



## Livestock Q&A

### Answers to your livestock questions, straight from the expert.

#### Providing Immunity

**Q:** One of our cows died shortly after calving, and we were wondering how old a calf should be before it can be given vaccinations. Our neighbor told us that the calf is too young to be vaccinated, but we're afraid it won't do very well if we don't vaccinate it.

**A:** Before you can deal with the calf, it's important to know the cause of the cow's death. A necropsy, if the cause of death is unknown, is recommended for your herd-health management program.

There has been a long-standing assumption that very young animals have a poorly developed immune system and will not respond to vaccination. Current research has shown the calf's immune system isn't fully functional by 170 days of development during pregnancy. Normally, the calf receives protective immunity from its mother's milk, particularly the colostrum received during the first 24 hours after birth. This immunity protects the calf during the first few months of life. Approximately one month before your cows give birth, vaccinate them for diseases that will affect the calf, including infectious bovine rhinotracheitis, parainfluenza virus, bovine viral diarrhea virus, bovine respiratory syncytial virus, rotavirus, coronavirus, Clostridial diseases and E. coli diarrhea. This ensures a high-quality colostrum for the calf.

If this cow wasn't vaccinated or the cow died before the calf could drink colostrum, consider vaccinating the calf. Many people use vaccines administered in the nasal cavity, which seems to elicit a stronger immune response. The response to vaccination is also dependent upon stress levels. If the calf is particularly stressed, it might not develop adequate protective immunity. Provide adequate shelter in a well-ventilated area, and don't expose it to older calves that may be shedding pathogens that will be detrimental to the calf.

Some people vaccinate calves at 3 months of age, while the calves are still nursing. At this point, most cows have been bred again and are pregnant. Pay attention to whether the vaccine is killed or modified-live. (Check the label.) Bovine viral diarrhea virus can cause severe problems for young calves. It's important to protect them from this disease, but when calves are given a modified-live version of this vaccine, the pregnant cow can be potentially exposed to virus shed by the calf, resulting in abortion. A killed vaccine for this disease is recommended at 3 months of age. After the calf is weaned at about 6 months, it should be boosted with a modified-live version of the vaccine. Of course, if your calf isn't nursing a cow and isn't around other pregnant cows, you could use the modified-live vaccine at any age.

Ultimately, you should consult with your veterinarian about the types and timing of vaccines for your herd.

#### Lame Pig

**Q:** One of our best sows was having problems getting up and walking around. She finally got to the point where she couldn't get up at all. We keep the pigs on pasture, so they get plenty of exercise. Our veterinarian gave her something for pain, and eventually she was able to get up again, but she still doesn't move around very well. Is this a common problem in pigs? What causes this?

**A:** Lameness is one of the most common problems that reduces the longevity of a sow. Even if she's able to walk, her ability to obtain food and reproduce is severely compromised. Lameness is more common in confinement production systems where the animals are kept on concrete surfaces and don't get much exercise. In your situation, there might be several other problems involved.

Trauma is the most common form of lameness in sows and growing gilts; rooting in pastures and tangling in fences or structures are possibilities.

Another source of leg weakness and lameness is osteochondrosis, which is associated with bone and joint soundness. Modern breeds of pigs are designed to grow very quickly. They may gain a considerable amount of weight before their skeleton is completely mature. This puts a lot of stress on their joints and can result in lameness issues as they get older. The stress on bones' growth plates and cartilage formation causes irreversible damage. If this is the cause, evaluate your nutritional program to slow the growth rate of the females that you intend to keep for breeding.

Another cause of lameness is infectious (septic) arthritis, which might be caused by a number of pathogens. Generalized infections with organisms such as Erysipelas and Streptococcus can result in chronic problems in the leg joints and spinal column. There are vaccines available for these diseases; consider them if your herd has been diagnosed. Wounds, infected hooves, skin abrasions and uterine infections can all lead to septic arthritis. Routine inspection of the hooves is



important, as well as preventing situations where fighting can occur. Aggressive animals should be either removed from the herd or isolated from less aggressive animals. Introduction of new animals into a group of hogs can pose particular problems. The social order is very strong in pigs and it is not unusual for them to pick on newcomers to the group.

Older boars that are too large for young gilts could cause injury to the hind legs and lower back during breeding. Care should be taken when selecting a boar for young females.

Genetic conformation is also an important consideration for preventing lameness. Some animals will exhibit overgrowth of the heels, have one toe longer than the other or have dew claws that overgrow. Poor conformation puts stress on the joints. These animals should be taken out of the breeding herd, as their offspring can have these problems, too.

Calcium and phosphorous imbalances may cause problems with osteoporosis and subsequent lameness. Current research indicates that organic sources of zinc, copper and manganese in the diet can contribute to sound feet and should be considered in your nutrition program.

Other structural soundness issues in pasture-pork production are rickets, due to mineral imbalances, and fractures, where paddocks have uneven surfaces or wallows for summer cooling are improperly built.