

Things were rocking along pretty well at Buck Island Ranch. Conception rates on the commercial operation were running 78%-80% — respectable, considering the heavy doses of Brahman blood in the herd and southern Florida's notoriously low-quality forages. But then, boom. When manager Gene Lollis tallied up the open cows in the fall of 1996, conception rates were down to 59%.

That got his attention. Even though Buck Island is part of the MacArthur Agro-



Ecology Research Center, the Lake Placid operation still is expected to show a profit.

The drop in conception rates didn't help.

Lollis estimated the loss in potential revenue at \$120,000, or 2,000 head times 20% of expected revenues, based on a \$300 calf.

It turns out the culprit was trichomoniasis, or trich, a sexually transmitted disease spread by bulls.

Buck Island isn't alone.

Six years ago, Arcadia, Fla., veterinarian Mark Davis tested 3,000 bulls for trich in southern Florida. "Sixteen percent of those bulls were infected," he reports.

"It is an insidious disease," he adds. "You don't see a sick bull, and you don't see a sick cow."

"Trich is a worldwide disease problem," adds Harvey Rubin, senior consultant for the Florida Veterinary Medical Association. "It is also one of the major disease problems facing the U.S. cattle industry."

But, since there are no visible signs of trich, it often gets no respect, Rubin says.

What you can see

What you do see is fewer calves on the ground, longer estrous cycles and an increase in late calvers. And here's the sneaky part: Unlike vibrio and lepto, which usually cause abortions in the last third of pregnancy, trich gets the embryos at 14-18 days. That's why the cows' estrous cycles stretch beyond the typical 21 days and why the cows that do calve may calve later than normal.

Every now and then, you will see a bit of pyometra in an open cow. When she loses that early fetus, it can cause a uterine infection.

To put it mildly, getting rid of trich can be a lesson in frustration.

Bulls carry the organism in their penis and sheath. Rubin says, if they are old enough to breed a cow, they are old enough to become infected. However, younger bulls are more resistant to the infection because

TRICH Is No Treat

With no visible symptoms, trichomoniasis easily can sneak into a herd and rob performance and profits.

Story & photo by *Becky Mills*



► Gene Lollis, ranch manager at MacArthur Agro-Ecology Research Center, estimated the loss in potential revenue due to trichomoniasis infection at \$120,000, or 2,000 head times 20% of expected revenues, based on a \$300 calf.

of the relative smoothness of the skin lining the sheath and covering the penis, he says.

In older bulls, the crypts in the genital tract make an ideal haven for the organism to reproduce, and once a bull contracts trich, he's usually stuck with it for life.

Rubin says, "An infected bull will infect 30% to 90% of the cows he breeds."

Cows can remain infected up to six months, but if they aren't rebred, they usually throw off the infection on their own. However, some cows with trich do conceive and carry a calf to term. Most of these cows end up as permanent trich carriers.

Eliminating trich

When Lollis began to suspect trich as the cause of Buck Island's lowered conception rates, he started by testing all 150 bulls on the ranch three times, two weeks apart.

"The test isn't 100% accurate," Lollis remarks. "It may not pick up all the positives the first time."

When they tested the Buck Island bulls, they found three bulls that tested positive in the first round. The next time they found five more, and two weeks later they found no positives. Since there is no effective treatment, Lollis culled the infected bulls.

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The test, which runs \$10-\$15/bull, is performed by running an infusion pipette up the bull's sheath and collecting smegma, the sebaceous matter that collects between the glans penis and the foreskin.

Some veterinarians are equipped to culture the organism in house, but others send it to a state diagnostic lab. Either way, it usually takes seven to 10 days to incubate the trich organism, so don't expect overnight results.

Along with culling the trich-positive bulls, Lollis modified his vaccination schedule. "We thought we were clear," he reports, "but we were vaccinating in the fall at preg-check time and not turning out the bulls until after the first of the year."

Now Lollis gets the cows up and gives the trich vaccination right before the bulls go in.

For optimum response, Davis recommends his clients administer Trichguard, by Fort Dodge, subcutaneously (sub-Q) two months before calving, then booster it one month before calving. After the first round, he recommends giving it annually.

"The vaccine gives the cow a higher level of antibodies. She clears the infection quicker. With the vaccine, she'll clear in three to five weeks. Without the vaccination, it usually takes 10 weeks," he explains.

Other vaccines that guard against trich infection include Reprotec® by Franklin and Trichontrol™ and Trichontrol VL5 by Pfizer Animal Health.

Davis also agrees with Lollis's practice of culling trich-positive bulls. In addition, he recommends, "Purchase bulls with a negative trich test, keep your fences in good repair, culture new and old bulls annually, and don't lease or borrow bulls."

He also says, "Don't buy older bulls. Cull open cows, cull older bulls if possible, ID (identify) late calvers, and if she has pyometra, get rid of her." He also says it pays to give bulls at least six months of sexual rest annually.

Artificial insemination (AI) is another safe bet. Although the trich organism (*Tritrichomonas foetus*) can be carried in semen, reputable AI studs routinely test their bulls.

Getting results

At Buck Island, Lollis says culling trich-positive bulls and changing their vaccination regime were the right steps. However, adding that extra trip through the chute for the cows isn't easy because they have baby calves.

"It takes six men three weeks to get up 3,000 head — that is \$12,000 to \$13,000," he estimates. "It cost me \$2 a head for the shots."

Still, the method appears to be more than cost-effective. The Buck Island 1997 conception rate was 92%, which Lollis says was misleading because almost half the herd was open. However, the conception rate in 1998 was 89%, and in 1999 it was 87.5%. In 2000, a bad drought year, the conception rate dropped to 81%, but Lollis attributes that to the lack of grass.

"In a low market, a 20% higher conception rate is \$120,000. In this market, it is \$200,000. That is a pretty good rate of return."

