

Tennessee Beef Cattle Improvement Initiative



Demonstration To Measure the Impact of Improved Genetics and Health/Management Practices on the Market Value of Tennessee Feeder Cattle

Background

Today's beef cattle market is demanding feeder cattle which are of some known genetics, preferably of superior feedlot and carcass performance traits. It also wants cattle which are low risk from a health perspective, which means they have been vaccinated for diseases common in the feedlot environment. Weaned calves are also preferred since they withstand transportation and go on feed more readily. University of Tennessee research by McLemore and Rawls 1993 indicated that the breed distribution of 53,000 feeder cattle on Tennessee auctions were as follows: Angus 20%, Angus cross 22%, Charolais cross 15%, Hereford 11%, Mixed 11%, and Brahman cross 4%. Further lack of uniformity was indicated by the fact that 23% of the lots and 38% of the male cattle were bulls, 63% were Number 1 Muscle, 34% were Number 2 Muscle, and 16% were Small Framed.

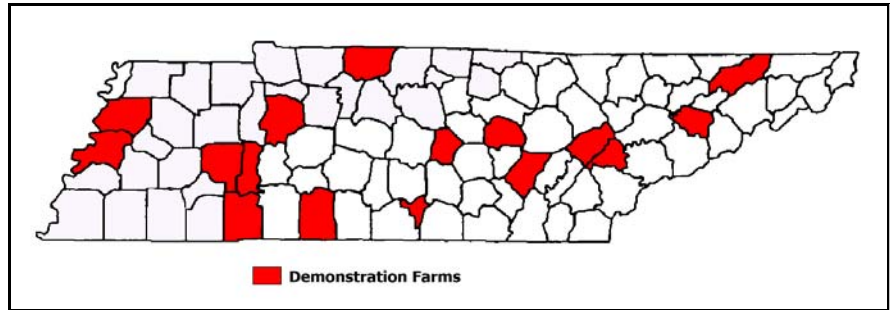
Purpose

The purpose of this demonstration is to show how genetic improvement can be made quickly through the use of superior bulls. In addition through the use of the Beef Cattle FIRM record keeping software, progress will be measured through evaluation of weaning weight, grade and market value of the calf crop produced from the beef producer's existing genetics and the improved genetics. Producers will also be given the opportunity to have their steer calves from the improved genetics placed in a post weaning program and then either marketed as a group, retained to a feedlot or returned to the farm. The information obtained from the demonstration will be used to teach other beef producers, agribusinesses and agencies how to achieve similar results across the state.



Procedure

There are a total of 17 herds from 16 counties participating as demonstrators in the state. The herds are Spring calving and consist of up to 50 females of which up to 16 could be heifers. The producers were all provided with a pre-breeding vaccine (Bovi-Shield FP 4 + VL5) given 30 days prior to breeding. Estrus was synchronized in all females using a timed-breeding protocol in



which on Day 1, all animals were given 10 cc of Vitamin A,D&E, 2 cc of Cystorelin (GnRH) and an Eazi-Breed CIDR (progesterone vaginal insert). On Day 7, the Eazi-Breed CIDR was removed and the animal injected with 5 cc of Lutalyse (Prostaglandin F_{2alpha}). On Day 9, all animals were artificially inseminated and administered 2 cc of Cystorelin (GnRH). It must be noted that the use of Cysterolin for estrus synchronization is considered "extra-label use" and should only be used following guidelines of a veterinarian. On Day 14 following AI breeding, a clean up bull of genetics comparable to the AI bull was turned with the cows for approximately 60 days. At weaning or approximately 205 days, the calves will be weighed, graded and priced. This will be done for this year's calf crop and next year's calf crop from the improved genetics.

Sires selected for the AI breeding were based on the cow description supplied by the producer and the desires of the producer regarding breed. All of the bulls are registered Angus bulls. Sires needed to have the following EPDs with high accuracy: Birth weight - cows +3.5 or lower, heifers + 2.5 or lower, weaning weight + 40 or higher, yearling weight +80 or higher. Three of the four bulls used had above breed average EPDs for milk, even though this was not one of the criteria.

Artificial Insemination Sires

Sire Name	Reg. Number	----- EPDs -----			
		Birth Weight	Weaning Weight	Yearling Weight	Milk
Julio	13352944	+2.2	+50	+89	+22
Bottomline	13026915	+1.9	+40	+82	+12
Riptide	12677801	+1.4	+45	+83	+23
Exceptional*	12716815	+0.9	+38	+88	+21

*Used on all heifers

Supporters of the Demonstration

- Allen's Supply
- Durvet
- Merial
- Pfizer Animal Health
- Pharmacia Animal Health
- Southeast Select Sires, Inc.
- Tennessee Farmers Cooperative
- Tennessee Livestock Producers
- University of Tennessee
- Agricultural Extension Service
- Agricultural Experiment Station
- College of Veterinary Medicine
- College of Agricultural Science and Natural Resources

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