

## Leghorn Fertility and Hatchability Are Good On Sloping Wire Floors, Research Indicates

Egg production by pullets on the sloping wire floor has been excellent since the concept was initiated in 1963

Performance of pullets reported by Bressler and Maw at the 13th World's Poultry Congress in 1966 showed egg production of 253 eggs per pullet housed with pullets allowed 0.66 square foot floor space per bird. Results on commercial poultry farms have given similar results.

Preliminary trials to obtain fertility and hatchability information with leghorn breeders on the sloping wire floor system were begun in 1966.

Four hundred leghorn females which had been in production for eight months were mated with 18-month-old males (only ones available for this preliminary test) at a ratio of one male to fifteen females, in 24 feet by 24 feet summer laying shelters. A floor space allowance of 0.66 square foot per bird was allowed.

Another group of 400, 26-week-old leghorn females was housed in a similar shelter. These females also were mated with 18-month old males at a ratio of 1 to 15.

An excellent level of fertility was achieved for the period from August 1, 1966, to November 7, 1966, and indicated the feasibility of high density housing of leghorn breeders on the sloping wire floor from the standpoint of fertility.

This research report by the Penn State University departments of poultry science and veterinary science shows that poultry breeding as well as volume of egg production can be successful with pullets in dense housing conditions using the modern A-frame or V-frame sloping wire floor. The report was prepared jointly by G. O. Bressler, T. W. Burr, T. A. Carter and R. F. Gentry of Penn State.

On February 6, 1967, an experiment on a larger scale was begun using two 30 feet by 100 feet laying houses. One flock of 2988 leghorn females, 22 weeks old, was housed on the A-frame sloping wire floor in House 100, allowing 0.62 square foot floor space per bird. One-hundred-eighty males, a few weeks younger than the females, were added to this flock on April 18.

Approximately the same number of females as in House 100 were placed in the other house (House 99) which was divided into two separate pens by a central egg aisle. One pen (99A) had 1478 females; the other pen (99B) had 1488 females. Floor space allowance was 0.75 square foot per bird. Eighty-seven males were added to this flock on April 18. No males were added to Pen 99B.

On May 5, the first check was made on egg fertility, and it

was found that 95 per cent were fertile in House 100 and 98 per cent in Pen 99A. No check was made on hatchability with this first egg sampling. Subsequent samplings of 100 eggs from each pen showed excellent fertility and hatchability in both houses up to July 14, when this portion of the experiment was concluded.

On July 17, a single flock was established in House 99 by combining the birds from House 100 with those in House 99. The center egg aisle was eliminated and nests placed at the top of the slope along the outside wall. The single flock consisted of 4677 females and 290 males housed at 0.44 square foot per bird.

Samplings of 100 eggs were made for the July to December period to check fertility and hatchability. As will be noted in Table 3, excellent fertility and hatchability continued throughout this period and up to the (Continued on Page 28)

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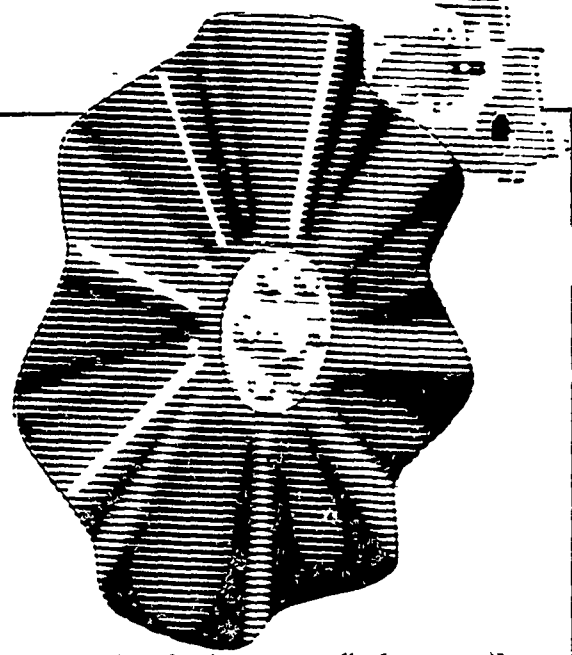
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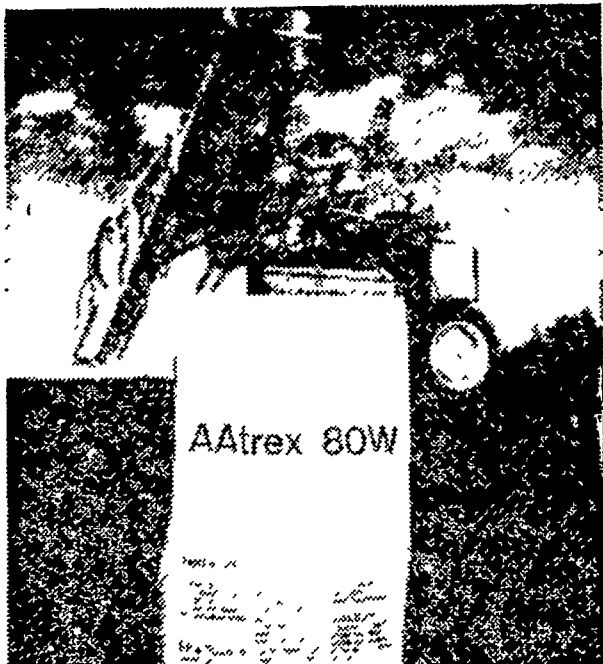
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