

Milk Can Be Cooled Too Fast

ARS scientists have completed the first stage of research to get a precise answer to the question: How fast must you cool milk in a bulk tank?

Milksheds regulate the cooling rate of milk, usually stipulating it must reach 50 degrees F. in one hour. So far, no research results are available to support the hour cooling period, but it is judged to be within a safe time limit.

Fast cooling is costly, however, and may cause a portion of the milk to freeze, thereby possibly harming the flavor. Slow cooling also has its dangers: Bacteria multiply much more rapidly at higher temperatures and, if cooling is too slow, the milk can deteriorate noticeably.

ARS microbiologist W. D. Schultze and dairy husbandman J. W. Smith have taken as long as 4 hours after milking to cool high-quality milk from body temperature to 50 degrees. They found that the 4-hour cooling period permitted excessive bacterial growth even in milk of highest qual-

Pennsylvania Flying Farmers . . .

RUTH WILSON CROWNED INTERNATIONAL QUEEN

Ruth H. Wilson, Nottingham, Lancaster County, Pennsylvania Chapter Queen, took highest honors in the International Flying Farmer Queen contest held in Omaha, August 12, when she was crowned International Flying Farmer Queen by Duane Wallace, Chairman of the Board of Cessna Aircraft Corporation

First indications, however, are that milk of uniformly high quality can be cooled safely to 50 degrees in 2½ hours.

Schultze and Smith emphasize that these preliminary findings apply only to research conditions. They are presently conducting tests with milk having higher bacteria counts in bulk coolers of various designs, hoping to cover all the conditions a typical milk hauler may find on his route. The research is expected to yield objective information on which quality-control authorities can base the optimum time limit for cooling milk in bulk tanks

who sponsored the contest. Ruth is the wife of Harry R. Wilson and the mother of five children. The Wilsons operate a 450-acre dairy and small grain farm in Little Britain Township. Their children are Dana, 18; Beverly, 16; Henry III, 14; Judy, 11, and Roxana, 7.

They own a Cherokee #150 aircraft which they will operate from an approved strap on their dairy farm. Harry, a former Navy pilot, has been flying for 22 years. Queen Ruth just recently passed her written examination for private pilot and is ready for her flight test. "Being a Flying Farmer gives us the satisfaction of warm, sincere friendship, and keeps us in close contact with both agricultural and aviation interests," says Queen Ruth.

International Queen Ruth plans to visit every Region of the organization during the coming year. Her schedule will begin with Region 3 for the Ontario Chapter convention at Sarnia, Ontario, September 12. Next will be the Region 1 meeting at West Chester, Pa., September 18.

● Esbenshade

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from a crib to the farm hammermill; Esbenshade says it will unload a 4-ton dump wagon in 45 minutes. In the winter it will also see duty at the site of the trench silo.

In constructing this elevator Jim added a valuable piece of equipment to his growing inventory. And in entering the farm mechanics contest, he converted a \$17.85 investment into \$65 worth of prizes! Not a bad return. He received \$25 as one of the state's 28 area winners, and \$40 as runner-up in the regional division (there are five regions in the state).

The contest, now in its second completed year, is sponsored by the Pennsylvania Farm Electrification Council, and is supervised by the Department of Public Instruction Division of Agricultural Education. The regional winner this year was an FFA boy from Blue Mountain Joint School, near Schuylkill Haven. Other entries from county vogue departments were Paul Brubaker, Lititz R1, Warwick FFA Chapter, Linford Weaver, Ephrata R1, Cloister Chapter

Esbenshade is a 1965 graduate of Solanco High School

He is holder of the Keystone Degree, and served as sentinel in the Solanco Chapter during his senior year. His equity in the home farm as of last fall was about \$28,000. This included livestock and equipment. Jim is the 18-year-old son of Mr. and Mrs. Milton Esbenshade, and presently works the 300-acre family farm with his father and two brothers.

His main interest is dairy, and he owns 32 head of registered Ayrshires. He also farms 12 acres of tobacco, and 28 acres of tomatoes. The total family operation includes 20 acres of tobacco; a 70-head Ayrshire dairy, and 40 acres of tomatoes. The Esbenshades specialize in green tomatoes, using the ripe ones as a clean-up crop.

Jim has also been active in 4-H work. He served as president of the county 4-H Ayrshire-Jersey Club last year, and is a junior leader this year. He took reserve champion Ayrshire recently at the 4-H Dairy Roundup with his 3-year-old cow, Glenn Hurst Cow's Pride, and will be among the 4-H's representing the county in the district show at Hershey on August 27.

So far as we could learn, he has yet to attempt rebuilding of old, depreciated cows, but he sure has a knack for putting new life into any tired, worn-out piece of machinery.

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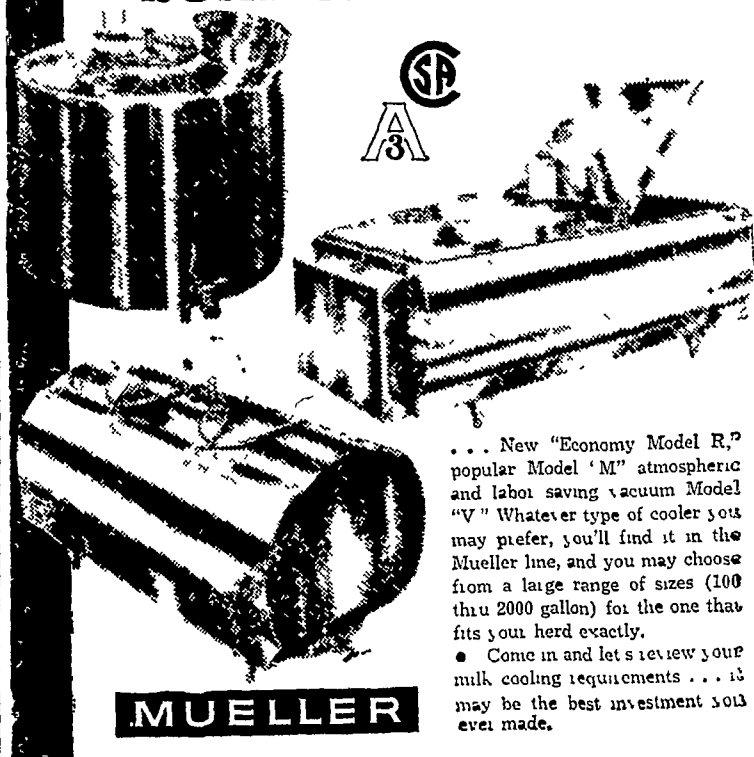
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ditioned buses. A few others followed in their own cars.

The group visited the new Penn Danes plant, the New Holland Machine Company; Victor Weaver's Poultry Plant, and Turkey Hill Dairy.

The general comments and the interested crowd — the largest to make the annual trip in several years — indicated the association had enjoyed a very successful tour.

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