

Penn State's somatic cell test helps combat mastitis

UNIVERSITY PARK — Pennsylvania dairy farmers have a better way of recognizing mastitis in their cows. The somatic-cell count program operated by Pennsylvania's Dairy Herd Improvement Association is helping farmers to keep their herds healthy and produce an additional \$37,000-worth of milk each day.

Mastitis infection not only reduces a cow's milk production. It also causes her to sluff white blood cells—somatic cells—into her milk.

"The DHIA counts those white blood cells in milk samples and then tells dairy farmers which of their cows may need attention," said Stephen Spencer, professor of dairy science extension for Penn State's College of Agriculture.

Half of Pennsylvania's dairy farmers with the DHIA. Sixty percent of that half pay the extra 12 cents per cow for the monthly somatic count. The average count in their cows has dropped from 550,000 cells per milliliter in 1979 to 300,000 this past February.

"Without infection, milk will have 50,000 to 100,000 cells," said Spencer. "When the count is 500,000 or more we suggest that

dairy farmers call the vet to take a culture and pinpoint the problem. It could be any of three different types of bacteria—staph, strep, or coliform."

Pennsylvania's DHIA was the first in the nation to offer somatic cell counts. "Before that, farmers could get a count from their dairy," said Spencer. "But the dairies test bulk tanks for the whole herd. That doesn't tell which cows are infected."

Dr. Bob Eberhart's research showed us that we could use the somatic cell count as our measuring stick," said Spencer. Spencer, Eberhart, and Lawrence Hutchinson, in cooperation with DHIA, created the somatic cell program in 1979. Eberhart and Hutchinson are professors of veterinary science and veterinary science extension at Penn State.

The DHIA counts somatic cells in samples from individual cows by means of automated microscopes. The machines mix a 1/1000 milliliter sample of milk with a dye that causes the somatic cells to fluoresce, then the microscope counts the cells. The end result is a printed record of the

number of somatic cells per milliliter for each cow sampled.

"About 200 samples go through the lab in an hour—10,000 a day," said Spencer. "When we first started in 1979 we had only one machine, and pretty quickly we had a waiting list for the program. We didn't do much promotion either; the program just sold itself. Now we have four microscopes and could take on more work if it came in."

Spencer and the college's dairy extension section have been helping farmers treat as well as recognize mastitis. Over the past several years teaching teams comprised of two county agents and one specially trained veterinarian have conducted 94 milking schools for farmers.

Preventing or curing mastitis is

largely a matter of cleanliness. Milking parlors need to be as aseptic as possible. Udders need to be cleansed with antiseptics. Milking machinery also has to be in good condition.

"You can't spot infection just by looking at a cow," said Spencer. He likes to stand in front of the

microscopes at the DHIA and watch the numbers flashing on the screens. "They're so low any more. The counts used to run about 600,000. A lot of these today are only 150,000. The textbooks used to say 250,000 was normal. Look at that! Just 27,000. This herd is in beautiful shape."

Cedar Crest FFA

Cedar Crest FFA recently elected the following officers: Lisa Houser, president; Brenda Peiffer, vice-president; Jenny Embich, secretary; Gale Hitz, treasurer.


Brian Boyer, reporter; Tonya Johnson, sentinel; John Whary, chaplain; Kevin Dreibelbis, assistant reporter; Becky Smith,

assistant secretary; and Adam Hain, assistant treasurer.

The County FFA delegates are Lisa Houser and Tonya Johnson. They will represent Cedar Crest in the Lebanon County FFA. New officers will be installed at a future meeting.

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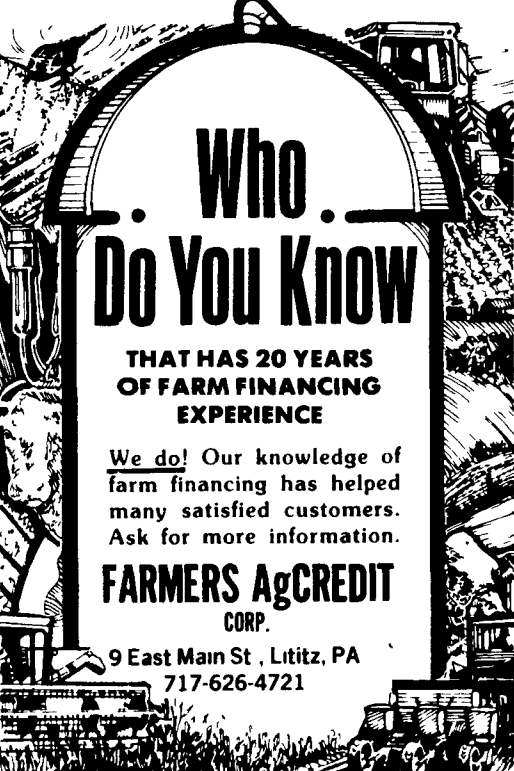
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