

# Dairy specialist shares tips on mastitis

LANCASTER — The fact mastitis cuts milk production in dairy cattle is not a new finding but one dairy producers need to take a hard look at, according to Steven Spencer, Penn State Dairy Specialist.

He shared management tips to help control this bacterial infection with Lancaster County dairy farmers last Friday at the Farm and Home Center.

"Although most farmers refer to the bacteria that causes mastitis as a bug, it is actually a plant that enters the teat, becomes embedded in the udder, and begins to grow," he explained.

As the infection takes hold, white blood cells appear on the scene and begin to attack the bacteria, Spencer said. This produces the elevated white blood cell count in the milk which in the normal cow udder ranges between 30,000 to 300,000 per milliliter and in severe infections can go over a million.

What sets the stage for mastitis infections? One condition is improper milking, according to Spencer.

"You can never milk a cow dry," he said. "There is always about 5-20 percent held in the udder as residual milk. This residual milk, however, presents no problem."

"Where the problems start is with the milk that could be stripped out, called available milk. When this milk is left in the udder, chances of mastitis increase."

When drying off cows, Spencer stressed proper procedures need to

be followed to reduce the risk of infection.

"Don't milk the cow every other day as some farmers do — if you're drying her off, stop milking her completely. Reduce her feed intake to lower milk production to 30 or 35 pounds per day, put her in a stall by herself which will make her unhappy, and feed her poor hay," he said.

"After you've milked her for the last time, prepare her teats for a mastitis single-service dry treatment infusion, teat dip her and turn her out. Don't continue to teat dip after she's been treated — this may stimulate milk production."

Spencer noted there are 88 known organisms that can cause mastitis, however only about a half dozen are recognized as the major problem causers.

He stressed the contagious aspect of mastitis, pointing out how infection can actually be passed from cow to cow by hand or with equipment.

Ninety percent of all contagious mastitis infections, he said, can be attributed to two bacteria, streptococcus agalactiae and staphylococcus aureus.

Environmental forms that are picked up by the cow are caused by coliforms, such as E coli and klebsiella.

"Klebsiella mastitis is also known as sawdust mastitis," Spencer said. "There is a false rumor going around that kiln dried

sawdust does not carry klebsiella. What does seem to make a difference is the size of the wood product bedding — shavings versus sawdust.

"All I can say is if I were having a cow freshen, it would be on straw not sawdust."

One other environmental mastitis agent, Spencer noted, is known as 'strep non ag', which stands for streptococci-no agalactiae.

Two tests for detecting mastitis include the California test, where a pink detergent is absorbed by white blood cells in milk until they explode and gel, and the Wisconsin test.

"If you get a Wisconsin test measuring 5 to 7 millimeters, you have a good test — less than 700,000 count. A 12-17 mm test means you have a problem with over 800,000 white blood cell count. And, a test of over 21 mm needs to be con-

firmed with a laboratory's direct microscope somatic cell count," said Spencer.

"I've heard a lot of excuses for elevated cell counts — they're all cop outs," Spencer chided. "Foot rot won't raise cell counts to 1,500,000."

"The somatic cell count only goes up appreciably with infected cows, regardless of age or lactation stage. Producers who blame the high count on a greater number of cows nearing the tail-end of lactation or a greater number of older cows in the milking string are all wet."

Spencer noted any producer with

a count of 1,500,000 is in a disaster area economically.

In studies done at Penn State, Spencer reported a count of 0-250,000 corresponded with a production rate of 48.3 pounds of milk per cow. As the count increased, production was reduced — 251,000-500,000 cell count lowered production to 43.1 pounds per cow, and a count over 2,000,000 dropped production to 39.6 pounds per cow.

Although the interstate milk shipping regulations limit the cell count to 1,500,000 and under,

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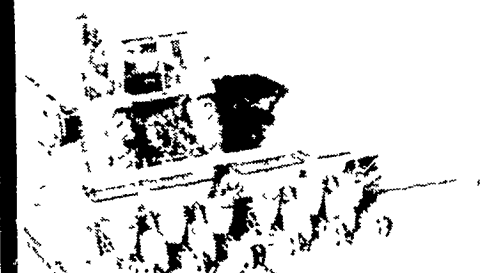
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