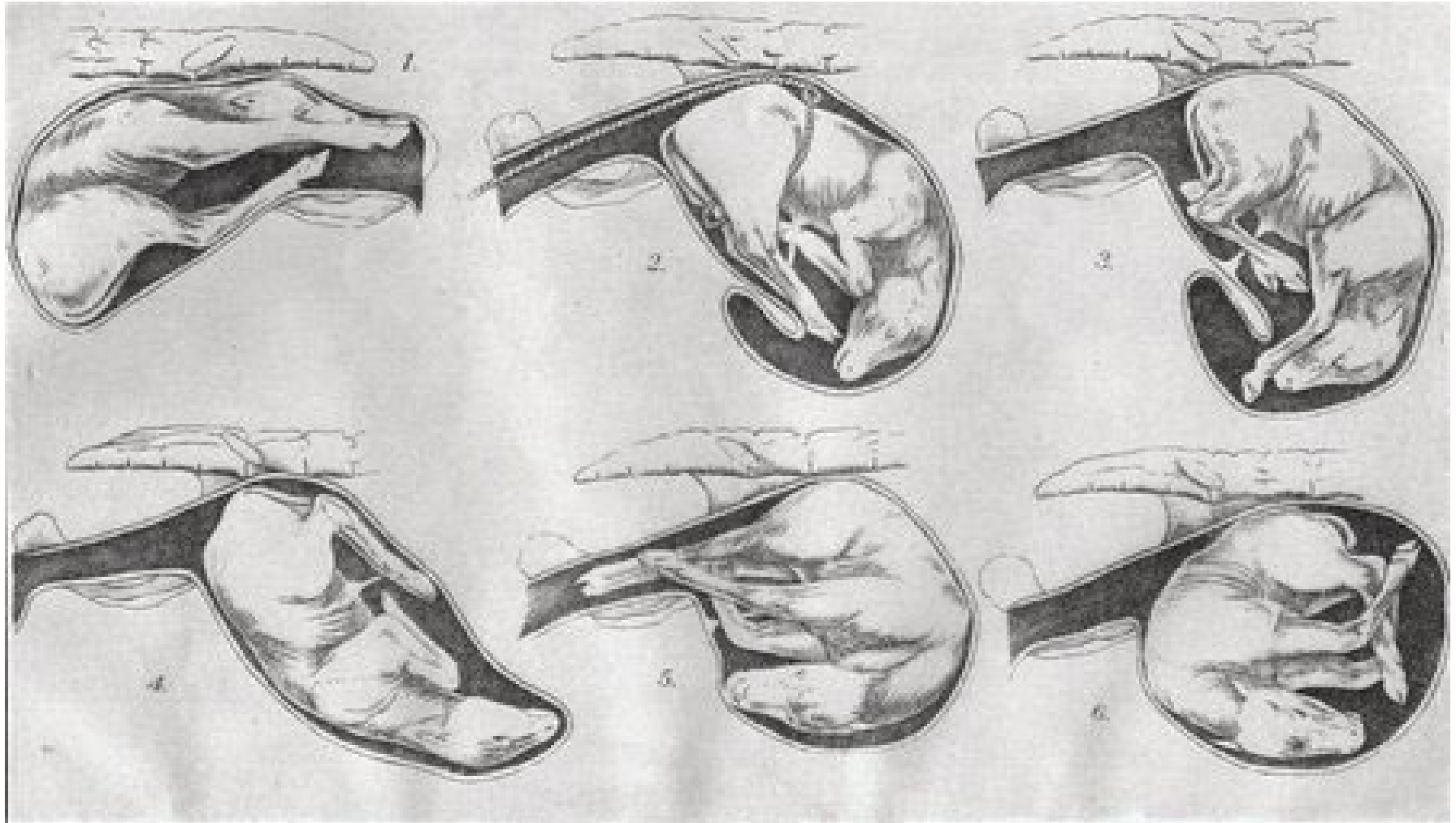


# Abnormal Presentations



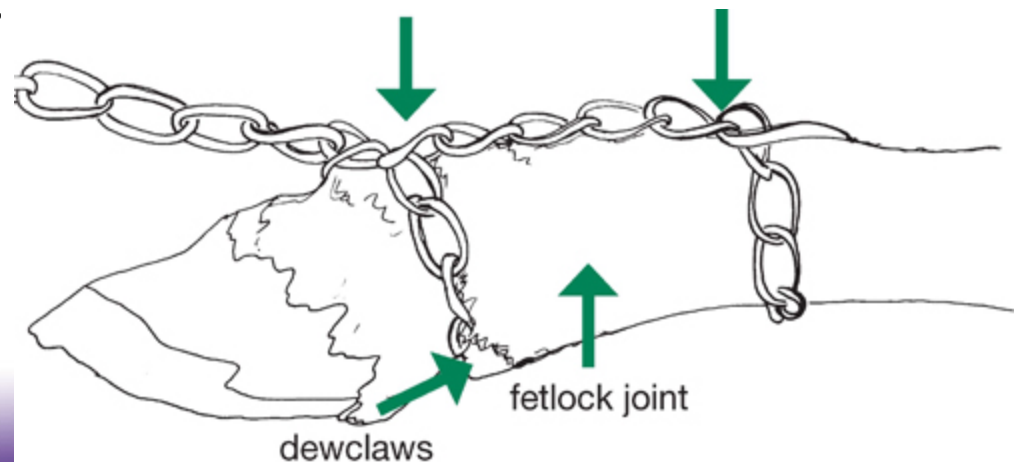


# Abnormal Presentations



# Intervention

- Veterinary involvement
  - No progress 1-2 hours
  - Keep C-Section as option
  - Use all Calving Tools appropriately
- Anterior -> Posterior
- Get that head around
- Never try three feet
- Lube, Lube, Lube



# High Risk Newborns

- Covered in Meconium
- Loss of Suckle Reflex
- Exaggerated withdrawal reflex
- Swollen Head/Tongue



# Cold Stressed Calves

- Mild- (<100F)
- Severe- (<94F)
- Options??
  - Floorboard heater in pickup, heating lamps and blankets, warm water immersion (**warm slowly** to 100F/replace water frequently to keep temp), warming boxes, warm water IV Fluids
  - Can take 1-1.5 hrs to warm calves back to normal body temperature. **It takes time!!!**





# Dummy Calves? Something to try

- Madigan Squeeze Technique
  - Developed for foals
    - Elevated neurosteroids (Keeps them calm in the womb)
- Technique
  - Wrap sliding loop between front legs tightening at the withers
  - Wrap 2 more loops with half hitches over chest
  - Apply pressure from behind calf
  - Maintain pressure for 20 minutes

# Madigan Squeeze

- Will create a deep “sleep” state for the calf
  - Acts almost like sedation
- Apply on calves 2 days old or younger
  - C-Sections
  - Poor suckle reflex calves
  - Lethargic and weak calves

# Intervention

- Producer/Veterinarian Involvement
  - Intervention – Rule of an hour
    - Why – Longer than 2 hours
    - What – water broke, nothing since
    - Where – best in clean facility
    - When - ASAP
    - How - quietly
  - **Sanitation** – Clean, Dry
    - Prevent uterine infection as well as neo-natal disease

# Intervention

- Facilities
  - Safety
    - Man
    - Animal
  - Restraint
    - Up or Down

