

# **PUBLICATIONS**

## **1992**

# **FIELD DAY REPORT - 1992**

**Texas A&M University Agricultural Research and  
Extension Center  
at Overton**

**Texas Agricultural Experiment Station  
Texas Agricultural Extension Service**

**Overton, Texas**

**April 30, 1992**

**Research Center Technical Report 92-1**

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## FEEDLOT AND CARCASS TRAITS OF STOCKER YEARLINGS VS. WEANLING CALVES

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**Background.** Beef cattle are traditionally weaned, sold and grazed for 3 to 6 months as stockers, and either sold again or retained and fed as yearlings in feedlots. Medium and large frame calves are often weaned between 600-800 lbs and may be transferred directly to feedlots without a stockering phase. A cooperative study between TAES Overton and Amarillo evaluated feedlot performance of two age groups of cattle. Seventy 1/2 Simmental-1/4 Brahman-1/4 Hereford steers and heifers were either: (1) winter-born, fall-weaned and stockered on ryegrass-bermudagrass pastures until about 16 months of age (n=30); or (2) fall-born, grazed on ryegrass-clover-bermudagrass until weaning at about 8 months of age (n=40). Both the fall-born calves (680 lbs) and winter-born yearlings (960 lbs) were shipped from pastures at TAES-Overton to experimental feedlots at TAES-Amarillo in mid-June. All cattle were housed in feedlot pens equipped with individual feed monitoring devices (Pinpointer® system) and fed to visual estimates of <.50 inch backfat.

**Research Findings.** Table 1 illustrates the performance of calves and yearlings during the first year of a 2-year study. Daily feed intake was not different among sex or age of calf. Yearling heifers, which entered the feedlot with the highest visual condition score (fat), had the lowest average daily gain and the highest feed:gain conversion. Calves that were sent to the feedlot directly upon weaning were on feed 33% longer than yearling cattle.

Carcass data showed differences in hot carcass weight due to sex and age; whereas, dressing percent and backfat varied only by age (Table 2). Ribeye area, yield grade, and marbling scores were similar for all groups. Yearling heifers had the highest percent USDA Choice carcasses (28%); whereas, heifer calves had the highest percent USDA Standard carcasses (26%).

**Application.** Preliminary data from the first year of this 2-year study indicated that about 80% of these Simmental crossbred steers would grade USDA Select when slaughtered at 14 to 20 months of age. And, the moderate gain and feed conversion of yearling heifers may be offset by the percent USDA Choice carcasses. Young, medium- to large-framed cattle that have been developed on high quality pastures and have had high daily gains may need to be projected to sell at USDA Select rather than spend additional time and expense in an attempt to reach USDA Choice. Additionally, there is less backfat trim and a more lean retail cut associated with these types of cattle.

Table 1. Performance of steers and heifers entering the feedlot as yearlings or immediately at weaning as calves.

Item	Steers		Heifers	
	Calves	Yearlings	Calves	Yearlings
Number	21	12	19	18
Shipping Wt., lbs <sup>ab</sup>	694	1008	666	925
Arrival Wt., lbs <sup>ab</sup>	631	927	602	852
Shrink, % <sup>a</sup>	9.0	8.1	9.5	7.9
Final Wt., lbs	1074 <sup>xy</sup>	1268 <sup>x</sup>	1050 <sup>y</sup>	1128 <sup>xy</sup>
Days on Feed <sup>b</sup>	181	121	185	122
Daily Feed Intake, lbs	19.2	18.7	18.2	183
Avg. Daily Gain, lbs	2.47 <sup>xy</sup>	2.78 <sup>x</sup>	2.47 <sup>xy</sup>	2.26 <sup>y</sup>
Feed to Gain	7.95 <sup>xy</sup>	7.26 <sup>x</sup>	7.70 <sup>xy</sup>	8.71 <sup>y</sup>

<sup>a</sup>Steers and heifers significantly different (P<.05).

<sup>b</sup>Calves and yearlings significantly different (P<.05).

<sup>xy</sup>Interaction significantly different as superscripts differ (P<.05).

Table 2. Carcass characteristics of steers and heifers entering the feedlot as yearlings or immediately at weaning as calves.

Item	Steers		Heifers	
	Calves	Yearlings	Calves	Yearlings
Number	21	12	19	18
Hot Carcass Wt., lbs <sup>ab</sup>	665	798	644	714
Dressing Percent <sup>b</sup>	61.9	63.0	61.4	63.2
Ribeye Area, sq. in.	13.8	14.2	13.9	14.2
Backfat, in. <sup>b</sup>	.27	.37	.29	.33
Yield Grade	1.65	1.90	1.51	1.84
Marbling	3.45	3.72	3.49	3.41
USDA Choice, %	4.8 <sup>y</sup>	8.3 <sup>y</sup>	5.3 <sup>y</sup>	27.8 <sup>x</sup>
USDA Select, % <sup>a</sup>	80.9	83.4	68.4	66.7
USDA Standard, %	14.3 <sup>y</sup>	8.3 <sup>yz</sup>	26.3 <sup>x</sup>	5.5 <sup>z</sup>

<sup>a</sup>Steers and heifers significantly different (P<.05).

<sup>b</sup>Calves and yearlings significantly different (P<.05).

<sup>xyz</sup>Interaction significantly different as superscripts differ (P<.05).