

38TH ANNUAL CONVENTION

PROCEEDINGS

American Association of Bovine Practitioners



Salt Lake City, Utah
September 24-26, 2005

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of the
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AMERICAN ASSOCIATION OF BOVINE PRACTITIONERS

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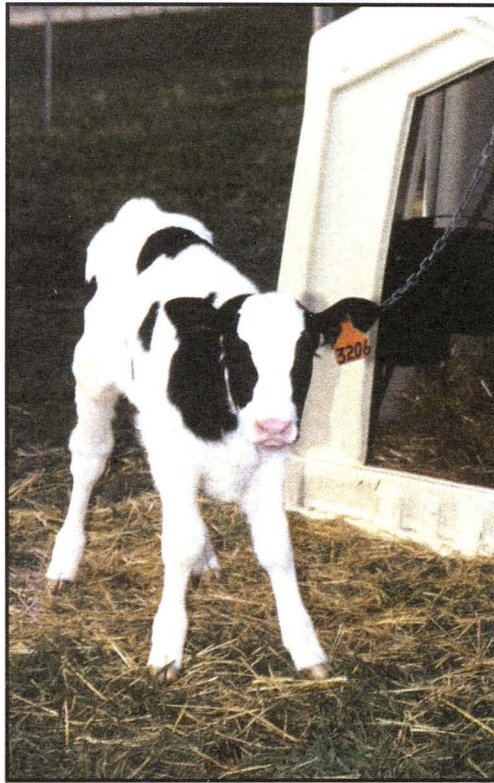


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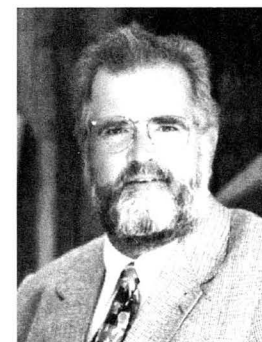
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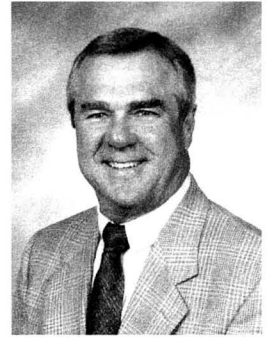
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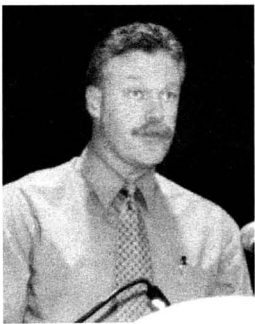
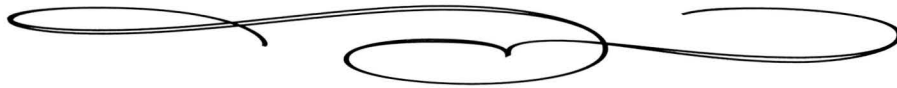
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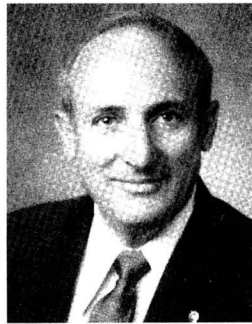
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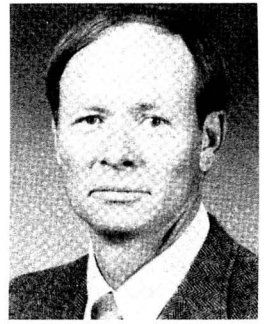
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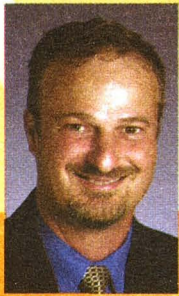
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Costly, fast and fatal: *Clostridium perfringens* Type A



By Jim Rhoades, DVM
Director of Veterinary Services
Farm Animal Business
Novartis Animal Health US, Inc.

If *Clostridium perfringens* Type A isn't on your radar yet, it should be. While not yet widely recognized, *C. perfringens* Type A is an emerging economic threat for dairy producers, because of its association with serious and often deadly gastrointestinal diseases in both cows and calves.

Research has indicated that *C. perfringens* Type A is associated with hemorrhagic bowel syndrome (HBS) in mature cows.¹ HBS strikes healthy animals without warning, and has a fatality rate of 85 percent or higher. It generally affects larger, more productive dairy herds in the western United States. But every herd is at risk.²

In dairy and beef calves, there's research linking *C. perfringens* Type A with abomasal ulcers, abomasal hemorrhage and abdominal tympany, all of which are frequently fatal. Yet standard seven-way clostridial vaccines don't protect against *C. perfringens* Type A, nor do they offer cross-protection. Even worse, the diseases associated with *C. perfringens* Type A are just about impossible to treat.

Clostridium Perfringens Type A Toxoid

Because treatment measures are expensive – and mostly unsuccessful – prevention and management strategies are the best line of defense. That's why you can't afford not to consider the new **Clostridium Perfringens Type A Toxoid** from Novartis Animal Health.

The first-ever conditionally licensed *C. perfringens* Type A vaccine for cattle, this product is labeled for use in healthy cattle as an aid in the control of disease syndromes caused by the alpha toxin of *C. perfringens*.

Clostridium Perfringens Type A Toxoid far surpasses USDA requirements, producing double the level of titers required for a conditional license. In addition, field studies involving 867 dairy and beef cattle – both open and pregnant, and of various ages and breeds – demonstrated product safety in animals as young as one month of age.

Another benefit: **Clostridium Perfringens Type A Toxoid** comes from Novartis Animal Health, a company with years of experience in developing custom Type A products. At Novartis, we have a well-deserved reputation for providing potent toxoids, so you can be confident

in the product. When your clients are battling a killer like *C. perfringens* Type A, you need confidence in the product you recommend.

HBS on the rise

Also known as jejunal hemorrhage syndrome or bloody gut, HBS is more prevalent in dairy cows, especially in early lactation, but it also has been reported in beef cattle.³ While no single cause has been identified for HBS, *C. perfringens* is believed to be a contributor as it is commonly isolated from the gastrointestinal tracts of afflicted animals. In addition to *C. perfringens* Type A, mold has been implicated, specifically *Aspergillus fumigatus* found in livestock feeds.

HBS begins with a sudden and sometimes massive hemorrhage into the small intestine, resulting in blood clots that obstruct the intestine. Although affected cows are often found dead or dying with no warning signs, clinical symptoms of HBS include: sudden and complete anorexia; rapid pulse and respiratory rate; pale mucous membranes; severe depression; dark, tar-like feces – often containing clots of digested blood; abdominal distention – especially the lower right; normal or below-normal rectal temperature; and scattered, low pitched “pings” in the lower right abdomen.

HBS is a particularly disturbing disease because it often strikes healthy animals without warning, and about 85 percent of infected animals die within 24 to 36 hours after the onset of symptoms. Treatments are usually unsuccessful, so emphasis should be placed on preventative measures, such as vaccinating the pregnant cow to provide her with active immunity. By vaccinating during the dry period, you also may provide the offspring with passive immunity through colostrum.⁴ Another key to prevention is evaluating and addressing nutritional factors that may predispose cattle to HBS.

With something this fast and this deadly, you'd think that everyone would be paying close attention. Yet a 2002 NAHMS producer survey showed that only 1 percent felt knowledgeable about the disease, and more than 87 percent had never heard of it. This, despite the fact that the number of operations reporting their initial case of HBS increased dramatically from 1996 to 2002, according to NAHMS.

Clearly, we can't afford to keep the problem of *C. perfringens* Type A off the radar. The good news is, we have a simple solution to add to the prevention kit: **Clostridium Perfringens Type A Toxoid** from Novartis.



Novartis
Animal Health

has produced an audio CD with expert veterinarians discussing the diseases associated with *C. perfringens* Type A, as well as management strategies for minimizing its impact.

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American Association of Bovine Practitioners

Prudent Drug Usage Guidelines

The production of safe and wholesome animal products for human consumption is a primary goal of members of the AABP. In reaching that goal, the AABP is committed to the practice of preventive immune system management through the use of vaccines, parasiticides, stress reduction and proper nutritional management. The AABP recognizes that proper and timely management practices can reduce the incidence of disease and therefore reduce the need for antimicrobials; however, antimicrobials remain a necessary tool to manage infectious disease in beef and dairy herds. In order to reduce animal pain and suffering, to protect the economic livelihood of beef and dairy producers, to ensure the continued production of foods of animal origin, and to minimize the shedding of zoonotic bacteria into the environment and potentially the food chain, prudent use of antimicrobials is encouraged. Following are general guidelines for the prudent therapeutic use of antimicrobials in beef and dairy cattle.

1. The veterinarian's primary responsibility to the client is to help design management, immunization, housing and nutritional programs that will reduce the incidence of disease and the need for antimicrobials.
2. Antimicrobials should be used only within the confines of a valid veterinarian-client-patient relationship; this includes both dispensing and issuance of prescriptions.
3. Veterinarians should properly select and use antimicrobial drugs.
 - a. Veterinarians should participate in continuing education programs that include therapeutics and emerging and/or development of antimicrobial resistance.
 - b. The veterinarian should have strong clinical evidence of the identity of the pathogen causing the disease, based upon clinical signs, history, necropsy examination, laboratory data and past experience.
 - c. The antimicrobial selected should be appropriate for the target organism and should be administered at a dosage and route that are likely to achieve effective levels in the target organ.
 - d. Product choices and regimens should be based on available laboratory and package insert information, additional data in the literature, and consideration of the pharmacokinetics and pharmacodynamics of the drug.
 - e. Antimicrobials should be used with specific clinical outcome(s) in mind, such as fever reduction, return of mastitic milk to normal, or to reduce shedding, contagion and recurrence of disease.
 - f. Periodically monitor herd pathogen susceptibility and therapeutic response, especially for routine therapy such as dry cow intramammary antibiotics, to detect changes in microbial susceptibility and to evaluate antimicrobial selections.
 - g. Use products that have the narrowest spectrum of activity and known efficacy *in vivo* against the pathogen causing the disease problem.**
 - h. Antimicrobials should be used at a dosage appropriate for the condition treated for as short a period of time as reasonable, i.e., therapy should be discontinued when it is apparent that the immune system can manage the disease, reduce pathogen shedding and minimize recurrence of clinical disease or development of the carrier state.
 - i. Antimicrobials of lesser importance in human medicine should be used in preference to newer generation drugs that may be in the same class as drugs currently used in humans if this can be achieved while protecting the health and safety of the animals.
 - j. Antimicrobials labeled for use for treating the condition diagnosed should be used whenever possible. The label, dose, route, frequency and duration should be followed whenever possible.
 - k. Antimicrobials should be used extra-label only within the provisions contained within AMDUCA regulations.
 - l. Compounding of antimicrobial formulations should be avoided.
 - m. When appropriate, local therapy is preferred over systemic therapy.
 - n. Treatment of chronic cases or those with a poor chance of recovery should be avoided. Chronic cases should be removed or isolated from the remainder of the herd.
 - o. Combination antimicrobial therapy should be discouraged unless there is information to show an increase in efficacy or suppression of resistance development for the target organism.
 - p. Prophylactic or metaphylactic use of antimicrobials should be based on a group, source or production unit evaluation rather than being utilized as standard practice.
 - q. Drug integrity should be protected through proper handling, storage and observation of the expiration date.
4. Veterinarians should endeavor to ensure proper on-farm drug use.
 - a. Prescription or dispensed drug quantities should be appropriate to the production-unit size and expected need so that stockpiling of antimicrobials on the farm is avoided.
 - b. The veterinarian should train farm personnel who use antimicrobials on indications, dosages, withdrawal times, route of administration, injection site precautions, storage, handling, record keeping and accurate diagnosis of common diseases. The veterinarian should ensure that labels are accurate to instruct farm personnel on the correct use of antimicrobials.
 - c. Veterinarians are encouraged to provide written guidelines to clients whenever possible to describe conditions and instructions for antimicrobial use on the farm or unit.