

PREVENTING ABORTIONS

One of the most discouraging problems in cow-calf operations is abortions. The cow or heifer got bred, conceived and is carrying the calf and BANG! You've got nothing! At least if the calf was born and developed scours or pneumonia you would have a chance to treat and save the calf. But with an abortion, you've lost a year's production with that cow.

What causes abortions? For the most part abortions are caused by infectious agents—viruses, bacteria, and protozoa. In California, selenium deficiency is also a common cause of late term abortions. The common bugs are Bovine Virus Diarrhea virus (BVD), Infectious Bovine Rhinotracheitis virus (IBR, rednose), Foothill Abortion, Leptospirosis, and Neospora. One bug we can't forget is *Brucella abortus* (Brucellosis).

How many abortions are too many? It is common in nature to have 1% abortions in a herd of cattle and these commonly occur just before the anticipated calving season or early in the calving season. When the number exceeds this level it is time to act.

What if I have too many abortions? The first abortion that occurs is usually not a cause for concern; but if a second one occurs don't hesitate to call your veterinarian. The California state diagnostic laboratory (California Animal Health & Food Safety [CAHFS] laboratory system) does an excellent job of finding out the cause of abortions at a very reasonable price. Your veterinarian will submit samples (often the entire fetus) to the lab. If there is a delay in getting the fetus to the lab—refrigerate it, do not freeze it. When you get a diagnosis back you and your veterinarian will know what steps to take or what to fine-tune in your current prevention program.

What should I be doing to prevent abortions? There are a number of things that must be done to prevent each type of abortion and these are briefly listed below. The main thing to do is to consult with your veterinarian well ahead of time to be sure you are doing all those things that are critical to your operation.

Viral Abortions—BVD and IBR

These are viruses that can be spread on equipment and clothing, as well as by contact with infected animals. Be sure to vaccinate all replacement heifers with a modified live virus vaccine (usually a 4-way IBR, PI3, BVD, BRSV vaccine) at some point prior to breeding. Afterwards, give yearly boosters with the killed virus vaccines (any time before the third trimester of pregnancy [before they are 6 months pregnant]) or use the modified live vaccines when they are open, just

before turning in the bulls. **Most MLV vaccines are not approved for use in pregnant cattle. If you have any questions regarding virus vaccines, contact your veterinarian.**

Leptospirosis

This is a group of bacteria transmitted via the urine of infected animals contaminating feed and water. It can be spread by many species of animals, such as dogs, rats, and wildlife. Infection usually causes late term abortions (6-9 months). Most veterinarians recommend annual or twice-annual vaccinations with multivalent vaccines, such as 5-way (*L. pomona*, *L. hardjo*, *L. grippityphosa*, *L. canicola*, *L. icterohemorrhagia*) or GHP (3-way) can usually prevent abortions. It is best to vaccinate when turning the bulls in or before the cows are 5 months pregnant.

Brucellosis

This disease is almost eradicated from cattle in the U.S. **Almost, but not quite!** Veterinarians and your state animal health officials highly recommend you continue to vaccinate all your replacement heifers against Brucellosis (Bang's vaccination) at or near weaning.

Foothill Abortion

This is a bacterial disease that is carried by the Parajuello tick and causes late term abortions. This disease costs California cattle producers an estimated 13-18 million dollars annually. There has been great progress made by UC researchers in the past few years; however, there is no vaccine currently available. When susceptible cattle are bitten by the tick during the first to seventh month of pregnancy they can abort in 90 to 120 days. The best prevention is to expose cows and heifers to the tick inhabited areas when they are open or greater than 7 months pregnant and to keep them away from these areas when they are bred from 1-7 months. Contact your veterinarian or livestock advisor if you are unsure where the ticks might be on your ranch. Also, if you anticipate bringing pregnant cattle (1-7 months pregnant) into a high risk Foothill Abortion area contact your veterinarian ahead of time.

Neospora Abortion

A protozoon carried by dogs and transmitted to cows through the feces, then transferred on to fetus through the placenta. Also, the agent can be transmitted from the cow to the calf. Usually causes abortions at 4-6 months of pregnancy. This is a very common cause of abortion in dairy cattle, much less common in beef cattle. Restrict access of dogs (potential carriers) to stored feed and feeding areas. If the disease is diagnosed in an aborted calf and its dam is found to be seropositive for the disease, considering culling the cow and any female

offspring. Also, testing of the cows in the herd can be used in a test and cull program to help eliminate the agent from a closed herd. Consult with your veterinarian about the various options if this disease is a problem in your herd.

Selenium Deficiency

This trace mineral deficiency causes white muscle disease, weight loss, diarrhea, infertility, retained placenta and decreased immune function. When selenium deficiency causes abortions it is usually in the last trimester. The fetus develops white muscle disease before it is born and dies—thus the abortion. Prevention is best accomplished by use of the new selenium boluses that last for one year or feeding of a loose salt mineral mix containing 120 parts per million at one ounce per head per day. Consult your veterinarian if you are unsure if your herd is selenium deficient. He or she can do blood tests to determine the selenium status of your herd.

John Maas, DVM, MS
Diplomate, ACVN & ACVIM
Extension Veterinarian
School of Veterinary Medicine
University of California, Davis