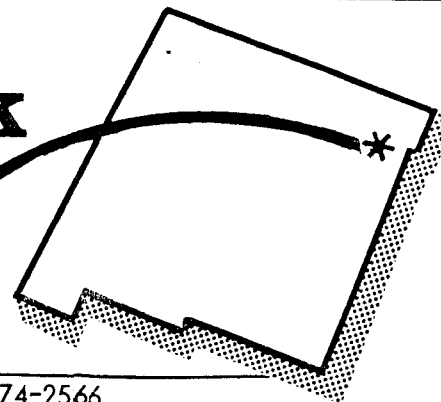




Clayton Livestock Research Center

PROGRESS REPORT



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COMPUDOSE AND TREMBOLONE ACETATE ALONE AND IN COMBINATION FOR GROWTH PROMOTION IN FINISHING CATTLE¹

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Compudose 200®, an implant containing estradiol as the active ingredient, is in common use in this country for growth promotion in beef steers. Finaplex®, an implant containing trenbolone acetate (TBA), is another anabolic steroid used in France for growth promotion in beef steers. Although TBA is not yet approved for use in the USA, the trial described herein was designed to gain information on the effects of the two implants when administered alone or in combination. One hundred fifty yearling Angus and Angus X Hereford steers were purchased and delivered to this Center for the trial. The cattle were divided into three weight groups with initial weights of 667, 720 and 773 pounds. Within each weight

group, cattle were randomly assigned to five treatment groups: (1) No implant, (2) TBA implant on day 1 and reimplanted on day 62, (3) compudose implant on day 1, (4) compudose and TBA implants on day 1 and (5) compudose and TBA implants on day 1 with TBA reimplanted on day 62. All cattle were fed a 90% concentrate ration in amounts to allow free choice consumption. The compudose implants contained 24 mg estradiol/implant and the TBA implants contained 200 mg TBA/dose. All cattle were slaughtered after 128 days on feed.

Table 1 contains the data on feed consumption, weight gains and feed to gain ratios. All implants increased feed

Table 1. Feed consumption, weight gain and feed conversion

Implant	Daily feed Intake lb.	Daily weight gain lb.	Feed per pound gain lb.
None	22.40 ^a	2.78 ^a	8.06 ^d
TBA on days 1 and 62	23.07 ^b	3.14 ^b	7.35 ^c
Compudose:			
On day 1	24.28 ^{cd}	3.33 ^c	7.29 ^{bc}
Plus TBA on day 1	24.60 ^d	3.53 ^d	6.97 ^{ab}
Plus TBA on days 1 and 62	23.85 ^c	3.44 ^{cd}	6.93 ^a

a,b,c,d Means in the same category having unlike superscripts differ (P<.05).

¹ Sponsored by Eli Lilly and Co., Indianapolis, Indiana; Nolie G. Elliston, DVM, Amarillo, Texas, Cooperator.

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intake, improved gains and reduced feed required to produce a pound of gain. Compudose produced a greater increase in gain than TBA. The stimulatory effects of the two drugs were partially additive. TBA and compudose improved gain .36 and .55 lb./day, respectively, while the combination implanted on day 1 improved gain .75 lb./day or 85% of the sum of the two when administered alone. Reimplanting TBA on day 62 when administered with compudose did not improve performance.

Table 2 shows the gains of the cattle for the first 62 days and for the 66 days

following the reimplants of TBA for those groups designed to receive the second implant. The same pattern of response to the implants was observed in the two periods with the exception that the group receiving compudose and TBA reimplant did not perform as well the last 66 days as the group receiving compudose and one implant of TBA.

These data indicate promising effects of administering compudose and TBA together. Of course, this procedure of using TBA in combination with compudose must await approval in this country.

Table 2. Gains before and after reimplanting TBA

Implant	Daily weight gain, lb.		Percent increase due to implant	
	First 62 days	66 days following date of reimplant of TBA in two groups	First 62 days	66 days following date of reimplant of TBA in two groups
None	3.26 ^a	2.33 ^a	-	-
TBA on days 1 and 62	3.69 ^b	2.62 ^b	13	12
Compudose:				
On day 1	3.89 ^b	2.81 ^{bc}	19	21
Plus TBA on day 1	4.20 ^c	2.91 ^c	29	25
Plus TBA on days 1 and 62	4.15 ^c	2.78 ^{bc}	27	19

a, b, c Means in the same category having unlike superscript differ (P<.05).

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