



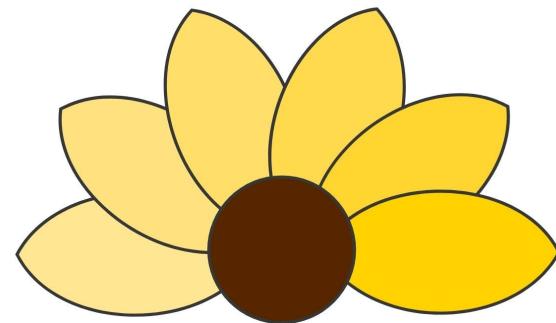
Calving Management

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



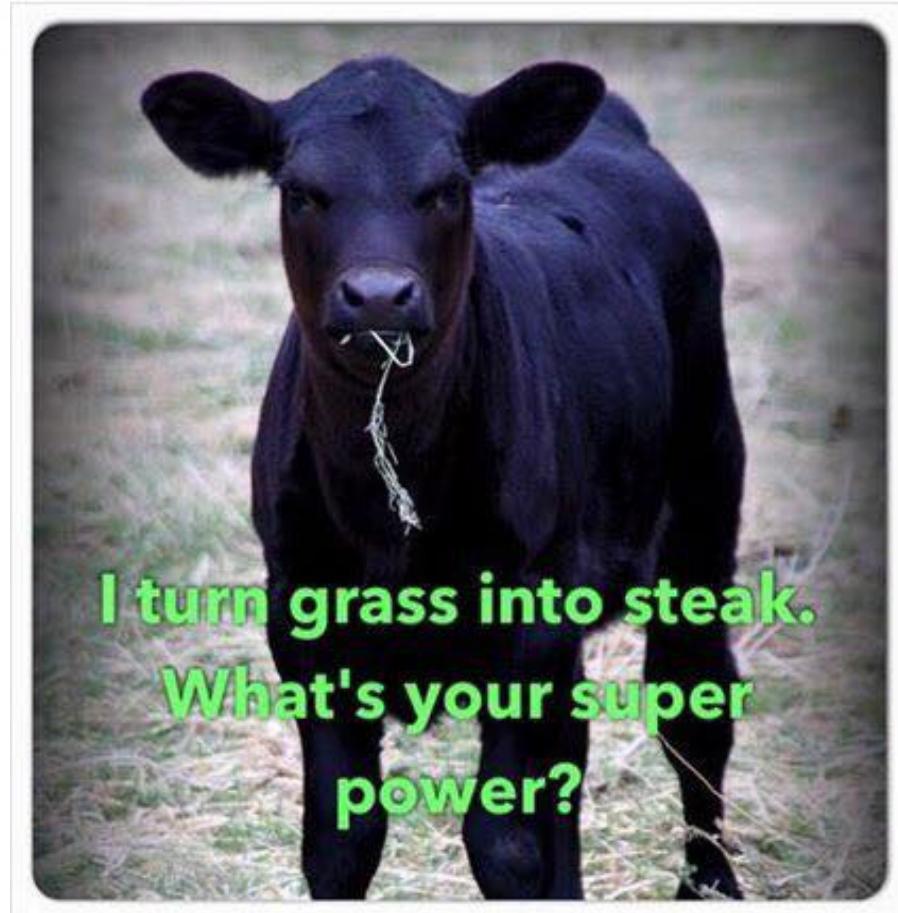
communityfoundation
of SOUTHEAST KANSAS



*Knowledge
for Life*

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



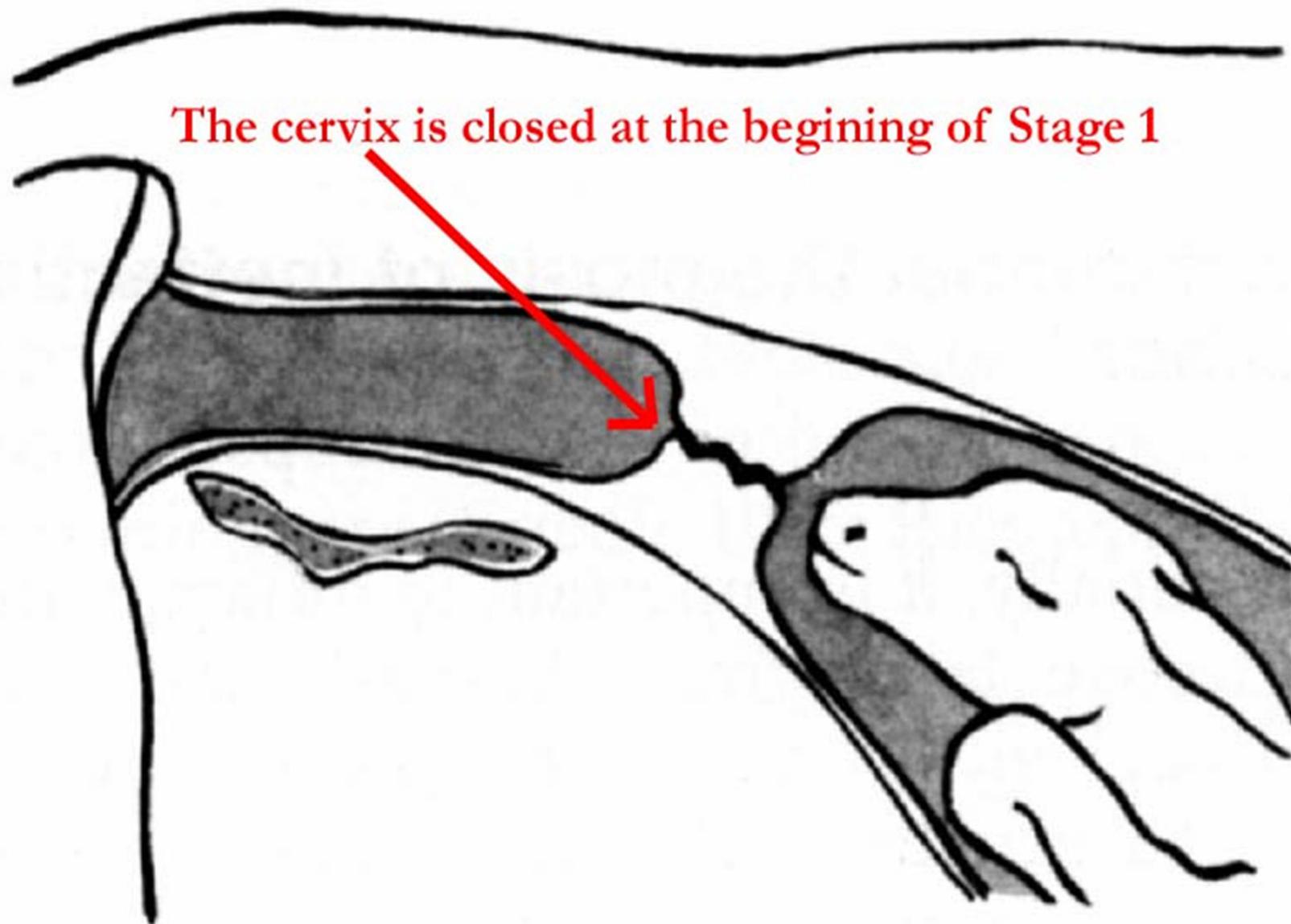
Understanding The 3 Stages of Parturition



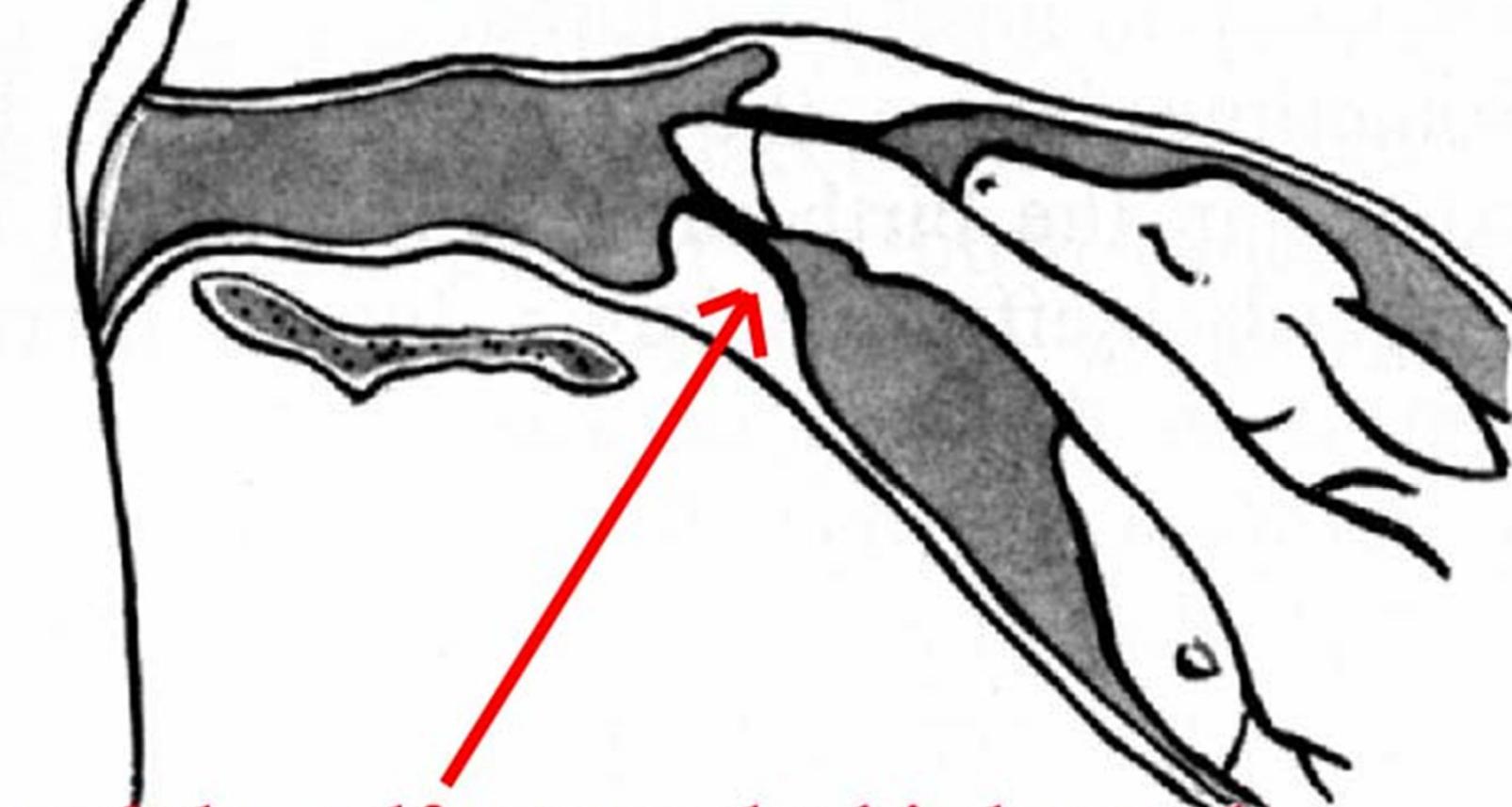
Stage 1 Parturition

- 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

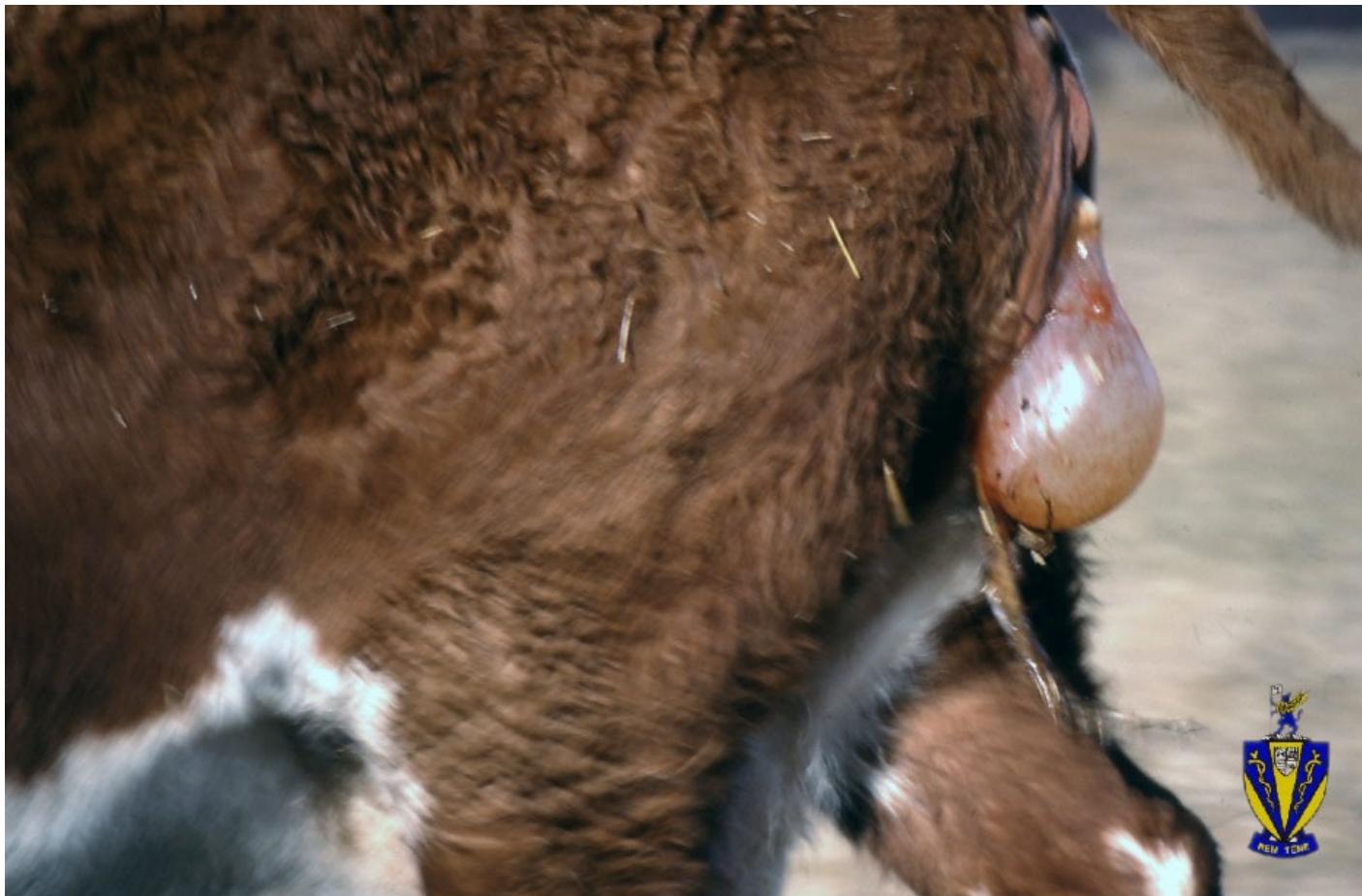




The cervix begins to open
throughout Stage 1



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
 - $\frac{1}{2}$ 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??

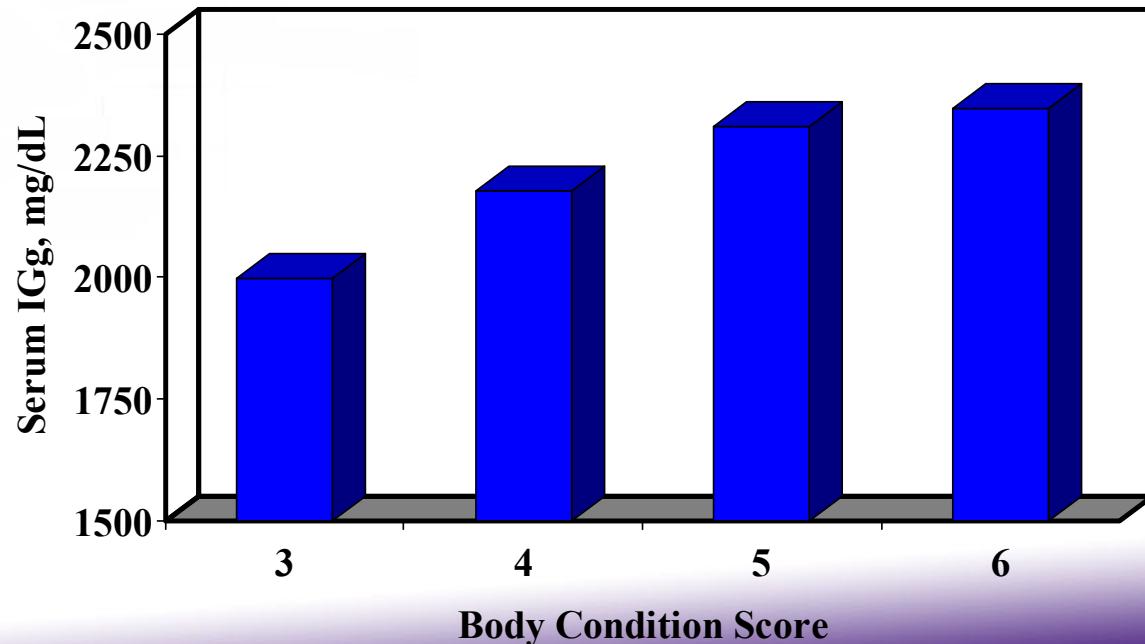
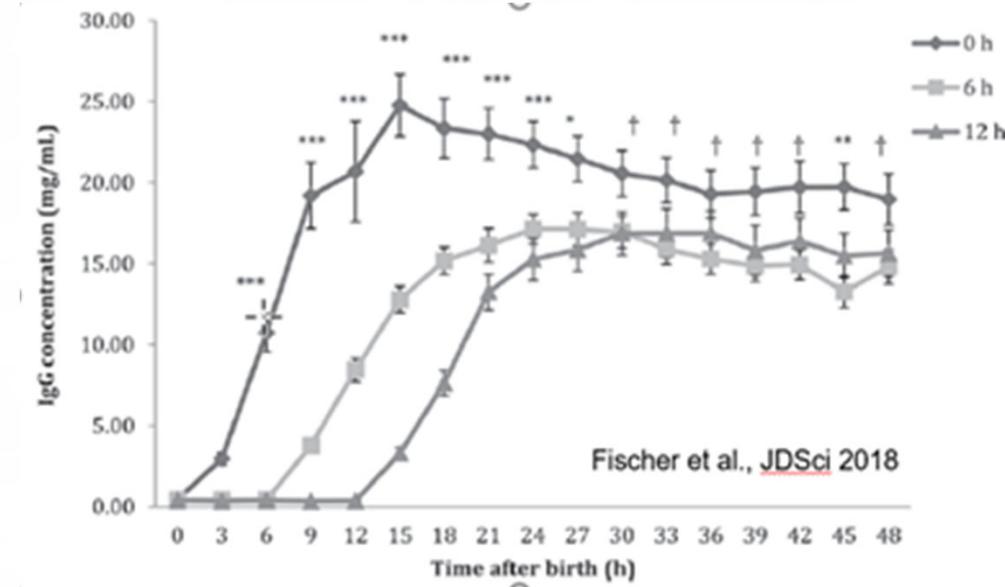


BCS Matters!!

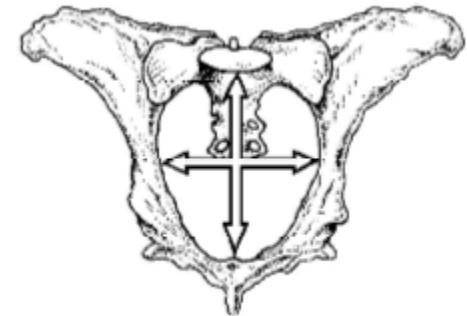
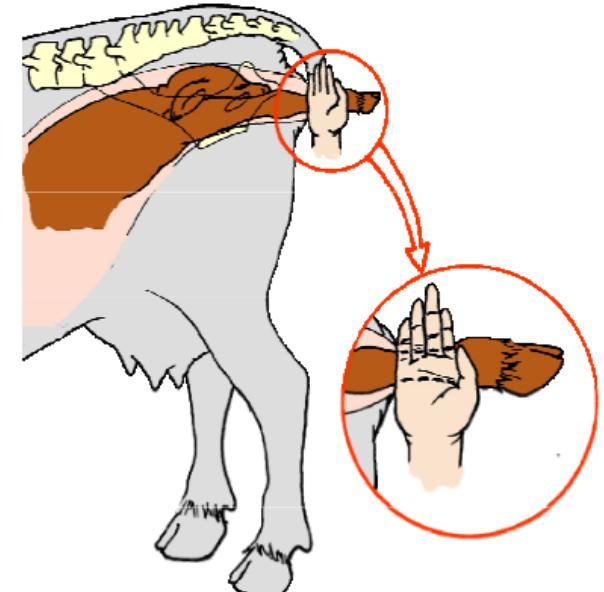
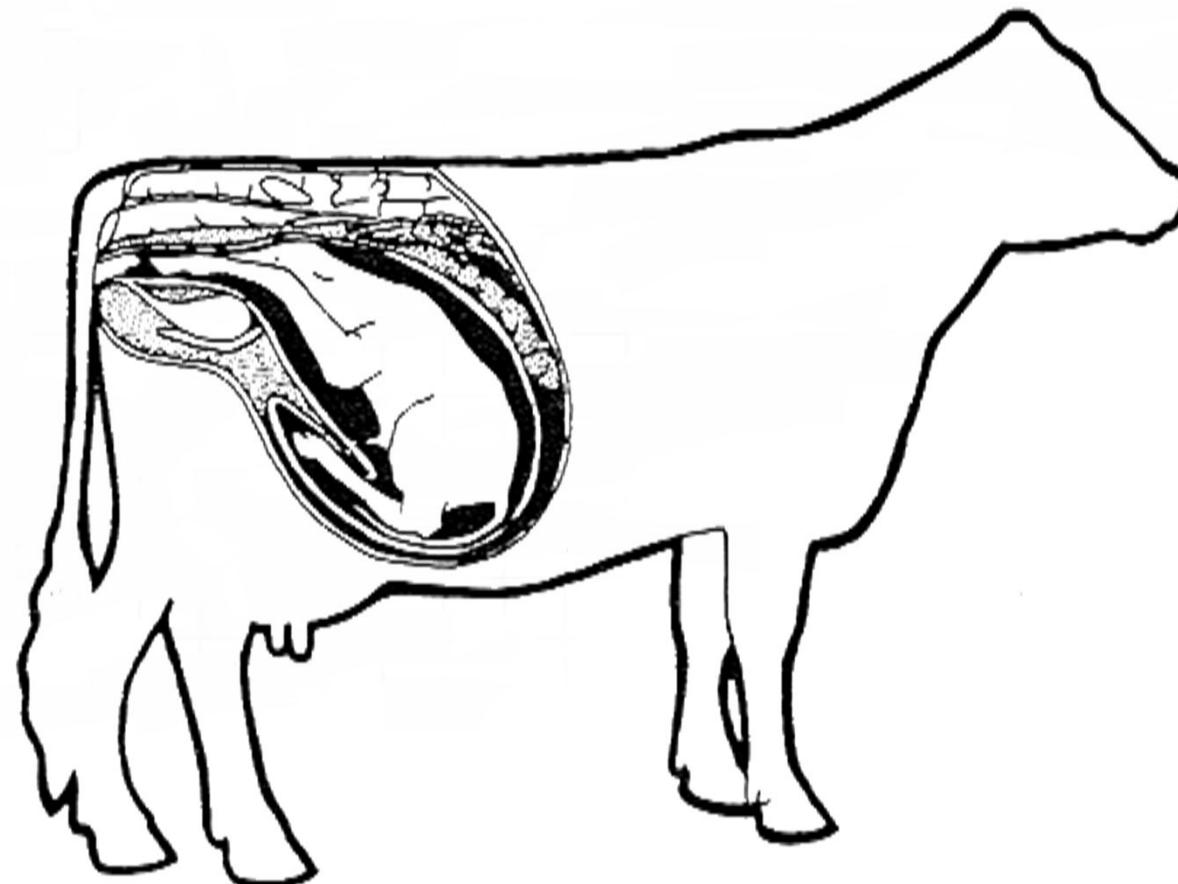
Effect of BCS at Calving on Calf Vigor and Colostrum Quality

| 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 |

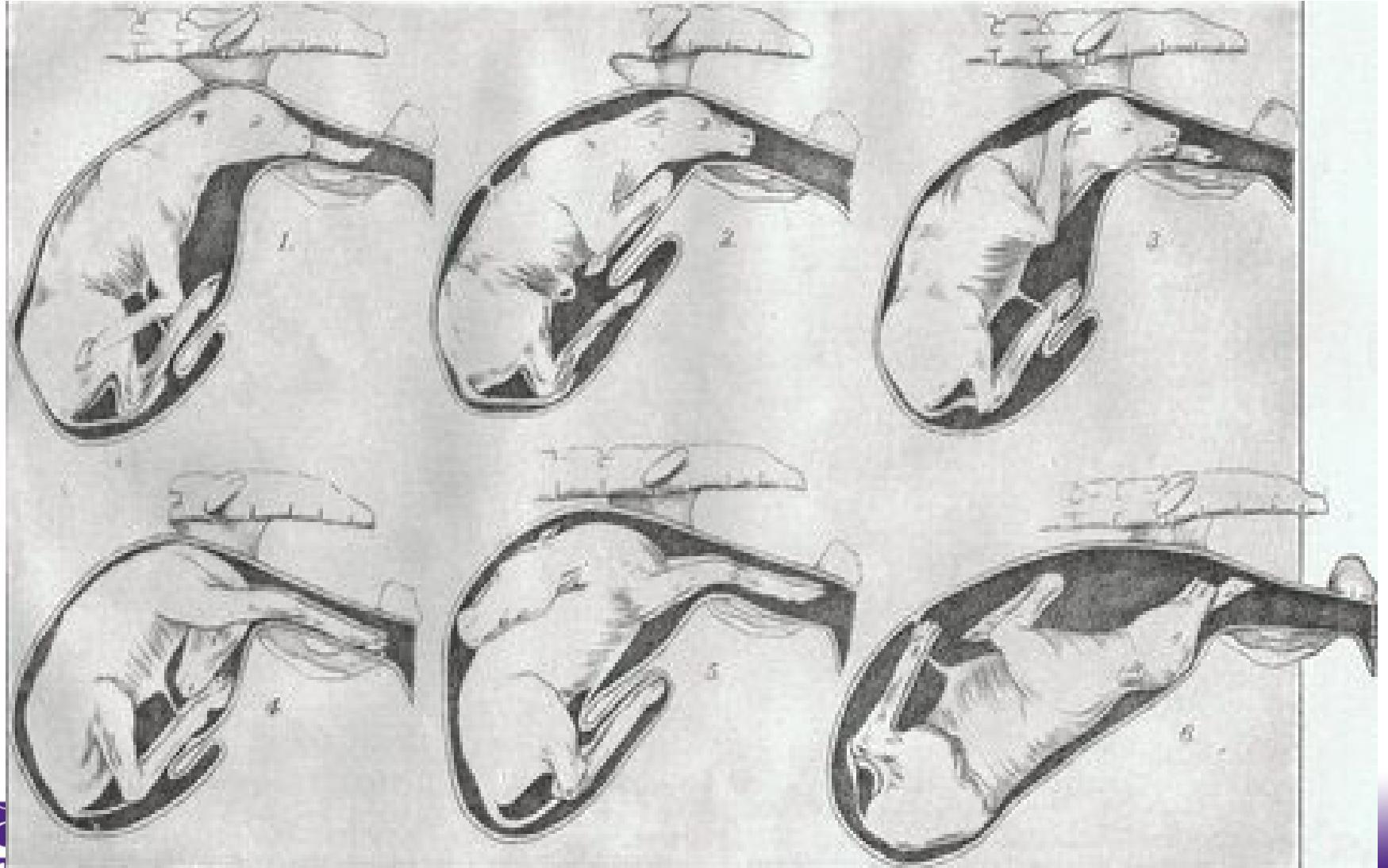
Colorado State, 1986



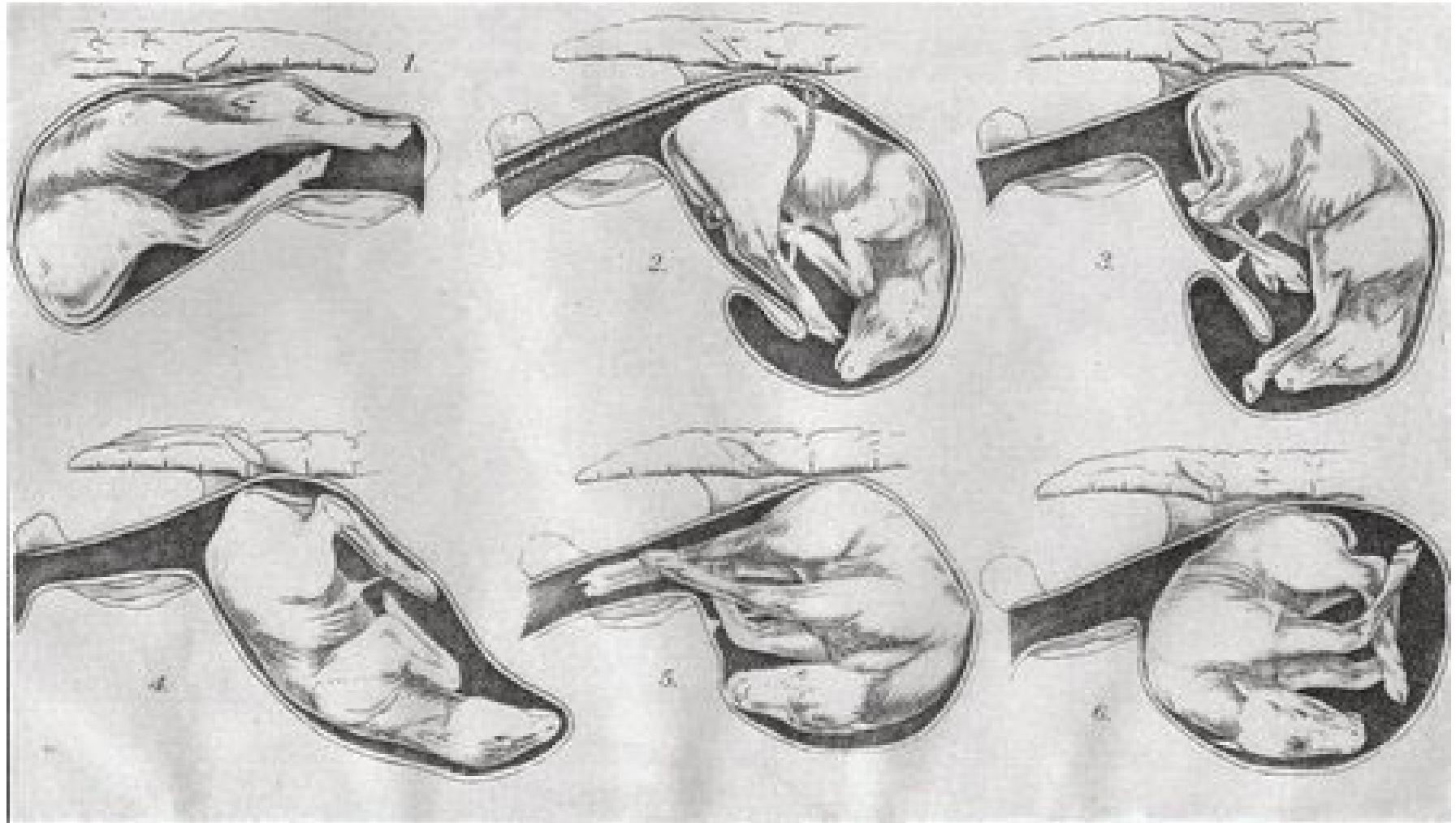
Normal Presentation



Abnormal Presentations

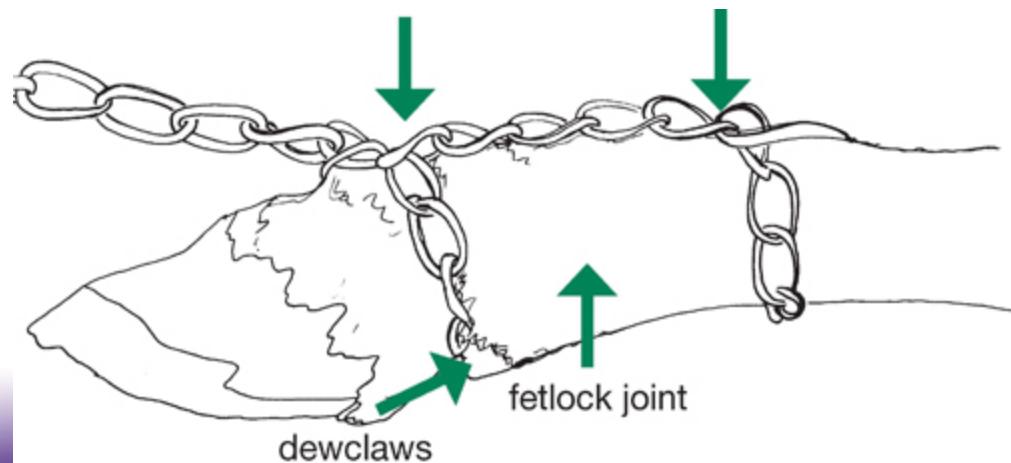


Abnormal Presentations



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

