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# AGRONOMY & BEEF BULLETIN March 2022

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AUGUSTA COOPERATIVE FARM BUREAU, INC. 1205B RICHMOND RD. STAUNTON, VA 24401



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# WEAK CALF SYNDROME: WHAT TO DO WHEN CALVES ARE BORN WEAK

"Weak Calf Syndrome" is a term applied to a calf born alive but lacks vigor, is slow to stand, and may not attempt to nurse. Affected herds may also see an increase in stillborn calves. The known factors contributing to the development of weak calves include inadequate nutrition for the dam during pregnancy, difficult calving (known as "dystocia") and infectious diseases, especially BVD virus. With excellent management, some weak calves will survive but most will die shortly after birth. Those that survive are prone to develop scours or pneumonia, grow slowly and have lower weaning weights. Although this situation is difficult to correct during calving season, identification and correction of the underlying problems will help prevent this syndrome down the road.

#### 1. INADEQUATE PRE-PARTUM NUTRITION

Nutrition for the dam is key to preparing a calf for life outside the cow. Not only does the pregnant cow's diet need to meet her own maintenance needs but, in the last 50-60 days of gestation, approximately 80% of fetal growth occurs requiring additional nutrients to support this tremendous growth and to develop the fetal brown fat needed to supply energy to the newborn until adequate colostrum is ingested.

The two most important cow nutritional requirements are protein and energy, the exact amounts of each depend on stage of production, environment, and mature cow size. Research has shown that calves born to cows on inadequate diets have less vigor, less brown fat stores, less ability to warm themselves, and it takes a much longer time for them to stand after birth. Heifers and old or thin cows are more likely to have weak calves as they simply cannot compete for hay and feed and should be fed separately to allow them access to the nutrients they need.

Vitamin and trace mineral deficiencies have also been associated with weak calves. If cows are not supplemented with adequate

amounts of selenium during gestation, the calf will be born with a severe selenium deficiency. This deficiency results in "white muscle disease", a condition where calves are born with weak heart and skeletal muscles and frequently die soon after birth. In addition, both vitamins A and E are vital nutrients for cows to pass to the fetus but may not be adequate in poor quality forage. Always keep a good trace mineral mix with vitamins in front of the cows or mix it in supplemental feed to ensure calves are born with sufficient amounts.

## **Augusta Co-op Solution**

#### **AC PRIME Brood Cow Mineral**

Sold by the bag. A solid choice for a free-choice mineral supplement for cattle on pasture. Contains minerals, vitamins and salt to help meet the macro and micro nutrient needs of cows and



calves. Compared to other minerals offered, this formulation features improved availability of micro nutrients such as zinc, manganese, and copper in the diet by utilizing the hydroxy forms of these minerals for enhanced absorption in the gut.

SKU - K5154

#### 2. DYSTOCIA (DIFFICULT BIRTH)

A calf involved in a difficult birth will have decreased vigor and take longer to stand and nurse. A prolonged labor and difficult calving often results in a newborn calf with a swollen head or tongue, bruising, fractures, and excessive fluid in the trachea or lungs. Low blood oxygen in the calf ("hypoxia") from prolonged labor will also impair the function of the central nervous system (brain and spinal cord). Additionally, a calf may have broken ribs that affect its ability to breathe. An easily observed sign of a difficult birth is brown or yellow staining of the calf's hair coat from the meconium.

If a calf does not stand and nurse within one hour of birth, the calf must be fed colostrum either milked from the dam or use a commercial colostrum replacement. Colostrum should be given as soon after birth as possible, preferably within 1-2 hours, and repeated at no later than 6 hours after birth. Weak calves born during cold, wet weather with little brown fat can quickly develop hypothermia (low body temperature) and are unable to stand or nurse until warmed. A warm water bath, blow dryer, heat lamp or floorboard heat can quickly warm a cold calf. Beware of heating pads as they can cause burns.

### **Augusta Co-op Solution**

## Manna Pro, Jump-Start Plus Gel, 60 g

An oral microbial gel to provide your animal with live, naturally-occurring microorganisms, vitamins and minerals especially in conditions of stress, transport or weaning. Helps keep animals on feed during stress and aids in the digestion of nutrients for maximum feed efficiency. Contains 2 billion CFU/gram of total viable cultures. Can be used in horses, cattle, goats, sheep, llamas, alpacas, and pigs. Palatable gel. Give orally by placing nozzle on the back of the tongue and dispensing the appropriate dose. Can be administered daily as needed. Continue daily administration as along as necessary during times of stress, transport or competition.



SKU - 52087

# 3. INFECTIOUS CAUSES-BOVINE VIRAL DIARRHEA (BVD) VIRUS AND LEPTOSPIROSIS

Both the BVD virus and the spirochete Leptospira interrogans serovar Hardjo infections have been diagnosed in weak calves. If an unvaccinated or poorly vaccinated cow is infected with the BVD virus during gestation, there are no good outcomes. The calf may be born weak or born with congenital defects such as a domed head, cleft palate, cataracts and other eye defects, or the calf may be born as a PI (persistently infected) calf. The other possible infectious cause of weak calf syndrome, Leptospirosis, is not fully understood but studies are on-going to determine its importance.

If pregnant cows in the herd have been losing weight, especially in late gestation, it is best to prepare for the birth of weak calves. Several measures should be instituted immediately to save as many calves as possible:

1. Check heifers and cows in labor frequently (at least 2-3 times daily) – Although producers are accustomed to watching heifers closely for calving difficulty, this recommendation should be extended to all late gestation cows. Once the water bag or hooves

appear, the calf should be born within an hour to hour and a half. If the cow is not making progress, call your veterinarian for help. If early signs of labor are observed for several hours but the water bag does not appear, the calf may be breech (tail first) or abnormally positioned. Again, call for help quickly for a better chance to have a live calf.

## Augusta Co-op Solution

### BI, Triangle 10 HB, 50 Doses

For vaccination of healthy cattle as an aid in the prevention of disease caused by infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD Type 1 & II), parainfluenza (PI3), and bovine respiratory syncytial virus (BRSV). This product contains BVD Type 1 and II. Also aids in the prevention of Leptospira pomona, L. hardjo, L. grippotyphosa, L. canicola and L. icterohaemorrhagiae thus providing 5-way Lepto protection. Safe for pregnant cows. SKU - 151888

- 2. Address nutritional needs and account for increased needs during severe weather. Test your hay then evaluate the protein and energy in the ration and address any deficiencies. Body condition score the cows and heifers due to calve in the next 60 days to evaluate their needs. In addition, remember that lactating cows have the greatest need for energy because they are producing milk. If you observe a young calf frequently attempting to nurse, it is unlikely to be getting enough milk from the dam and may need milk supplementation. If possible, separate cows according to their nutritional needs and feed them accordingly. Creep feeding calves will help the older calves continue to grow and lessen the burden on the lactating dams.
- 3. Identify the weak calves and institute special care. Normal calves should stand within 30 minutes of delivery and nurse within 30 minutes of standing. If the calf is slow to stand and nurse, intervention is necessary. It is important to dry the calf off, dip or spray the navel with disinfectant, warm the calf, and feed colostrum with an esophageal feeder to ensure it gets enough. Have a good quality commercial colostrum replacement (NOT supplement) on hand and ready to mix and feed. Do not delay because the longer the interval from birth to feeding, the fewer antibodies absorbed into the blood stream of the calf.
- 4. Provide shelter during harsh winter weather. Unrolling hay on the ground where there are windbreaks or in wooded areas provides some protection during times of intense rain and cold. A shed or barn can be beneficial but remember organisms that cause calf diarrhea build up very quickly in areas that stay moist and without sunlight. Barns should be clean, dry, and well-bedded if used for calving. If cows were not vaccinated with scours vaccine prior to calving, there are products available to give the calf by mouth at birth to aid in scours prevention.
- 5. Do your best to feed in different spots to avoid creating areas of deep mud. Calves and weak cows will get stuck in deep mud and die. Mud is very sticky and will trap weaker animals until they die of exhaustion, hypothermia or fall prey to a predator. Fields can be fixed when winter is over.
- 6. Diagnose the cause of unexpected death in newborn calves. Contact your local veterinarian and submit any calves that die due to unknown causes to the UK Veterinary Diagnostic Lab or Breathitt Laboratory in Hopkinsville.

The best strategies to prevent weak calves next calving season are a solid vaccination and deworming program, proper nutritional management, and avoiding dystocia. Not only will calf survival improve but pregnancy rates will increase as well. Keep the following points in mind:

- Vaccinate open cows at least 4-6 weeks before breeding with a modified live 5-way viral respiratory vaccine (IBR, BVD Types 1 & 2, PI3, BRSV), with Vibriosis and the 5 strains of Leptospirosis. Consult your veterinarian about vaccination protocols in pregnant cattle and testing the herd for persistent infection with BVD virus.
- Test all hay and plan to provide enough protein and energy for cows and heifers with a balanced ration based on the stage of production (lactation, mid- or late gestation). Ensure a clean, uninterrupted water supply 24 hours a day, 7 days a week.
- Maintain a body condition score of 5 for cows (up to a 6 for heifers) to ensure adequate condition at calving.
- Allow cows access to some form of shelter in case of bad weather when calving. However, if unable to keep this area clean, calves are far better off being born outside in a grassy area.
- Have enough help on hand at calving to watch cows, assist with calving and treat weak calves if necessary. A strong
  relationship with your local veterinarian is exceptionally important for difficult calving situations and the evaluation
  and treatment of weak calves.

Dr. Michelle Arnold, University of Kentucky

# BULL TO FEMALE RATIOS: PREPARING FOR BREEDING SEASON

#### WHAT'S THE RULE OF THUMB WHEN IT COMES TO BULLS VS. FEMALES?

Breeding season is approaching and bull turnout is only weeks away for herds that plan to start calving next January.

The first goal of breeding season is to get cows bred early in breeding season resulting in more calves born earlier in calving season, shorter breeding/calving seasons, older calves at weaning and ultimately, more pay weight at weaning due to calf age. The typical beef calf gains about 2 lbs./day up until weaning, accordingly a calf born one heat cycle (21 days) earlier will wean off about 40 lbs. heavier. How do we get this accomplished? By having an adequate amount of bulls to get cows serviced. The following shows a conservative expectation of the number of cows we should expect bulls to cover in a defined breeding season.

- 12 15 month old bulls = 10 12 females
- 15 18 month old bulls = 12 18 females
- 18 24 month old bulls = 18 25 females
- 24 mo. & older = 25 35 females
- 2 6 year old bulls = 25 35 females

Rule of Thumb: One female per month of age at turnout (after passing yearling Breeding Soundness Exam)

For example: If I have 60 heifers to breed and plan to turn out 15 month old bulls, I will need four bulls.

# WHAT IS THE TYPICAL LIFE EXPECTANCY OF A BREEDING BULL?

Typically up to the age of 6 is "prime of life" for breeding bulls. This isn't to say that all bulls will break down at this age, but is more likely to happen after age six. Often when an

older bull goes bad, it isn't discovered until after breeding season when we are doing pregnancy checks.



#### **SOCIAL BEHAVIOR OF BULLS**

When you invest in bulls this spring, it is a good idea to pen bulls of similar ages and size together for several weeks prior to start of breeding season to allow for social ranking of bulls. This time together allows bulls to establish a "pecking order" so they will be ready to focus on their job at turnout.

#### **EVENTS / CALENDAR**

#### **PURINA CHECK-R-BOARD & CHICK DAYS**

Monday, March 21 - Saturday, March 26

All Store Locations

(Staunton, Fairfield, Weyers Cave & Scottsville)

Deals on poultry, equine, livestock feed and more!

For a full list of sale items visit:

www.AugustaCoop.com/events

#### **SMALL ENGINE OPEN HOUSE**

Friday, April 1 & Saturday, April 2 8 AM – 5 PM

Staunton Small Engine Shop 1205B Richmond Road, Staunton, VA

Huge deals on all Husqvarna, STIHL and Oregon equipment. Vendors on site!

Additional information: www.AugustaCoop.com or (540) 885-1265

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- 3-4 weeks of protection against a broadspectrum of internal and external parasites
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'In a comparison of approved labels for DECTOMAX Pour-On and Ivomec" Pour-On, DECTOMAX has at least twice the duration against Cooperia oncophora, Ostertagia ostertagi, Haemonchamblaneignathus vituli

Based on comparison of number of parasite species controlled by DECTOMAX and Ivomec, as cited in FDA freedom of information summaries NADA 141-095 and NADA 140-841.

Comparison of approved label indications for Dectomax Injectable Solution, Cydectin\* Injectable Solution, Ivomec 1% Solution and LongRange







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Improve the profit potential of your feedlot

– it's as simple as planting a hybrid that
provides more potential value in the field
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Unique Enogen® Feed hybrids do just that, offering proven genetics and strong agronomic characteristics in the field. And in your ration, a step-change in starch and sugar availability provides more available energy to feedlot cattle.

#### Benefits in the field

- Excellent yield potential across a variety of soil types and conditions
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It's as easy as replacing the corn or silage you currently grow and feed. FEED AS GRAIN OR SILAGE PLANT **ENOGEN** FEED Upgrade **ENHANCE** your hybrid DIGESTION Maximize starch availability Energy is a key component to maximizing beef production. INCREASE AVAILABLE ENERGY and corn is an important energy source. Corn supplies starch, that is converted to sugar, which ultimately delivers energy to feeder cattle.

#### FOR ADDITIONAL INFORMATION CONTACT THE AUGUSTA CO-OP AGRONOMY TEAM

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At Augusta Cooperative Farm
Bureau, Inc., we know the
importance that spraying
services can play in maintaining
the health and beauty of your
property; and because of that, we
offer our clients a full range of
options in spraying applications.

Many property owners are unaware of just how critical it is to properly protect their pastures and property from weeds until it's too late; but by being proactive with treatments applied on a regular schedule, those hazards can often be prevented and eliminated. With our team's knowledge and specialized equipment, Augusta Co-op will achieve optimal results.



# AUGUSTA CO-OP SPRAYING SERVICES

Focusing on small agricultural pasture applications.



## **SERVICES**

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Regular applications of herbicides will help keep volatile weeds under control. Fence row spraying is also available.

#### **TOTAL VEGETATION CONTROL**

Applications to remove all vegetation.

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Test and monitor pH levels, soil moisture and soil quality.

#### THE SCHEDULE

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