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Abstract

The main component of the beef industry in South Carolina is cow/calf operations. Recent advances in implant technology are being utilized to help these producers increase weights at time of sale to feedlots. The objective of this study was to determine how the use of anabolic implants in steer calves at 4 mo of age and at weaning altered weight gain at two different farm locations in South Carolina. Steers (year 1; n= 161, year 2 n=116) from Edisto REC and Simpson REC were randomly allotted into two treatment groups: 1) no implant or 2) implant at 4 mo of age plus implant at weaning. Weights were obtained at implanting, weaning, and the end of backgrounding. Real-time ultrasound measurements of the ribeye area and fat thickness were collected at the end of the backgrounding period. Data were analyzed with the treatment, location, year, and the interaction in the model. Implanting the steers increased (P<0.001) average daily gains from implanting to weaning, weaning to the end of the backgrounding, and overall by 0.36, 0.15, 0.25 lb/hd/d respectively. Implanting also increased ribeye area by 0.34 in^2. Weight and gains of the steers differed by location and year but there were no interactions between location, year, and implant treatment. The use of anabolic implants in steer calves at 4 mo of age and then again at weaning helped to increase weight gain, other desirable carcass traits and produced heavier steers for marketing.

Results

The use of implants:

- Increased overall average daily gain by 0.25 lb/hd/day
- Increased ribeye area as measured by real-time ultrasound by 0.34 in^2
- Increased average final weight by 34.55 lb/hd
- Weights and gains of steers differed by location and year but there were no interactions between location and implant treatment.

Materials & Methods

- Steers (year 1; n= 161, year 2 n=116) from two different locations, Edisto REC and Simpson REC, were randomly allotted into groups: 1) not implanted or 2) implanted.
- Steers in the implant group were implant at 4 mo of age with Ralgro (zeranol) implant and then Revalor- G (trenbolone acetate, and estradiol) implant at weaning.
- Weights were obtained at implanting, weaning and then at the end of backgrounding.
- Real-time ultrasound measurements of ribeye area and fat thickness were collected at the end of the backgrounding period (time on forage before being sold to feedlots).
- Data were analyzed with treatment, location, year, and the interaction in the model.

Conclusions

The use of anabolic implants in steer calves at 4 months of age and then again at weaning helped to increase weight gain and other desirable carcass traits such as ribeye area.

	Non-implanted	Implanted	P-value
Live Weights			
Start Weight, lb	436.12	438.50	0.7874
Wean Weight, lb	583.38	609.88	0.0084
End Weight, lb	677.69	712.24	0.0014
Average Daily Gain			
Weaning ADG, lb/d	2.26	2.62	<.0001
Backgrounding ADG, lb/d	1.38	1.53	0.0359
Overall ADG, lb/d	1.77	2.02	<.0001
Ultrasound			
Fat thickness, in	0.16	0.14	0.0399
Ribeye area, in^2	6.98	7.32	0.0118