

## Performance Responses and Extra Economic Returns of Beef Calves Receiving Comprehensive Preconditioning Programs with Aureo S 700®

### Summary

Feedlot operators prefer preconditioned cattle. Even minimal preconditioning (bunk breaking and/or water tanks) can mean a week or less time on feed. The study described in this Technical Bulletin shows that a comprehensive preconditioning program can indeed pay off for the producer.

This study evaluated comprehensive preconditioning programs with Aureo S 700 for beef calves, in the presence of respiratory disease, as measured by performance responses and resulting economic returns. Three groups of beef steer and bull calves of mixed origin (approximately 100 head/group) were purchased at auction in early fall and winter. They were commingled and shipped to a beef test station within the state.

On arrival, all animals received multivalent clostridial and respiratory disease vaccines. They were randomly selected, separated and assigned to four preconditioning groups. One group served as a minimal preconditioning, nonmedicated control, and the rest were divided into three comprehensive preconditioning groups. All three groups received Aureo S 700 for 42 to 48 days (average 43 days) as well as standard implant, antiparasitic and injectable multivitamin products commonly used in preconditioning programs.

Calves on the comprehensive preconditioning programs that included Aureo S 700 showed higher average daily and total weight gains, resulting in greater economic returns over the controls.

### Treatment Groups

- Group A: minimal preconditioning controls – nonmedicated feed and hay.

Comprehensive preconditioning Groups B, C and D received the following programs for 42 to 48 days (average 43 days), as well as standard implant, antiparasitic and injectable multivitamin products commonly used in preconditioning programs:

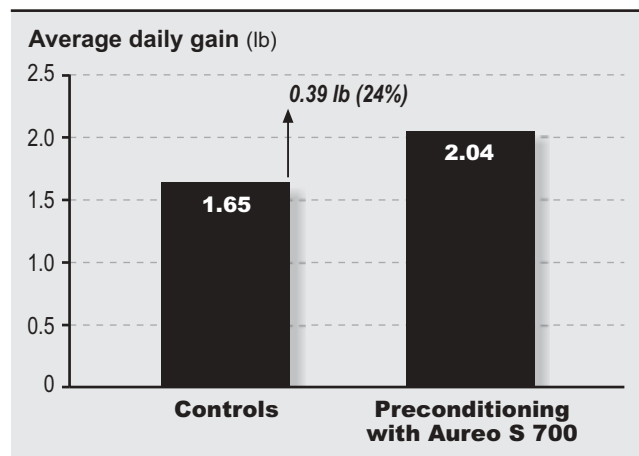
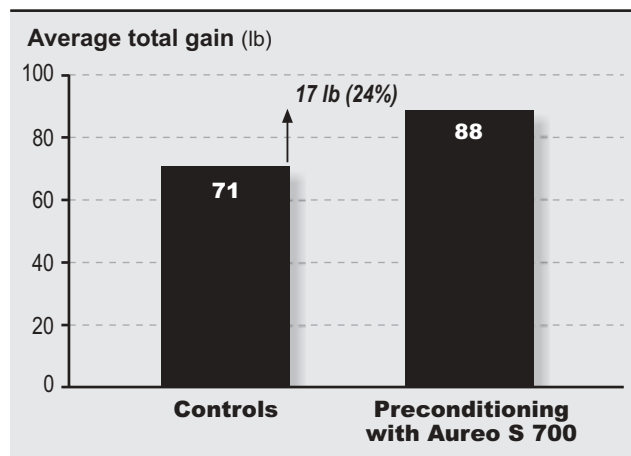
- Group B: Aureo S 700 in Brand A starter preconditioning grain and hay;
- Group C: Aureo S 700 in Brand B starter preconditioning grain and hay;
- Group D: Aureo S 700 plus home-mixed grain and hay.

### Performance

Calves receiving the comprehensive preconditioning programs that included Aureo S 700 for 43 days (average) showed 0.39 lb (24%) higher ADG and 17 lb greater total gain than the controls (Table 1, Figures 1 and 2).

**TABLE 1.** Performance of weaned calves receiving comprehensive preconditioning programs with Aureo S 700 (average 43 days on test).

	Controls		Aureo S 700	
	A	B	C	D
No. of head	15	87	88	88
Avg. daily gain (lb)	1.65	1.91	2.16	2.04
Avg. initial weight (lb)	492	479	480	482
Avg. final weight (lb)	563	561	573	570
Avg. total gain (lb)	71	82	93	88

**FIGURE 1:** Average daily gain (combined averages of three treatment groups).**FIGURE 2:** Average total gain (combined averages of three treatment groups).

### Economics

On a combined average basis (refer to Figures 1 and 2, 43 days), the value of the additional total gain of comprehensively preconditioned calves at \$0.60 to \$1.00/lb ranged from \$10.20 to \$17.00 per head, respectively, compared to the controls (Table 2). At a total treatment cost of \$6.10 for Aureo S 700 and the other products used (standard implant, antiparasitic and injectable multivitamin products), the extra return from comprehensive preconditioning ranged from \$4.10 to \$10.90 per head, respectively, over the controls. These represent the extra returns that would have been lost if the producer did not use the comprehensive preconditioning programs with Aureo S 700.

**TABLE 2.** Economic summary.

	Market value of gain (\$/lb)				
	0.60	0.70	0.80	0.90	1.00
Value of extra gain (\$/head)	10.20	11.90	13.60	15.30	17.00
Total cost of preconditioning products (\$/head)	6.10	6.10	6.10	6.10	6.10
Return on investment (ROI)	1.7:1	2.0:1	2.2:1	2.5:1	2.8:1
Extra return (\$/head)	4.10	5.80	7.50	9.20	10.90

NOTE: Aureo S 700 is approved for use as an aid in the maintenance of weight gains in the presence of respiratory disease, such as shipping fever, in beef cattle when fed for 28 days.



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