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CALF SCOURS AND DIARRHEA IN POST-WEANED HEIFERS TREATMENT PROTOCOLS

Scours is the most significant cause of illness and death in pre-weaned calves. There are a number of causes, some of which have specific treatments or preventive measures like vaccination. Good nutrition and husbandry practices are the best prevention for all types of scours.

Calves get most types of scours by swallowing the bacteria. Contacting manure after birth, either from bedding or sucking dirty teats, is usually the source. The calves first line of defense is the protection received from colostrum. A Holstein calf needs to receive 4 quarts of colostrum within 4 hours of birth. If that is not available, a good quality colostrum replacer (not supplement) containing 100 gm of bovine globulin should be given. Ideally, the calf will suckle this from a nursing bottle, but esophageal feeding tubes may be necessary to give the recommended volume. Dip the navel with strong (7%) iodine at birth and again at 12 hours of age. Once the newborn is dry, the calf should be moved to individual housing, preferably bedded with clean, dry straw.

E. coli scours (also known as colibacillosis or enterotoxemia) is the leading cause of scours. The bacteria is a normal inhabitant of manure; the larger the dose swallowed, the more likely that disease will develop. E. coli scours usually affects calves in the first week of life. The calf needs antibodies against E. coli. To increase the antibodies in the colostrum, the cow can be vaccinated at dry-off and again at 3 weeks before freshening with vaccines like Scourguard 4K/C, Scour Bos 9 or Guardian. For this to work, the calf needs the 4 quarts of colostrums in the first 4 hours of life. Another alternative is to use a specific antibody source like Bovine Ecolizer with C, given orally prior to colostrum. Treatment for scours include antibiotics. LA200 or Tetradure can be given subcutaneously (under the skin) and Sustain III boluses can be given orally (**WITHHOLDING**). Supportive care is important. Banamine (Flunixin) can be given intravenously (**WITHHOLDING**) to keep the calf feeling better. Please refer to the product labels for dosing instructions. Dehydration ultimately is the cause of death in these calves. Scouring calves should continue to receive their normal feedings of milk but should receive additional feedings of electrolytes, like Resorb, between milk feedings. Do not mix electrolytes with milk. Severely dehydrated calves may need to be given intravenous fluids like lactated ringer's solution.

Rota and/or corona viruses are common causes of scours, usually causing disease from 5 to 15 days of age. The virus can be detected in the manure at the state lab. Because they are viruses, antibiotics are not effective (although secondary bacterial infection is inevitable so antibiotics as shown above are still required). The virus must be prevented from setting up an infection. Scourguard 4K/C, Scour Bos 9 and Guardian also vaccinate the cows against rota and corona viruses. To get the antibodies into the calf, the colostrum feeding guidelines must be met. Alternatively, a modified live vaccine, Calfguard, can be given orally at birth. After giving Calfguard, 30 minutes should pass before giving antibodies (Bovine Ecolizer plus C, colostrum). The same guidelines for electrolyte therapy apply.

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Cryptosporidiosis affects calves usually from 5 days up to 5-6 weeks old. It is caused by a protozoan parasite for which a good specific treatment is not available although some feel that Deccox is helpful. If cryptosporidiosis is uncomplicated, keeping the calves nourished and hydrated while the disease runs its course will be sufficient. Unfortunately, many cases are also infected with bacteria and/or viruses which results in a greater chance of death. Treatment and supportive care is the same as outlined above.

Salmonellosis, if present in a herd, can cause diarrhea and pneumonia in calves and young stock. If culture and sensitivity reports are available, treatment should be based on that.

Clostridium perfringens causes a rapidly developing, rapidly fatal disease of the intestine. Often the calf will show bloating, abdominal pain, and sometimes bloody diarrhea. Sometimes, an apparently healthy calf will be found dead. The diagnosis can be confirmed with post-mortem examination. The disease is caused by toxins produced by the bacteria so antitoxin (C + D antitoxin, given subcutaneously) or antibodies produced against the toxin (Bovine Ecolizer with C, colostrum from cows vaccinated with Scourguard 3K/C or Guardian) can be beneficial.

Coccidiosis is the main cause of diarrhea in calves and young stock from one month to one year of age. The incubation period is around 3 weeks so signs usually do not show up until the calves are at least a month old. Bloody scours is the classic disease but subclinical disease in young stock is very common and results in poor gain and unthriftiness. Milk and calf starter and grower should contain a coccidiosis preventive like Deccox or lasalocid. Calves with diarrhea should be treated with Corid (amprolium).

Rumensin also controls coccidiosis so incorporating that into the feed of growing heifers is recommended. **Rumensin is toxic to horses.**

Stomach worms can cause diarrhea in young stock turned out onto contaminated pastures in the spring. A good strategy is to deworm prior to turnout and again 3 to 4 weeks later and again when brought in, in the fall. Many injectable, oral, and pour-on preparations are available.