

Cystic Ovarian Disease in Cows

by Dr. David Faber

Cystic ovarian disease is a cause of temporary infertility in cattle. Cystic ovaries are relatively common in cattle and have a higher incidence in embryo transfer (ET) donor cows. Fortunately, prompt professional treatment is effective in restoring normal reproductivity.

Cystic ovaries result from the failure of a follicle to mature and rupture (ovulate) properly. When a cow comes into heat, one of her ovaries produces a small (1-2 cm) fluid-filled structure that contains the ova. This follicle will grow, mature, and rupture to release the ova. This occurs in response to a hormone called LH (Leutenizing hormone) approximately 24 hours following the onset of standing heat. Failure of the follicle to rupture and form a corpus luteum (CL) will result in an ovarian cyst.

The most well-known symptom of Cystic ovarian disease is nymphomania. This results in frequent estrus activity. A more common condition is that cows with cystic ovaries fail to exhibit estrus activity. This period of anestrus may lead you to believe that the cow is pregnant.

Diagnosis of cystic ovaries is based on the results of rectal palpation. This can be accompanied by assay of blood progesterone levels. It is important to understand that cows with cystic ovarian disease do not always have large fluid filled cysts. Even veterinarians experienced in rectal palpation will have some difficulty with the diagnosis.

Some cows will have cystic corpus luteum which are relatively normal. Some truly cystic cows will have cysts which are difficult to palpate. I recommend a series of palpations to monitor changes in ovaries, coupled with appropriate therapy.

Cystic ovarian disease is not an uncommon problem. In dairy cattle, where excellent post partum management includes regularly scheduled reproductive herd health visits, research has shown that 5 to 15 percent of cows develop cysts following calving. Cysts are more common in mature cows and tend to be more common in fall and winter.

Heredity may play an important role in determining the incidence of cysts in certain cow families. Some evidence of increased cystic ovarian disease occurs with estrogen sources in cow rations.

Repeated superovulations on cows with cystic tendencies will accentuate this condition. Some donor cows will routinely exhibit cysts following superovulation and collection. These donors need professional follow-up to ensure they return to normal heat cycles. With prompt diagnosis and proper treatment these cows can continue to produce embryos satisfactorily.

I usually prescribe a rather conservative approach and recommend a longer interval between collections. I also recommend these cows be pulled out of an embryo program and bred for a natural calf. I realize this is not always feasible with

valuable donors. I strongly recommend a natural calf if a particular cow has been both cystic and nonproductive in embryo transfer.

Treatment of cystic ovarian disease usually involves use of GNRH or HCG injections, or progesterone implants. While some veterinarians recommend manual rupture of cysts, I strongly discourage this in valuable donor cows, as the only real value of a donor cow is within her ovaries. I feel that over zealous palpation and rupture can lead to hemorrhage and adhesions of important structures surrounding the ovary. Adhesion of ovaries, oviducts or imbria can lead to problems in transporting the embryos to the uterine body.

In summary, cystic ovaries occur with relative frequency in cattle. This incidence increases with repeated superovulation attempts. Cystic cows need to be recognized early. Proper diagnosis and treatment must be administered. Economic decisions must be reached in deciding whether to continue with the donor in embryo transfer or to be bred for a natural calf. Cows with proper treatment can be restored to normal productivity.

Editors note: Dr. David Faber has a Doctor of Veterinary Medicine degree from University of Illinois. He founded Trans-Ova Genetics at Sioux Center, Iowa.

