

New hormone for estrus control to be studied

COLLEGE PARK, Md. — Scientists at the Maryland Agricultural Experiment Station are beginning to examine the effect of nutrition on estrus synchronization of beef cows. Estrus synchronization — inducing reproductive heat in a group of female animals at the same time — is a relatively new concept in American dairy and beef cattle management.

Researchers have used the hormone prostaglandin to synchronize cattle during practical trials across the country for the past five years.

Dr. Edgar P. Young,

professor of animal science at the University of Maryland in College Park, heads the project slated to begin in December at the university's beef cattle research farm near Sykesville. Drs. Jerry V. DeBarthe, William E. Kunkle, Donald L. Campbell, and Walter F. Williams of the animal, veterinary, and dairy science departments, respectively, will also participate in the experiment. This is the first time that Maryland scientists have studied this approach to estrus synchronization in beef cattle.

Young and his colleagues

will inject prostaglandin into each test cow's muscle. This synchronizes the cow's estrus, or reproductive cycle. The cow comes into heat after the injection if she is already five or more days past her last heat period.

The over-all potential of estrus synchronization is to increase the artificial breeding of beef animals, says project coordinator Kunkle. Artificial insemination decreases disease transference by bulls and can hopefully help cattlemen to better plan calving times.

Maryland scientists already have conducted a preliminary trial involving two groups of 40 and 39 animals. They compared conventional A.I. methods with estrus synchronization. For 31 days, the 40 cows in the first group were observed and bred by conventional A.I.

The 39 cows in the second group were estrus-synchronized and then inseminated. Young and his colleagues observed the cows for the first five days and bred those in heat. They administered prostaglandin to the remaining cows. For the next two days, observation and the breeding of cows in heat continued. At 72 hours, every cow not serviced previously was then inseminated.

Kunkle stressed that all cows used in the trials were at least 60 days post-calving. "They weren't cows that just calved one month before," he explained.

The Maryland team also observed cow body condition during the trials. They found cows with higher body condition, fleshier, had a higher pregnancy rate than cows with lower body condition. Cows on the fat side achieved an 82 per cent conception rate. Thinner cows had a 56 per cent conception rate.

Nutrition plays an important role in the upcoming

project. The Maryland scientists will use controlled pastures and monitor cow weight changes more closely than during the preliminary trials. Half the cows will be maintained on high nutrition levels — those recommended by the National Research Council. The other half will be maintained on lower nutrition levels for comparison.

Results of the preliminary trials showed two-thirds of both the conventional A.I. group and the estrus synchronization group were pregnant in 31 days. "That's what we set out to find," said Kunkle. "Estrus synchronization is comparable to conventional A.I. methods of breeding," he added.

However, estrus synchronization is a lot less expensive in the long run. "It takes a lot less time since you don't have to observe cows for heat two or three times a day. And it's a system people can learn," Kunkle explained.

Conventional A.I. programs require tremendous amounts of labor. With estrus synchronization, cattlemen will not only cut down on labor, "but they'll increase their chances of successful cow conception. And most importantly — they'll be able to use top sires for nominal cost," said Kunkle.

Estrus synchronization is

not a substitute for good management — cows must be cycling for it to work. Says Kunkle, "this whole thing will take a lot of effort, but I believe it has real potential."

With the preliminary trial

finished and providing promising results, it is now possible to proceed with more extensive studies covering several breeding seasons. These experiments will provide the basis for practical recommendations to beef cattle producers.

Wool breed titles taken to Ohio

HARRISBURG — Ohio and Virginia exhibitors captured all titles in the Columbia breeding sheep division at the Keystone International Livestock Exposition, Harrisburg, November 7.

Joan Hess & Sons of Cable, Ohio, premier exhibitor, won the champion ram class with

a yearling entry. They also showed the champion ewe, a Fall lamb.

K-J Columbias, Williamsville, Va., captured the reserve champion ram title with a Spring lamb entry. They also won reserve champion ewe with their second place Spring lamb.

Lancaster Co. places fifth in horse judging

HARRISBURG — Lancaster County 4-H members, representing Pennsylvania, placed fifth in the National 4-H Horse Judging Contest held at the Keystone International Livestock Exposition, November 4.

Team members were Cindy Wenger of Leola, Lashon Bussel of Lanheim, Daphne Immel of Litz and Jennifer Weber of Miller-

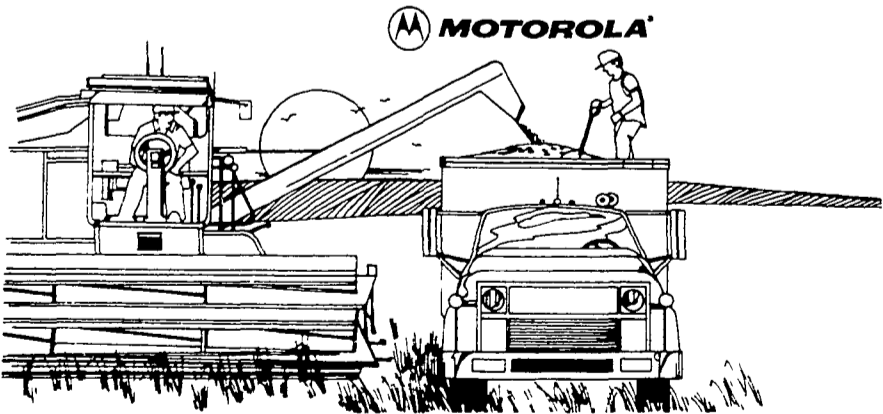
Jennifer also placed fifth in individual scoring.

The 4-H'ers were coached by Dr. Earl Weber, Millersville, and Nancy Meyers, Lancaster County assistant 4-H agent.



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