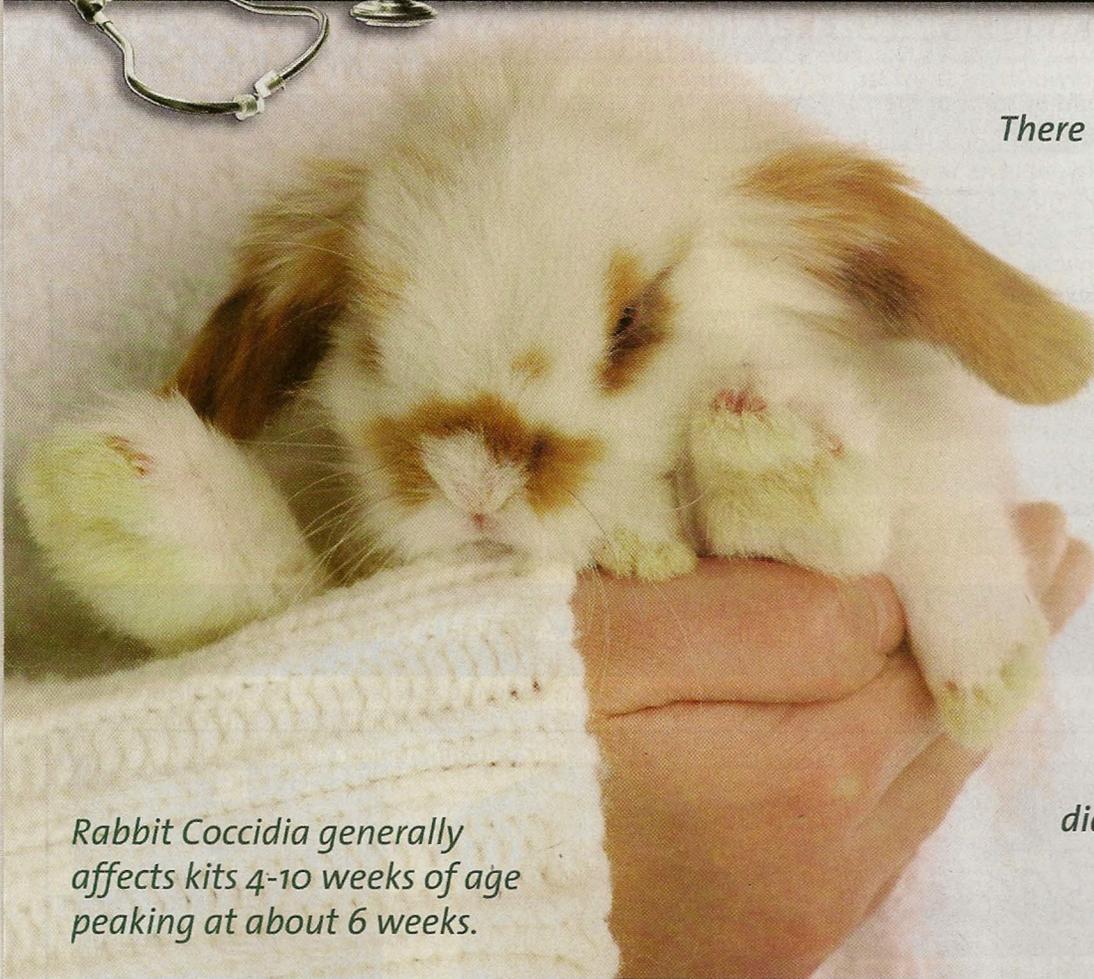


With Dr. Wendy Feaga, DVM

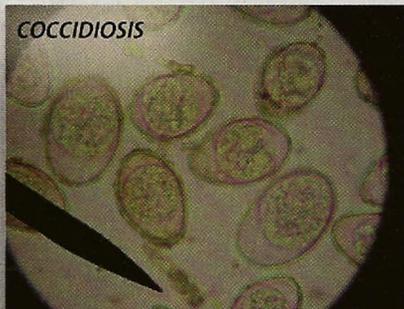


Rabbit Coccidia generally affects kits 4-10 weeks of age peaking at about 6 weeks.

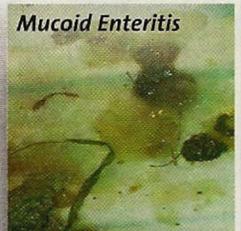
There are many causes of diarrhea in rabbits but in summary, no matter the cause, all respond to decreasing the amount of pellets and feeding more hay.

To prevent diarrhea, practice good sanitation, institute proper ventilation and avoid over-crowding. If you follow these rules, you will have little trouble with diarrhea. Unfortunately, these rules are hard to follow.

COCCIDIOSIS is a protozoal disease which is very common and we assume all rabbits are infected. The goal is to keep the protozoal numbers to a low level, but not try to eradicate the disease. Disease occurs with wet, dirty conditions and over-crowding. Add the stress of weather changes and you have a perfect storm. The rabbits affected are kits 4 to 10 weeks of age, peaking about 6 weeks of age. Adult rabbits are usually resistant. In an outbreak, the diagnosis is made by a stool sample, and the eggs look like what small animal veterinarians would see in dogs or cats. Treatment is usually done with medications in the water such as Sulmet® or Corid®, or individually with Albon®. There is no treatment for the liver form. To prevent, be sure to clean manure from the cage floor every 3 days with a wire brush, feed hay, and use a closed water system such as water bottles or an automatic water system.



MUCOID ENTERITIS has a distinctive mucoid diarrhea, wasting, and a high death rate. One of the characteristic signs is the feet in the water bowl. In an outbreak, 50-90% of the litters are affected with nearly a 100% mortality. Rabbits affected are 4 to 10 weeks of age, peaking in the 4-6 week old range. The diarrhea has mucus in it which distinguishes it from the usual diarrhea.



This mucus can be found on the anus of the kit as well as in the drip pan under the cage. I have noticed a strange odor as well, and this odor may be noticed before diarrhea is seen. These rabbits grind their teeth and sit with their front feet in the water bowl. In the past, the adults have been resistant, but there is a new variant of this disease which affects nursing does also with high mortality.

Epizootic Rabbit Enteropathy was documented in France in 1996, and is probably the deadly diarrhea we

have been seeing here in the United States in the past few years.

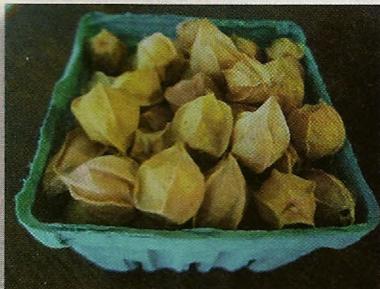
Muroid enteritis is clearly associated with feeding high energy feeds, such as "milk pellets" or corn and oats, and is often associated with a new batch of feed – not that the feed directly is the culprit, but because the feed is fresh, the rabbits have larger appetites so they over eat.

Although the cause officially is unknown, one paper found a high association with *Clostridium perfringens* type C&D toxin. (Infectious agents associated with epizootic rabbit enteropathy: Isolation and attempts to reproduce the syndrome, D. Marlier et al, *The Veterinary Journal* 172 (2006) 493–500.) This is the same bacteria is involved in over-eating disease on sheep and goats. This disease is due to an overgrowth of *C. perfringens* as a result of high energy feeds, i.e. grain, and the toxin released by this organism causes rapid death.

Various treatments can be tried, but they usually are not effective.

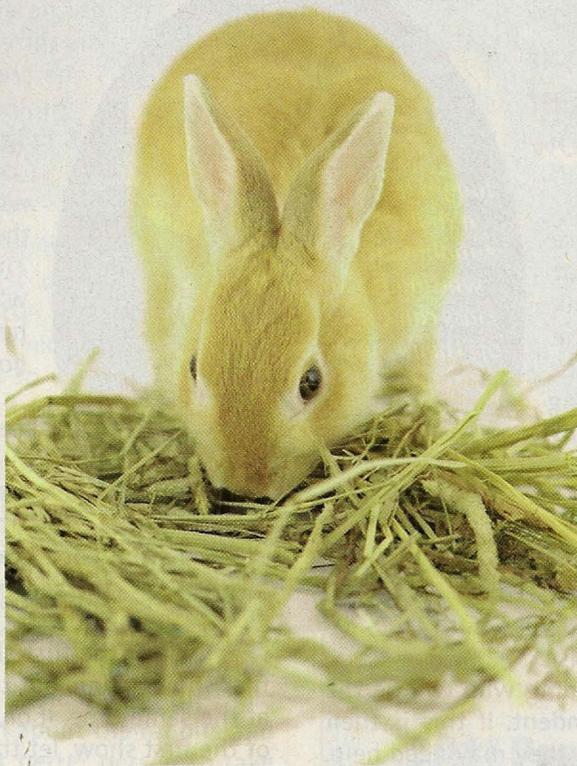
When an outbreak suspected, stop feeding pellets and any grain, and feed only hay for 24 to 48 hours. Then feed only small quantities of pellets, such as what can be eaten in an hour. When the droppings become normal and their appetite returns, you can slowly increase the pellets. Next, isolate affected babies – put them in a sick pen, feed them just hay, and provide water in a bowl so they can drink more easily. I have found when does loose most or all of their litters they are usually successful with the next litter.

When a nursing doe contracts this disease, she will stop eating and have the muroid diarrhea as well as a mucopurulent vaginal discharge. This may initially be blood tinged. I have had 100% mortality with the nursing does, but if one survived, I would not expect her to be fertile and would fear she might infect the buck. If the litter is at least 3



Viral Hemorrhagic Disease may mimic ground cherry poisoning.

When an outbreak of muroid enteritis is suspected, stop feeding pellets and feed only hay for 24-48 hrs.



weeks old, they may survive as long as they stay in their original cage (move the doe to a sick pen). Feed hay to the orphan litter and be sure they have access to water. Do not try to foster the litter to another doe.

Prevention is the best to avoid muroid enteritis entirely. This can be summarized by the following:

1. Do not feed grain or high energy (i.e. "milk") pellets to rabbits until they are at least 3 months of age.
2. Do feed hay and do this twice a day in hay racks off the floor so the babies do not soil the hay
3. Sanitation, sanitation, sanitation.

The key to feeding young rabbits is they should not have feed in front of them 24/7. Pellets are primarily fed at night and should be gone or nearly gone by the next morning. If the feeders are empty in the morning I will add a small amount of pellets, but expect the feeders to be empty by evening. I feed my litters hay twice a day and keep the hay clean by tucking it into a hay rack made from a spring which runs vertically on the inside of the door to the cage. The

youngsters have an easier time pulling the hay out from behind the spring rather than trying to pull it through the wires of a hay rack, and they are not able to sit on it and soil it which they will do if the hay is put on the cage floor.

VIRAL HEMORRHAGIC DISEASE: This is a rapidly fatal hemorrhagic disease which may have a bloody diarrhea. It also results in high death losses primarily in young rabbits. It will have a respiratory component with a frothy bloody nasal discharge. The official diagnosis of this disease is by laboratory confirmation through your veterinarian. This disease may mimic ground cherry poisoning. Ground cherry is found in the hay and there is a picture to the right. The green cherries should be picked out of the hay, and then the rest of the hay is safe to feed.

Dr. Wenda Feaga received her DVM in 1980 from Ohio State University in the same class as Dr. Chris Hayhow, and owns a small animal veterinary practice, "Twin Oaks Animal Hospital", established in 1987. She obtained her ARBA judge's license in 1996, and has been a 4-H club leader since 1973.

