



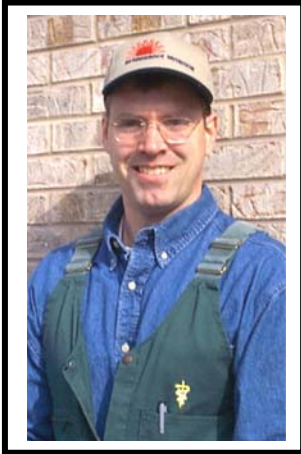
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TECH TALK . . .with Dr. Tom

Why Is There Blood In My Cows' Manure?

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There are several things that really seem to get the attention of dairy producers. One such situation is seeing blood in the manure of mature dairy cows. In order to figure out what is going on, several considerations should be addressed. How many cows are affected? Do affected cows appear really sick, or are they otherwise fairly normal? Do the cows have diarrhea? Is the blood digested or undigested?

Manure containing digested blood has a dark brown or black, tar-like appearance and is called melena. The presence of undigested blood (still red in color) in manure is referred to as hematochezia. Whether blood is digested or not depends on its point of origin in the gastrointestinal (GI) tract. Generally speaking, digested blood comes from the rumen, abomasum, or beginning of the small intestine. Common causes of melena include rumen ulcers, abomasal ulcers, abomasal torsion, and intussusception of the small intestine (a condition where a portion of the bowel telescopes on itself). Melena can also be caused by oak (acorn) toxicity, overdoses of certain drugs, and consumption of some chemicals. Undigested blood originates from points further downstream in the GI tract. Several common reasons for the presence of undigested blood in the manure are discussed below.

Winter Dysentery: This condition occurs more commonly during the colder months, and first calf heifers are often more severely affected. A very rapid onset is typically observed in which a significant portion of the herd develops diarrhea over a period of 2-4 days and fewer animals become affected thereafter. The disease typically runs its course through a herd in 12-18 days, but may persist for longer periods, particularly in large herds. Affected animals occasionally have a slight fever, are usually somewhat slow and depressed, and experience decreased milk production. Their diarrhea is watery, often has bubbles form in it, contains varying amounts of blood, and has a putrid odor. Current evidence indicates this disease is caused by a coronavirus. Viral infections do not respond to antibiotic therapy, so this form of treatment is of no benefit in uncomplicated cases of winter dysentery. Anecdotal reports proclaiming successful treatment with "drug X" or "feed additive Z" are common, but I am unaware of any existing scientific evidence that supports such claims.

T-2 toxin: T-2 toxin is a mycotoxin occasionally found in grains, concentrates, and some forages. It is a strong irritant of the GI tract and is damaging to the intestines. Cattle consuming significant amounts of T-2 toxin may experience decreased feed intake and milk production, diarrhea that often contains blood, decreased immune function, and occasionally death. Other mycotoxins may produce similar effects. To treat and/or prevent this problem, remove the contaminated feedstuff, feed less of the contaminated feedstuff and/or include a mycotoxin binder (adsorbent) in the ration.

Salmonellosis: *Salmonella* are an extensive group of bacteria (over 2000 serotypes identified) that can cause infections in many different species, including people. The serotypes most commonly infecting cattle include *S. dublin*, *S. typhimurium*, *S. montevideo*, and *S. newport*. Cattle infected with *Salmonella* are generally very sick,

with high fevers (>104° F) and severe diarrhea. The diarrhea may contain blood, mucus, and/or fibrin (a thick, sometimes chunky yellowish or grayish substance). Pregnant cows may abort, and infected cows sometimes die. The number of animals affected can vary from as few as one or two to many more, depending on the strain of *Salmonella* involved and source of the infection. **This is a serious disease that should receive immediate veterinary attention if suspected.** Treatment should include antibiotics, non-steroidal antiinflammatories (such as flunixin meglumine), and fluids containing electrolytes. Control and prevention of salmonellosis should focus on minimizing the exposure of healthy animals, eliminating carrier animals from the herd (where applicable), environmental disinfection (where practical), removal of contaminated feedstuffs, elimination of contaminated water sources, and possibly vaccination. **Please note:** Cattle infected with *Salmonella* can shed these bacteria in their milk. This poses a significant health threat to people that drink unpasteurized milk originating from infected cattle.

Bovine Viral Diarrhea (BVD): Bovine viral diarrhea is a fairly common viral disease of cattle that has many potential negative effects. This disease can present in many ways and potentially affects the GI tract, immune system, respiratory system, and/or reproductive tract. Acute herd outbreaks occur most commonly in unvaccinated or improperly vaccinated herds. Affected animals usually have fevers, nasal discharge, oral ulcers, decreased feed intake and milk production, and diarrhea that may contain undigested blood. Death may also result, depending on the BVD virus strain involved and the level of preexisting immunity in the exposed cattle. As with salmonellosis, BVD outbreaks should receive prompt veterinary attention. Treatment should focus on supportive care and prevention of secondary bacterial infections. Prevention includes a thorough vaccination program, proper biosecurity measures, and testing for persistently infected (PI) animals when needed. Consult your veterinarian for specifics on treatment, vaccination, biosecurity, and testing.

Trauma from rectal palpation: Blood may occasionally be seen in a few cows after a reproductive visit from the herd veterinarian. These cows and their manure should otherwise be normal and the blood should disappear within a day after the cows are palpated.

This is not an exhaustive list of the reasons why blood appears in manure. Other anatomical problems are possible causes, as are diseases such as Jejunal Hemorrhage Syndrome, an emerging condition in dairy cattle associated with *Clostridium perfringens* Type A. Certain toxins of both plant and chemical origin can also cause undigested blood to appear in the manure. Use this information as a guide to help identify possible causes and make management decisions in the event that you observe blood in your cows' manure. If a serious condition is suspected, call your veterinarian immediately.

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