



UNIVERSITY OF
DELAWARE

Cooperative Extension
COLLEGE OF AGRICULTURE &
NATURAL RESOURCES

Necrotic Enteritis Prevention & Control

What is Necrotic Enteritis

Necrotic enteritis is commonly seen in 2-to 5-week old broiler chickens raised on new and used litter. When symptoms such as severe depression, decreased appetite, dark colored diarrhea, closed eyes or ruffled feathers appear they are often short-lived because birds die rapidly. Dead birds appear dehydrated and seem to rot very quickly from the inside out.

Necrotic enteritis is caused by toxins produced by *Clostridium perfringens*. *Clostridium* spores are commonly found in water, soil, feed, manure and other environmental sources. These spores that are highly resistant to drying, heat, acid and other harsh conditions. *Clostridium perfringens* are also commonly found in the intestinal tract of healthy broilers, they do not cause disease. Under normal conditions the “good bacteria” in the intestinal tract keep the *Clostridium perfringens* population small in number. However, when abrupt changes in the intestinal tract(feed interruption, change in feed ingredients, other intestinal diseases, and environmental stress), *Clostridium perfringens* numbers increase, toxins are produced and the disease appears. Antibiotics such as Bacitracin, Penicillin or Lincomycin can be used to treat the necrotic enteritis, but are not options in certain Antibiotic-Free Programs. Ionophores which are anticoccidials with antibiotic properties are not allowed in NAE(No Antibiotics Ever) programs. Thus, efforts should be on preventing necrotic enteritis Antibiotic-Free Programs. It is important to address all the issues possible, including: keeping bird stress to a minimum, maintaining feed storage and delivery systems, vermin control and coccidiosis control. Any factor that causes stress in the bird can alter the intestinal environment, allowing *Clostridium perfringens* to grow and produce toxin. While stress can come from innumerable sources, the proper set-up and management of poultry house environment is the most obvious method of controlling stress. <http://www.thepoultrysite.com/articles/846/necrotic-enteritis/>



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What you can do as a grower:

In between flocks: follow best litter management practices.

- This may include windrowing as this has shown success in reducing the reoccurrence of necrotic enteritis (most likely due to the reduction in clostridium bacteria and coccidian present in the house).
- Crusting out the house or reconditioning the litter and ventilating.
Windrowing will change the level of challenge in the house while the other suggested methods will help remove moisture from the house.
- Dump feed pans especially on flood window feeders. Most windows will not open if there is residual feed left over from last flock. It also insures you are on the proper feed type for chicks.

During the flock: Minimize stress and follow good animal husbandry practices.

- Brooding chicks make sure feed is readily available and not restricted. Supplemental feed should be fed through movement to second chambers. Birds running out of feed and eating litter with increase chances of getting enteritis.
- Make sure water is clean, properly sanitized and readily available for birds.
- Manage ventilation to keep humidity under 70%. Manage drinker height and pressure to prevent cake build up under water lines. Clostridium and coccidiosis thrive in environments with higher levels of moisture.
- Temperatures should be managed to limit fluctuations and to keep birds comfortable. Do not chill birds. Preheat the next chamber 24 to 48 hours prior to moving down. Do not overheat birds- birds should not get so hot that they pant. Tunnel ventilation can be done on smaller birds cautiously.
- Migrate at recommended times. Holding birds too long in the brood chamber can overload the litter with coccidiosis and will cause feed restriction.
- As feed type changes from starter to grower, be proactive to soothe the gut through this time. Probiotics may help with this. There has been success with copper sulfate and citric acid, and apple cider vinegar. Follow your company guidelines. Do not run anything not approved by the integrator.

