

# What to Do About Mastitis and Uneven Udders

## *No Time to "Wait and See"*

BY NANCY NICKEL

Sometimes mastitis just happens. Even though the barn lot is kept dry and the bedding clean, the prewash and post milking spray used effectively, sometimes an individual will exhibit signs of mastitis. It is unfortunate that by the time noticeable signs present themselves, the udder has undergone permanent and damaging changes. In the few cases that we have dealt with at Nickel Farms near Clark, Missouri, we have observed that the doe which has had clinical mastitis never milks to her expected potential and often exhibits changes in the capacity of the effected side. Sometimes knots or lumps in the mammary tissue remain despite modern medicine and a herdsman's best efforts. This too has a direct effect on production from that half. In a show string, these does do not milk down well in addition to being judged at a disadvantage due to the texture or uneven capacity of the halves.

The difficulty of dealing with these individuals in a dairy situation becomes even more acute when considering that they may at any time become actively mastitic again, shedding high somatic cells which can contribute to the entire bulk tank being sold at a lesser price. It is difficult at best to tell if these herd members are likely to contribute to the spread of pathogens throughout the herd. They are possibly endangering not only the milk

check, but any future herd replacements as well. It has been established throughout the cattle dairy industry that herds who follow the practice of feeding raw milk containing bacteria from infected females experience as much as an 80% increase in mastitis among the first fresheners when they come into milk. Lateral transmission of bacterial pathogens on the hands of the milker or milking equipment is another concern as sub-clinical mastitis is as likely to become a source of infection to other animals as is an acute case.

Methods of detecting sub-clinical mastitis in dairy goats are not well defined or developed. Because goats secrete milk in a different manner than cows, the use of detection plans serving cattle dairies are not effective for use by goat herdsman. The strip cup, which shows clots of milk, will warn you of a problem, but by the time this abnormal milk is discovered, damage has already occurred in the mammary system.

Chemical solutions that are used to combine with a small sample of milk likewise will not provide a definitive reading when used with goat milk—until the udder is harboring enough bacteria to cause lasting damage.

Somatic cell counts will be high when the milk from active cases is examined at the DHIA lab. This has its drawbacks as well in that the milk test is usually performed on a sporadic and intermittent basis and at a monthly

interval. To cloud the diagnostic situation, it is important to note that there are many other causes for high somatic cell counts in dairy goats. To list a few, one might wish to consider if she has just come fresh, or is drying off and lessening in production. Some families of does will shed high somatic cell counts when they are in estrus or coming into estrus.

Being aware and alert to potential difficulties is the best preventative tool when dealing with mastitis. At each and every milking, our milkers are well advised to handle the udder, examine the flow and consistency of milk, and evaluate the texture after the flow of milk has stopped. We know that there are low selenium levels in feeds from our area, so we offer minerals to provide adequate balance. Zinc is another added component to our free choice mineral offering. Both zinc and selenium work to promote healthy skin and general well-being at the cellular level. Helping the does maintain optimum health is the most important factor. There are well known herds who booster their does with E. coli vaccines and vaccines against the staph bacteria that is most common to cattle dairies. When these organisms are likely to be potential troublemakers, this is a very inexpensive precaution.

Don Langly, an old friend and experienced goat keeper, once told me, "When you are dealing with possible mastitis you must act quickly. If you

are inclined to 'wait and see' then don't waste that time, 'dig the hole' while you are waiting."

We have kept this in mind whenever we have had a doe with a potential problem. Isolation of both the doe and her milk is the first step. Drawing a sterile sample of milk from the suspect side is next. This need not be sent to the lab for diagnostics immediately, but is kept in the refrigerator. Sometimes this proves to have been unneeded, but better safe than sorry. When the alarm of a hot udder, or decrease in volume of milk produced proves to be the precursor of mastitis, treatment with what might be the best-guess medication will not destroy accurate results of the growth of culture made from the milk you have saved initially.

We consider that this first case could very well be the first of a full-

blown mastitis epidemic and our sterile culture added to others in the near future could provide valuable data in assessing general herd health and in trouble shooting the underlying causes.

It is difficult to effectively introduce antibiotics into a mammary system. The udder is rather effectively walled off from most systemic drugs. To complicate the story, the udder is a perfect medium for the growth and culturing of bacteria. Most of our old favorite antibiotics are ineffective against the pathogens, in addition to the fact that they do not arrive in the udder in effective strength to do any good.

We have in the past been very successful using Naxcel and Erythromycin to save two does from mastitis. Both of these drugs are staples of our medicine cabinet at home and on the road. They are never administered without the consultation of our veterinarian and only under his guidance. (He prefers Naxcel to Exanel for this use, indicating that the antibiotic is the same, but the carriers are different. Naxcel is better able to penetrate the mammary system via the blood stream than Exanel.)

One success story involves a lovely LaMancha yearling who we were showing and had high hopes for. She was perfect in every way when we loaded her into the trailer and set out for a show five hours away. As we unloaded the does to pen in the show barn, we noticed a slight unevenness in her udder. Upon closer examination the right side of the mammary was warmer than the left and had a slightly firmer texture. We penned her in our trailer and began her on a treatment of Naxcel immediately. Throughout the afternoon and night we milked her out every two hours taking all antiseptic care to wash hands and dispose of the infected milk. By the second day she was no longer producing milk out of that side, but a serous fluid quite red with blood. She had stopped eating and was running a temperature of


106°F. No other members of our show string exhibited signs of ill health, but the yearlings we were carrying, who had lived in the same barn with her, were not shown out of respect for the other exhibitors in those classes.

Our doe seemed to be through the worst of the acute stage by the time we arrived home Sunday night. We continued to milk her every three or four hours. Monday morning we added infusions of Ceftiofur hydrochloride at each milking which was suggested by our vet as a compliment to the Naxcel. This little doe lived! Which according to our vet is not usually the outcome of "hot" cases. By the end of the first week she was once again starting to produce a fluid that looked like pink milk. Gradually it became more normal in color and the flow increased.

My hopes of ever seeing that lovely mammary even and productive were very slim, but Bruce was determined that she would not be a loss to us and to the breeding program. Both her sire and dam were animals that we had judged to be cornerstones of our breeding program and she was the first doe to be born to them. Conformation and the promise shown early in that lactation indicated we were indeed headed in the right direction. Bruce kept milking her several times a day, and never with the rest of the milking string. Gradually the udder tissue came back to life, and as her udder matured the side that had been sick began to grow as well. We did culture the milk prior to adding her to the herd once again. With a clean bill of health, it took until August for this doe to be even enough once again to compete at shows, and by September she was able to win a large class at a regional fair. Never has a blue ribbon been viewed as such a triumph!

When she was dried off she was dry-treated three times. All seemed to be rather uneventful. Milk production this lactation was not what we had envisioned for her when she first freshened, but even with the heart of her lactation in such difficulty, she did

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milk enough in 305 days to make her star on both butterfat and fluid pounds.

She bred back readily, which is not always the case with does that have had mastitis. At the advice of Dr. Marion at the University of Missouri Vet School we marked her breeding date and expected kidding date on two calendars. His plan for her was to start her on Naxcel 10 days before she kidded the following spring. It was his theory that the Naxcell would be taken up into the udder as the milk secreting tissues came to life for the second lactation. He was correct. She freshened with an even udder totally devoid of scar tissue and proceeded to milk her way to a Top Ten lactation. I believe it was aggressive and immediate treatment that allowed her to be the exception to the rule.

Sometimes udders that have gone uneven from sub clinical causes in a less dramatic manner than our little yearlings can be brought back in following lactations by the prudent use of Naxcell before kidding. Our second success was such a case of sub-clinical mastitis of a nature that we were never able to determine. The culture and sensitivity done by the lab was muddled and inconclusive. We treated her with a variety of drugs without any visual success or increase in production from the light side. When she was dried off we dry treated her and followed the plan to use Naxcell on her 10 days prior to kidding. She freshened with a slightly uneven udder that did not seem to be responding to the increase in size one sees when a doe comes into production. Our vet suggested we give her Erythromycin in addition to Naxcel for five more days. This was a stiff treatment of systemic antibiotics, making us fear we would destroy the microbials in her rumen. Probiotics and "rough hay" were added to her diet and grain ration was reduced to a minimum. This doe did not milk well that year. Most likely the low protein ration and reduction of rumen flora

from the antibiotics did not allow her the nutrition she needed to start an excellent lactation. Does milk at a deficit of calories and protein both during the first 90 days fresh. To save the evenness of the udder we were willing to make this sacrifice. She did milk her full 305 days and the next year, came into milk with a lovely, show quality mammary system making the 3,000 pounds plus as we had hoped she would do.

In situations where does with the potential to pass mastitis to herd mates are allowed to run and be

milked with the herd; neither tests, nor cultures will safeguard herd health. The best mastitis care is vigilance and cleanliness with reliance on proven udder wash and post milking sprays. Isolation of suspect carriers will go a long way toward keeping the environment clean of pathogens and allow for observation as well as treatment. To know the animals and observe them all critically on a twice daily basis, we feel is our most valuable contribution to herd health. Thanks to Don Langly, we know there is no time to "wait and see."

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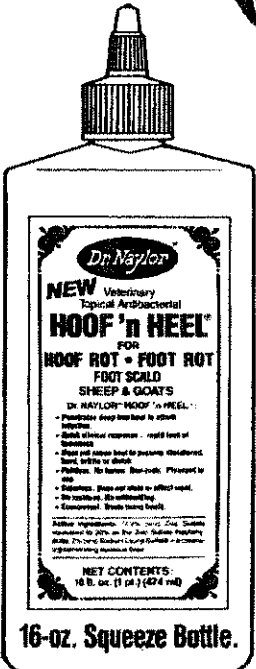
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