

# MEDICINE AND MANAGEMENT

By CARL TROOP, VMD



## A closer look at the udder

There are many parts of the dairy cow which are important or even essential to functioning as an economically profitable animal. These parts are determined to have desired characteristics to be of optimum profit (broad strong muzzle for adequate foraging of food, wide girth for plenty of room for strong heart and lungs, strong legs and feet for good locomotion, etc.). But when it boils right down to it the money maker is that four compartment pouch she carries between her hind legs. It, too, has certain desirable characteristics that every dairyman looks for in a profitable animal. But profit is measured not only in how much a cow can milk in a day or a year, but even more so in how long she can keep it up. Many very promising cows are lost because of mastitis or problems within the milk producing and storing areas of the udder itself. But many are also lost because of damage to the structures that are responsible for holding the udder in place, the framework or foundation.

The base or top of the udder is attached to the bottom of the pelvis by means of a well developed suspensory apparatus, a strong plate of tendinous tissue. This suspensory apparatus consists of four sheets of tissue, two of which are in the midline of the udder and descend from the base to the bottom of the udder. The two sides of the

udder are separated as well as supported or held together by this double layer of strong tendon.

The other two layers extend around the outside of the udder and downward underneath the skin.

The layer in the middle of the udder is referred to as the median suspensory ligament and is responsible for most of the support of the udder. It keeps the tissue in the center of the udder pulled upward for well defined halving, it keeps the meat of the udder held toward the center so the teats are not pointing out toward the side. And hopefully it maintains the whole udder suspended at an adequate height for ease of

milking and avoidance of injury.

For some unfortunate cows (and their unfortunate owners) they inherit a weak suspensory apparatus and as first calf heifers their udders are already pendulous with teats pointing in all directions, already difficult to milk. The other more fortunate cows are born with a strong suspensory apparatus, and, with a little luck can live a very long and profitable life. Unfortunately these too can go awry.

Blood comes into the udder via arteries, is collected by a circle of veins at the base and is drained by three major veins. The lymph vessels are numerous in the

udder, and, as with the veins, are responsible for draining fluid and wastes from the tissues of the udder.

As a first calf heifer comes near calving the new udder tissue is being manufactured at a fantastic rate. Blood and lymph vessels have a problem keeping up with the rapidly expanding udder thus excess fluid is not adequately removed from the tissue and swelling results. Usually the more udder and milk producing tissue being made, the more swelling, sometimes extending as far forward as the brisket. This is the first critical period for the udder as much stress is put on the supporting ligaments at this time. The milk in the udder

is not the main source of the swelling or pressure, and pre-milking is usually discouraged.

In most cows the next few calvings are not as bad as the first for damage to the suspensory apparatus. Much of the udder tissue has been formed and circulation is usually adequate to handle the excess. But depending on the initial strength of the suspensory apparatus and the stress to which it has been put at each calving, time does take its toll. A little stretching each year and the circulation has more of a job in removing fluid and more udder, resulting in more swelling. More swelling results in more strain and stretching of the ligaments, poorer circulation, more swelling, and more stretching. Once a certain point is reached the circulation has been compromised beyond the point of no return. The cow may be in perfect conformation and health otherwise, but the old "broken down udder" is no longer of use to her or to you. Then it is too late. The time to take care of the suspensory apparatus is at each calving. Keep the cows from being excessively fat and watch the udders for excess swelling which appears to be adding excess pressure to

the supporting ligaments. Questions as to how much is too much and what to do about it can easily be consulted with your veterinarian. And in choosing replacements, use as one of your criteria how well the suspensory apparatus of the dam has held up under years of calving, then take good care of hers from the first lactation, not after it is too late.

## Tug of war results posted

QUARRYVILLE - Penn Manor's Future Farmers of America 12-man tug-of-war team won the boys championship Thursday at the Solanco Fair in a six-team single elimination contest.

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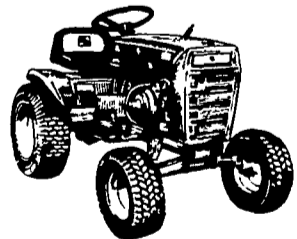
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