

# 'Test tube' calves previewed at Md. dairy day

CLARKSVILLE — In the wake of publicity concerning birth of the world's first human "testtube" baby last month in England, considerable interest was generated in a demonstration of the bovine counterpart recently at an agricultural field day in central Maryland.

The event was Farm Family Field Day, otherwise known as the tenth statewide forage crops and dairy cattle management field day, held Aug. 3 at the University of Maryland's agronomy-dairy research farm near here in Howard County.

Dr. Richard F. Davis, dairy science department chairman at the University of Maryland in College Park, explained that an embryo transfer demonstration was included for the first time at this year's field day because it is a fairly new and exciting concept.

Its use can permit only average heifers to act as incubators for calves from cows with superior genetic potential. Combined with inducement of superovulation in the donor animals, embryo transfer allows rapid increase of offspring from an outstanding female. For example, 20 fertilized ova were taken from two donor cows during the Maryland field day demonstration on Aug. 3.

Embryo transfer, as practiced in cattle, involves flushing fertilized ova (embryos) from a donor cow in which superovulation has been induced by means of a hormone serum taken from pregnant mares or sows. Fertilization is accomplished by artificial insemination.

Prospective recipient animals are prepared by administering a drug for estrus control. The purpose is to adjust their heat cycles to coincide with the reproductive cycle of the donor cow.

Ova (eggs) flushed from the donor animal are examined under a microscope to identify those that are fertile. At least one fertilized egg (embryo) is then transferred with a pipette to each recipient cow (usually heifers). Actual carry-through of the transferred embryo to full-term pregnancy occurs about 50 per cent of the time.

This is about in line with the success rate for artificial insemination, or even natural breeding, observes Dr. Davis.

The University of Maryland dairy science

chairman reported that artificial insemination of dairy cattle was first demonstrated on a scientific basis in 1936 by agricultural researchers at Rutgers, the state university of New Jersey. A.I. first got started on a commercial basis in the U.S. about 1945-46.

He noted that embryo transfers now are in the stage where artificial insemination was a third of a century ago.

One of the pioneer commercial firms in the embryo transfer field is Via Pax Corporation International. Established four years ago, Via Pax has European, Canadian and U.S. branches, respectively, in Milan, Italy; Woodbridge, Ontario, and Elizabethtown, Pa. The latter office has been in operation since Jan. 1, 1978.

For the field day, arrangements were made with Via Pax to demonstrate the actual process of embryo transfer. A team of five specialists from the U.S. office at Elizabethtown, Pa., participated. The team included two professional veterinarians and a man with a Ph.D. degree in animal physiology.

At times, it seemed that half of the 400 field day visitors were crowded into barn No. 4 at the University of Maryland's agronomy-dairy forage research farm to watch the three-hour demonstration.

This year's attendance was slightly higher than average, despite threatening skies and forecasts of rain, reported Dr. Charles M.

Chance, field day coordinator.

Included in the total were 80 dairymen and their families from the Finger Lakes area of upper New York state. They stopped by during a chartered bus tour of farms in the Mid-Atlantic area.

Also in attendance were 10 citizens of Bangladesh. They were in the fourth week of a 16-week course set up by the Institute of Applied Agriculture at the University of Maryland in College Park. The course is funded by the World Bank through the Bangladesh Agricultural Development Corporation. Most of the course participants are workers or managers or seed farms in their native land.

Sponsoring organizations for Farm Field Day were the Maryland Agricultural Experiment Station and the departments of agronomy, dairy science, agricultural engineering and Extension home economics — all based at the University of Maryland in College Park.



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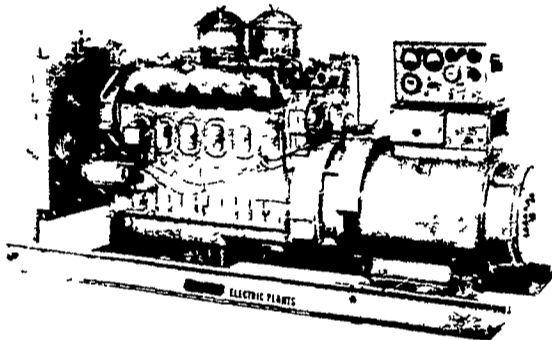
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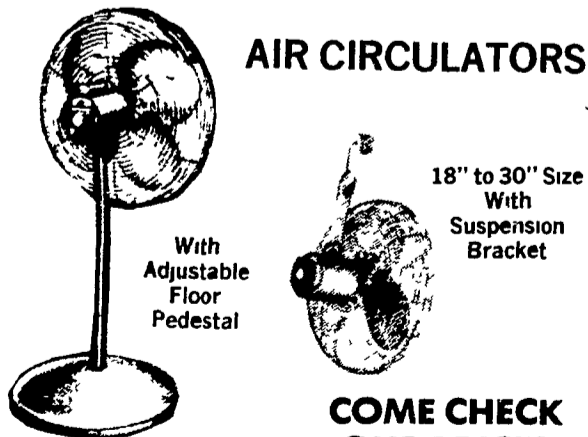
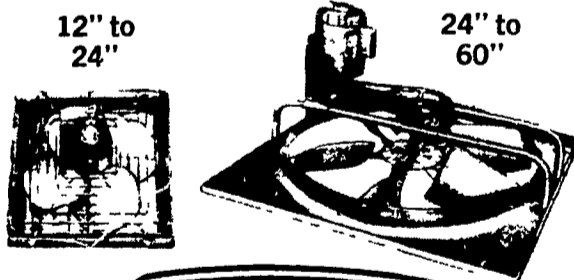


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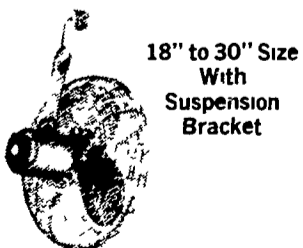
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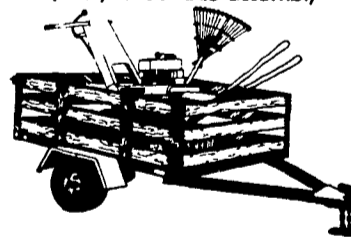
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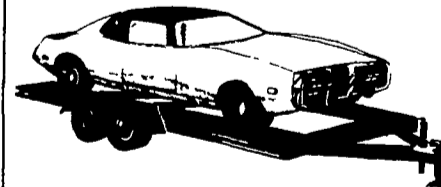
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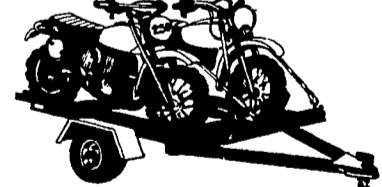
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