

## IMPLANT PRACTICES BY NUTRITIONAL CONSULTANTS: SURVEY RESULTS

M. L. Galyean  
West Texas A&M University,  
Canyon Texas Agricultural Experiment Station, Amarillo, Texas



### ABSTRACT

Eight nutritional consultants (four independent and four corporate) were surveyed to determine implant practices. These consultants serviced feedlots in all the major cattle feeding states. An estrogen plus trenbolone acetate (E + TBA) combination implant was used as the terminal implant for steers by all eight consultants, with days targeted on the terminal implant ranging from 80 to 140. For heifers, a TBA implant was the primary terminal implant when melengesterol acetate (MGA) was fed, with days on the terminal TBA implant ranging from 80 to 140. When MGA was not fed, E + TBA was the choice for the terminal implant (range in days of 80 to 140). When steers received more than one implant, the range in days on the initial implant was 40 to 70 for zeranol, and 50 to 110 for estradiol benzoate. Initial implant practices generally were similar for steers and heifers. Research questions resulting from this survey include: 1) how many days does a given implant last?; 2) what differences in performance, carcass quality grade, incidence of dark cutters, and incidence of bullers exist between aggressive (i.e., fewer days targeted on a given implant) and conservative (i.e., more days targeted on a given implant) programs?

### INTRODUCTION

Consulting nutritionists typically are responsible for designing implant practices used in the commercial beef cattle feeding industry. To gain an appreciation for the nature of implant practices in use by consultants, a telephone survey of eight consulting nutritionists was conducted. The major focus of this survey was to determine the types of implants in use and the length of time targeted for use of particular implants.

#### Procedures

A telephone survey of eight consulting nutritionists was conducted during the period of September 16 to 27, 1996. Live cattle prices averaged \$71.99/cwt for steers and \$71.95/cwt for heifers during this period; the carcass price difference between Choice and Select grades was approximately \$5.00 (TCFA, 1996). Four of the eight consultants were independent, working for various feedlots on a fee basis; the remaining four consultants worked for cattle feeding corporations. Feedlots serviced by these eight consultants were located in all the major cattle feeding states (AZ, CA, ID, KS, NE, NM, OK, and TX) in the Western U.S. and Great Plains.

Each consultant was asked a series of questions regarding their implant practices. Specific questions included:

1. What is your terminal implant (the last implant before slaughter) program for steers?
2. What is your terminal implant program for heifers? How does this program vary with the feeding of MGA?
3. How many days are targeted on the terminal implant for steers and heifers?
4. What is your initial implant program for steers and heifers that will receive more than one implant before slaughter?
5. How many days are targeted on the initial implant for steers and heifers, and how does this vary with the type of initial implant?

Each consultant was assigned a letter designation to protect anonymity; results were tabulated for specific implants types in terms of the range in days targeted for use of various implants.

#### Results and Discussion

Survey results for terminal implant use with steers are shown in Table 1. An E + TBA implant was used by all eight consultants as the terminal implant

program for steers; however, the number of days targeted on the terminal implant varied from 80 to 140. For virtually all these consultants, cattle fed for short periods (100 d) would receive only one E + TBA implant during the feeding period. The wide range in days targeted for a terminal implant among these eight consultants presumably differentiates between “aggressive” and “conservative” implant strategies. A conservative strategy would involve only one implant with E + TBA for cattle on feed for 140 d, whereas an aggressive strategy would likely involve an initial implant (targeted for 60 d) with either zeranol or estradiol benzoate, followed by a terminal implant of E + TBA targeted for 80 d. The variable use of E + TBA by Consultant C depending on how cattle were marketed suggests that choice of aggressive

or conservative strategies might vary with real or perceived differences in carcass quality.

Implant practices for heifers were impacted by the feeding of MGA; hence, results are presented for programs with or without MGA in Table 2. Typically, a TBA implant was the preferred terminal implant program for heifers fed MGA; however, two of the consultants used E + TBA implants in combination with MGA feeding. For non-MGA programs, an E + TBA implant was the preferred strategy. The range in days targeted for a particular implant was similar to the range observed for steers, as was the distribution of aggressive and conservative strategies.

Table 1. Implant practices survey: Terminal implant use with steers.

Consultant	Terminal implant <sup>a</sup>	Days on terminal implant <sup>b</sup>
A	E + TBA	80 to 130
B	E + TBA	100 to 140
C	E + TBA	80 to 85 (cash) 105 (formula)
D	E + TBA	≥ 100
E	E + TBA	80
F	E + TBA	80
G	E + TBA	80
H	E + TBA	100 to 140

<sup>a</sup>E + TBA = estrogen plus trenbolone acetate combination implant.

<sup>b</sup>For Consultant C, (cash) = days on terminal implant for cattle sold on a cash market, whereas (formula) = days on terminal implant for cattle sold on formula pricing arrangements.

Table 2. Implant practice survey: Terminal implant use with heifers

Consultant	With MGA		Without MGA	
	Terminal implant <sup>a</sup>	Days on terminal implant <sup>b</sup>	Terminal implant <sup>a</sup>	Days on terminal implant
A	TBA	80 to 110	E + TBA	80 to 130
	E + TBA	130		-
B	TBA	100 to 140	NA	-
C	TBA	80 to 85 (cash) 105 (formula)	E + TBA	≤ 140
D	E + TBA	≥ 100	E + TBA	≥ 100
E	TBA	80	E + TBA	≤ 110
F	TBA	80	E + TBA	80
G	TBA	85	NA	-
H	TBA	100 to 130	E + TBA	100 to 130

<sup>a</sup>TBA = trenbolone acetate implant; E + TBA = estrogen plus trenbolone acetate combination implant; NA = not applicable.

<sup>b</sup>For Consultant C, (cash) = days on terminal implant for cattle sold on a cash market, whereas (formula) = days on terminal implant for cattle sold on formula pricing arrangements.

For cattle that received more than one implant during the feeding period, days targeted on the initial implant are shown in Table 3. Because results were very similar for steers and heifers, only steer data are presented. Two types of implants typically were used by these eight consultants for initial implants: zeranol or estradiol benzoate. Clearly, zeranol (up to 70 d) was

targeted for fewer days of use than estradiol benzoate (up to 110 d). As with terminal implant programs, the range in days targeted for a particular implant varied considerably among consultants, again presumably reflecting aggressive vs conservative strategies.

Table 3. Implant practices survey: Days on initial implant with steers<sup>a</sup>

Consultant	Zeranol implant <sup>b</sup>	Estradiol benzoate implant <sup>c</sup>
A	≤ 60	≤ 80
B	≤ 70	≤ 100
C	≤ 60	≤ 90
D	NA	≥ 50
E	≤ 70	≤ 110
F	≤ 40	≤ 70
G	≤ 60	≤ 90
H	≤ 60	≥ 50

<sup>a</sup>Steer data are generally applicable to heifers.

<sup>b</sup>NA = not applicable.

<sup>c</sup>Includes 72-mg zeranol implant for Consultant C.

Generally, these results suggest that the implants currently available for use in feedlot beef cattle production offer a wide range of possibilities of application in practice. A clearer understanding of how long a given implant should last (i.e., how long an implant provides an efficacious response in performance) seems needed. Moreover, more information is needed to determine the effects of

aggressive and conservative implant programs on performance, carcass quality, meat tenderness, incidence of bullers, and so on. Answers to such questions should provide practicing nutritionists with the tools needed to design implant strategies that will meet a variety of production and marketing goals.

#### LITERATURE CITED

TCFA. 1996. Texas Cattle Feeders Association Newsletter. Vol. 49, Nos. 37 and 38, Amarillo, TX.

#### QUESTIONS & ANSWERS

**Horn:** Did you ask consultants about their current feed costs and the choice-select price spread?

**A:** No, I didn't. I surveyed consultants about two months ago, but I didn't ask that question.