

Controlled-Environment House May Mean Turkey Breeding Change

Experiments in a new U. S. Department of Agriculture research facility at Beltsville, Md., are likely to influence the design of future buildings used by turkey growers to house breeding stock, say USDA scientists.

The new facility is a controlled-environment house for turkeys, in which light, temperature and humidity can be positively regulated. Located at USDA's Agricultural Research Center at Beltsville, this windowless, air-conditioned building now houses several groups of male turkeys. They are under test to determine

the effect on their fertility caused by light of different intensities and durations.

"STUDIES OF THE effect of light on male turkey fertility are not new at Beltsville, according to Dr. A. W. Brant, head of poultry husbandry research conducted by the Agricultural Research Service. "Light is known to be a major factor in the onset, level, and duration of male-turkey fertility. But the intensities and colors of light and the lighting times needed to produce maximum response remain largely unknown.

"We have conducted these key environment house relate to studies for a number of years, the effect of light alone. Temperature in the house is being held at a constant level in order to eliminate temperature changes as a possible environmental variable until different intensities and durations of light have been tried.

If the studies show radiant energy to be as important a factor in male turkey fertility as it is now believed to be, Dr. Brant indicated, they will suggest buildings for male turkeys in which daylight is excluded and absolute control of light is possible.

However, if temperature is also found to be an important factor, as a result of subsequent studies, even more complicated farm buildings for turkeys, in which both light and temperature can be controlled, will probably be the answer.

DR. BRANT EXPLAINED that present studies in the tur-

THE NEW TURKEY environment house was designed by ARS agricultural engineers to provide poultry scientists with the facilities they need for light and temperature studies. It is in no sense a farm structure, although it may prove to be a forerunner of specialized farm buildings of the future.

The building features an air-conditioning system consisting of three heat pumps used singly or simultaneously to maintain any desired inside temperature within a 50-degree range. Electrostatic air filters are used. These are capable of removing 90 to 95 percent of the dust particles from the air entering and discharging through the system. Light controls provide an ample range of intensities — so far determined to be between 0.6 and 100 foot-candles, measured 24 inches above the floor.

Stocker Cattle Remain High At Baltimore

BALTIMORE, May 12 — **CATTLE AND CALVES** Fed steers comprised approximately 60 per cent of the supply of stockers and feeders 15 to 20 per cent and the balance mostly cows. Only one load and few scattered head fed heifers on offer. The fed steer supply was mainly good and choice grades. Clearance was good on all classes. All slaughter classes and stockers and feeders were moderately active to active. Few steers were uneven and sold steady to mostly 25 cents higher with instances 50 cents up. Fed heifers were fully 50 cents higher. Cows sold mostly fully steady to 25 cents higher. The large bulk of bulls sold steady with a few instances 50 cents higher. Vealers were mostly steady with instances 50 cents lower. Stocker and feeder steers sold fully steady. The bulk of low-good to average choice 900-1185 lb fed steers brought \$27.50-30.00 with one package at \$30.50. Choice steers mainly \$29.00, and up. A few small lots standard and low good sold from \$26.00-27.50. A short load of 762 lb mostly good fed heifers, including a few low-choice, sold for \$20.00, two small lots 653-694 lb good grade \$26.00-27.25. Utility and commercial cows bulked at \$20.50-22.00 with a few commercial reaching \$23.00. Canners and cutters ranged from \$17.50-20.50, mostly \$18.00 and up and a few light canners down to \$15.00. Utility and commercial bulls bulked at \$23.50-25.50 with a few scattered head to \$26.50 and a few head of good grades \$27.50-27.75. Choice 180-230 lb vealers sold at \$33.00-35.00. A few head \$25.50 with an individual at \$36.00, good grades \$29.00-33.00 and standard \$27.00-29.00. A half load 709 lb good to choice feeder steers brought \$30.75 and one load 820 lb medium to good \$27.50. About 5 loads 506-653 lb good to mostly choice stock steers \$31.00-32.00, two loads mostly good 500-626 lb \$29.00-31.00. Two small lots 372-478 lb mostly good stock steer calves sold for \$30.00.

HOGS Butchers were active with good clearance early. Barrows and gilts were fully 75 cents higher with instances \$1.00-1.25 up on No. 1 and 2 grades. Sows were very scarce and sold 25 to 50 cents higher. The bulk of the supply was mixed lots U. S. No. 1, 2, and 3. 180-240 lb butchers which sold at \$23.75-24.25, bulk \$24.00, 35 head No. 1 and 2 mostly No. 1 190-220 lbs \$24.50, 3 small lots totaling 13 head No. 1 \$27.75-25.00. This was no criterion of the general market. One load No. 2 and 3, 259 lb butchers sold for \$22.00 and a small lot No. 3 333 lbs \$19.75. A few mixed No. 1-3, 300-400 lb sows \$16.25-19.50 with a few head No. 1 under 300 lbs to \$20.00.

SHEEP Two small lots 78-81 lb good and choice spring slaughter lambs \$25.00 and \$28.00. A short deck near 77 lb utility to mostly good spring lambs brought \$24.00 and a small lot of 68 lb utility \$23.00.

Bulk Tanks and Pipeline Save Labor and Costs

The use of bulk milk tanks and pipeline milking systems save labor and result in higher quality milk, even on moderate sized dairy operations, according to Economist Stephen J. Brannen of the Georgia Extension Service.

An analysis by him of a study by the Georgia Experiment Station shows bulk handling to have these advantages. It is more economical than can handling at all output levels above 30 gallons a day, the quality of milk is higher, spillage and stockage losses of milk are reduced by about six to eight cents per 100 pounds, and hauling costs were found to be lower because of larger payload and pickup every other day.

The Georgia study also showed pipeline milking systems to be economical on farms milking 25 or more cows per day because four minutes of labor per cow was saved each day, more cows can be handled with the same amount of labor, and it was found that the labor saved would pay for the pipeline milker in an average of three years.

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