Test those freemartin heifers

FREEMARTIN – NOT: Veterinarian Tony Beane has a beat-the-odds success formula for determining whether a freemartin will be a breeder or not.

Key Points

■ One of every 13 freemartins may, in fact, be a normal breeder.
■ An exam of potential high-value calves improves the odds.
■ A blood test can confirm if a 2-week-old is a normal breeder.

By LINDA GREENWOOD

Tony Beane just shakes his head in dismay over the delivery of twins. As a large-herd veterinarian, a professor of Veterinary Technology at the State University of New York at Canton and owner of a small Holstein herd, he knows there’s a 43% chance that it’ll be a bull and a heifer calf.

Heifers in twin or triplet combinations are known as freemartins. They’ll be sterile 92% of the time, when their placentas touch and fuse together, he explains. The H-Y antigen, the primary male sex-determining factor, comes into play early in the developing male. If there’s blood transfer between placentas, the H-Y antigen also starts affecting the female, causing defects in her reproductive tract.

One of Beane’s own best cows calved with twins. “She had a red-and-white bull calf, and a black-and-white heifer. I really wanted a heifer from her,” he notes. “After examining the calf, I decided she was worth testing, and I sent off a blood sample. She wasn’t a sterile freemartin, and went on to calve at 22 months of age.”

The challenge is finding that one calf in 13 that’s normal. “It’s possible to overcome the low odds,” contends Beane. “I’ve had three freemartins blood tested, with two coming back normal.”

Test for a ‘keeper’?

Sometimes, those twin calves are offspring of an excellent cow or at least a favorite. And that’s where the University of Minnesota Veterinary Diagnostic Laboratory can help with freemartin blood testing. Samples are checked for Y (male) chromosomes, indicating a freemartin. Results are available within 10 days. Lab costs and shipping run about $55, but it may be a good investment if used on potentially high-value animals. What’s 92% of the lab’s freemartins, Beane contends on-farm observations can reduce those odds. Here’s his counsel:

■ Observe if the cow cleans with one set of placentas or two. If the placentas never fused, two separate placentas increase the chances that she’ll be a breeder.
■ A physical exam is now needed. Does the calf appear normal? Is its body in proportion to the legs, the neck? Occasionally, freemartins will look bullish with a stockier, beefy look. “If she doesn’t look quite right to you, chances are good she’s a freemartin,” says Beane.
■ Feel around the naval and scrotal area for an extra opening typical of a bull calf.
■ Move the tail over for a look at the clitoris. “Freemartins often have an enlarged clitoris, with long hairs at the tip of the vulva,” adds Beane. “The distance from the anus to vulva may be increased. The vulvas may be extremely small or nonexistent.”

■ If the calf passes your exam, a test-tube test is next. Using a 100-by-15-mm tube, the kind commonly used for drawing blood, insert the tube into the calf’s vagina to check the length. Most freemartins have abnormally short vaginas.

“Clean the area well,” says Beane. “Lubricate the test tube with lubricating jelly. If you’ve never test-tubed a calf, just remember that the vagina isn’t straight. It slants up at first. So slant the tube upward, as well.

“When you feel resistance, the tube now has to be slanted slightly downward. Never force the test tube. But it should go in the entire length.” If the tube goes in only 5 or 6 centimeters, chances are good she’s a freemartin.

Passing the test-tube test doesn’t always mean she’s a breeder. Some freemartins have a normal vagina, adds the veterinarian. “This test just eliminates freemartins with an abnormal vagina.”

Next: Your least-cost choice

If the calf passes these tests, one option would be to raise her for nine months and then have your veterinarian check her reproductive status. But the least-cost choice is to blood test for the Y chromosome. Contact the lab at 800-605-8787 for more information. Or visit the Web site: www.vdl.umn.edu/vdl/ourservices/guidelinefiles/moleculardiagnostics/home.html.

Greenwood is a dairy producer from Canton, N.Y. Of the four suspect freemartin heifers she recently tested, “two were XX [normal],” she reports.