

# Dairy Food Safety Researcher

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antibiotic residues, and then dump milk and levy fines on producers based on those test results, should stand by their belief in the validity of the tests and, in effect, put up or shut up because it's hurting an important resource — the dairy producer.

The associate professor said he has suggested that, to be fair, processors and producers should share in the risk associated with the tests.

"Frankly, if the processor has faith in the tests, there is nothing to worry about," he said.

However, he quickly added that,

"If the test is not good, then (the processors) will find out and the dairyman won't be the only one holding the bag."

Under the existing circumstances, Cullor's recommendation is for processors to use the tests for screening loads of milk. If they get a positive result, then the sample would be sent to a third party laboratory for more complete, quantitative testing that can determine if there is truly an antibiotic residue in the milk.

"Why not share the responsibility with the processing plant and say if the processing plant uses the

screening test and it's positive, then they send the sample to a third party lab and they run more sophisticated tests.

"And, if it comes out that there is a violative residue, then everything goes on as it should," Cullor said, meaning that the producer loses his milk and money and undergoes the 10-point program and temporary mandatory refusal of milk from the farm.

"But, if they run the (more sophisticated) test and it comes back that there is not a violation (of antibiotic drug use), then, number one, the producer gets no strikes

against him; two, the processing plant pays for the dumped milk and reimburses the producer; and three, the processing plant pays for the more sophisticated test."

Cullor was one of 12 speakers who were scheduled to speak at the regional meeting of the NMC Inc., an Arlington, Va.-based concern with the mission statement to promote research and provide education to help dairy producers reduce mastitis and enhance milk quality.

In addition to Cullor's discussion about drug residue testing problems, topics covered during the day included a presentation by James Dell, chief of the Pennsyl-

vania Department of Agriculture's Bureau of Food Safety and Laboratory Services Division of Milk Sanitation; Robert Moser, a representative for Nationwide Insurance Co. in Harrisburg; Norm Corlett, of Milk Marketing Inc.; Williams Sischo, Lorraine Sordillo, and Steve Spencer from Penn State University; Jeff Reneau, from the University of Minnesota; Joe Hogan, with the Ohio State University; Ron Erskine from Michigan State University; and Charles Gardner, a dairy veterinarian with Dairy Management Consultants in Orefield.

Also on the schedule was Jill Harnish, representing her Nine Points, Lancaster County family dairy operation and talking about what practices they use to combat mastitis.

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In a telephone interview this week, Cullor further discussed the issue that he addressed during the meeting.

"People believe the tests are infallible, and that's simply not the case," Cullor said. "Tests make mistakes."

Cullor said he is an advocate of using proper scientific technique. He should know about tests.

"My lab is called the Dairy Food Safety Laboratory and we work on new ways to diagnose and treat disease, new vaccines for mastitis, and other diseases," he said.

"In our lab, there are three research assistants, four PhD graduate students, three master's (degree) level students, and five undergraduate students," he explained. He oversees the lab.

University of California-Davis has the only veterinarian school in the state.

"Part of our job is to work for our taxpayers in the state and to help work with animal agriculture in maintaining their leadership role in producing safe and wholesome products, and to help keep animals healthy," Cullor said.

He got involved with residue tests after producers contacted him seeking a scientific opinion on the dependability of tests being marketed.

"People started calling and asking about the tests and to find out which ones to use, and we started doing some controlled research projects and that's when we started to notice some problems.

"And then when we reviewed the literature, (we found that) scientists from around the world have reported problems with these residue tests, since 1984.

"Since we reported our results, in the early '90s, now other researchers around the country have verified that these same problems exist."

According to Cullor, the problem was that, "... individual cow samples, a lot of times the tests couldn't tell the difference between antibiotic residues and natural host defense mechanisms.

"The chemicals and the methods the cow uses to fight mastitis problems cause false positives in these antibiotic residue tests," he said.

"And so that's a problem. If the test can't tell the difference, what do you do?"

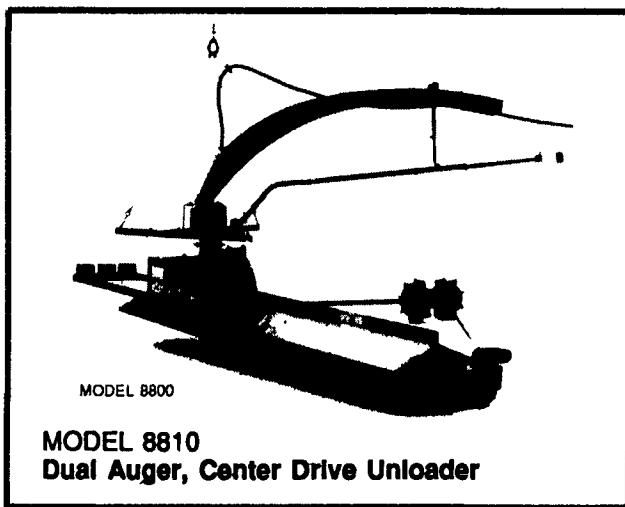
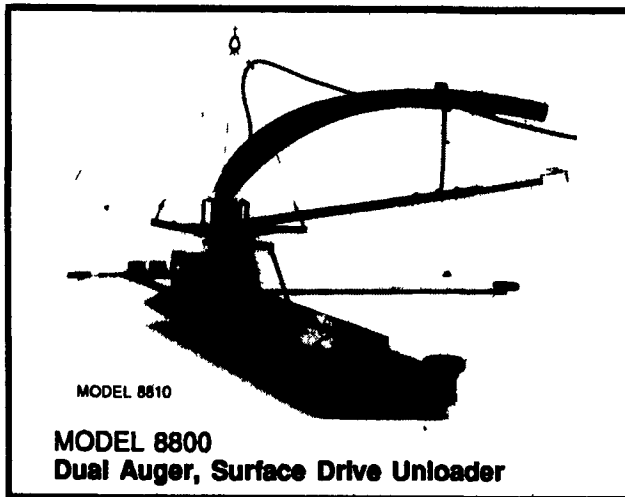
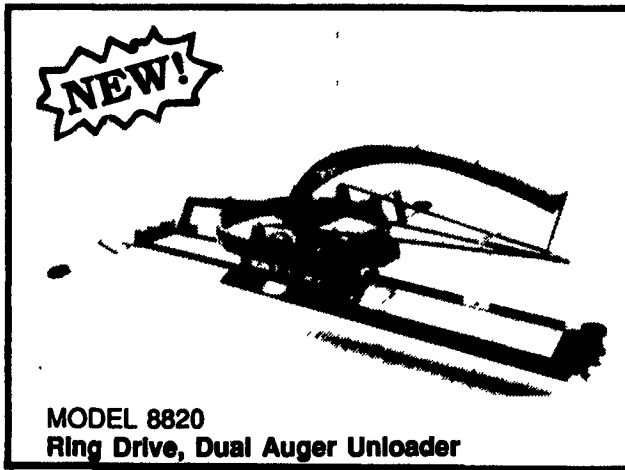
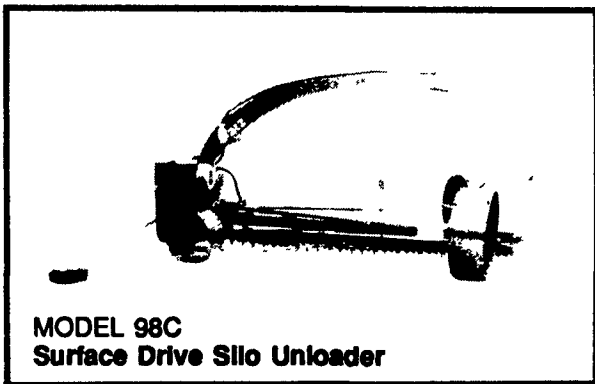
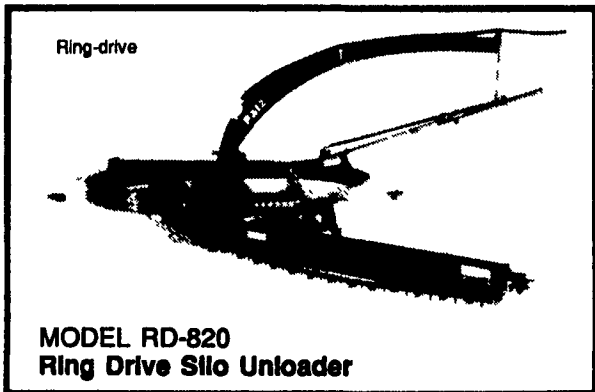
The answer, of course, to the rhetorical question is that the test shouldn't be used for a definitive answer as to whether or not the dairy farmer was careless in keeping track of antibiotic treatments on cows and withdrawal times before putting milk into the bulk tank.

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