● Holstein

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After noon, the tour stopped at the 600 acre father sons partnership of Arthur, Wayne and Harold Lesher The 90 milk cows are housed in a completely new 130' x 80' free stall barn with a 100' bunk feeder and 110 stalls

The old barn is used for the heifers and young stock A liquid manure system is used The storage capacity in the system is 20,000 gal and is emptied every six weeks The cows were reported doing better in the new 1½ year old set up with production on several cows going over 100 lbs of milk a day to 130 pounds

The last stop was the Wernersville State Hospital Farm These 83 milk cows have a herd average of 15,825 pounds of milk and 602 lbs of buterfat, third high in Berks County A part of the hospital institute was also toured

And finally, the tour ended at 5 p.m where it had started. And as this reporter left the parking lot, the sun broke through the clouds to send local dairymen back to their own milking at home with about as much sunshine as they had seen all day

ON THE HOLSTEIN TOUR are (left to right) Mr .and Mrs. Clarence H. Martin, Cacoosing Farm, Sinking Spring R6; James Haldeman, Berks County agent; Paul Zimmerman, tour chairman and Clarence Stauffer, Association President. The cow in the Martin herd is Shirley Pabst Bell, classified Very Good with 17,000 pounds of milk and 740 lbs of butterfat. L. F. Photo

Heat-Treating Eggs Halts Chronic Respiratory Disease

A special heat treatment of eggs before incubation stops egg transmission of chronic respiratory disease in chickens

The major infective agent of this disease is Mycoplasma gallisepticum, a very small bacterium Hens may carry Mycoplasma organisms in the reproductive tract, and egg transmission is a major route of Mycoplasma infection

Since the early 1960's researchers have had some success in reducing egg transmission by treatments applied before incubation Most recently, dipping eggs in antibiotics paired with other techniques, proved helpful in cleaning up Mycoplasma infection from most broiler breeding flocks

Mycoplasma eradication remains to be completed, however, in certain poultry lines. While dipping could possibly complete the eradication program, the method has drawbacks Some Mycoplasma slip through, and special material and equipment are needed

These drawbacks can be overcome, it now appears, with a new eradication method that parallels pasteurization—heating eggs to a predetermined, moderately high temperature ARS veterinarian H W Yoder, who devised the new method, says that it depends for success on achieving an internal egg temperature of 114° F under a specified set of conditions

The method was evaluated at the ARS Southeast Poultry Research Laboratory, Athens, Ga, when treated eggs had been incubated for 14 days — a good time to check for egg-borne infection Results showed no Mycoplasma survival in eggs that had been experimentally *infected*

Yoder calls 114° the critical temperature because it kills the Mycoplasma and consistently keeps hatch of treated eggs within 8 to 10 percent of normal. Temperatures higher than 114°, while eliminating Mycoplasma just as completely reduce chick hatch more drastically

The optimum temperature was achieved in preliminary experiments by heating a batch of 40 eggs in a small incubator for 6 hours to eradicate Mycoplasma. Yoder found, however, that each size of load poses a different problem The largest load he has checked was 2,000 eggs—close to a commercially feasible batch

For this load, the incubator must run 10 to 12 hours for eggs to reach 114°, no further holding at this temperature is needed Hot-running incubators should be adjusted to achieve the desired temperature in the 10 to 12 hour range, however. Shorter treatment is ineffective; longer treatment increases embryo damage

Since standard incubators and equipment are used for the treatment, the only special requirement is a good mercury thermometer The major cost is the reduced hatch, which at the level incurred with 114° is reasonable for the primary breeder, who does the basic breeding for the poultry industry

'For success," Yoder says, "the breeder must determine the temperature precisely The best way to get a good temperature is to put the thermometer in a sandfilled jar or bottle and place it with the eggs I'd buy three thermometers and test them together before use If one reading disagreed, I'd still have two others to give me assurance the job is being done right"