



**RIGHT IMPLANT.  
RIGHT TIME.  
RIGHT RESULT.**

**IMPLANT STRATEGIES FOR ALL  
STAGES OF BEEF PRODUCTION.**



# IMPLANT FOR IMPACT.

*IMPLANTS CAN HELP INCREASE ANIMAL GAINS IN EACH PHASE OF BEEF PRODUCTION AND REDUCE PRODUCTION COSTS. HOWEVER, BECAUSE POTENCY, TIMING, PAYOUT AND MANAGEMENT CAN AFFECT GROWTH AND MARBLING, A STRATEGIC APPROACH IS REQUIRED TO MAXIMIZE LIFETIME GAIN WHILE MINIMIZING REDUCTION IN CARCASS QUALITY.*

All implants are designed to release compounds slowly into the bloodstream of the animal. This period or lifespan of the implant is referred to as the “payout” period.

As animals mature, implants with increasing potency are used, with cattle typically receiving three or more implants during their lifetime.

**Suckling** – low potency

**Growing** – moderate potency

**Feedlot** – moderate followed by high potency  
80 to 100 days prior to slaughter

But more implants might not necessarily mean more in terms of weight gain, carcass quality and return on investment.

## COMMERCIALLY AVAILABLE IMPLANTS FROM MERCK ANIMAL HEALTH

Product	Trenbolone Acetate (TBA), mg	Estradiol, mg	Pellets	TBA: Estradiol Ratio	Payout (days)
<b>Weaned Grazing Steers and Heifers</b>					
Revalor®-G	40	8	2	5:1	150
<b>Heifers Fed in Confinement for Slaughter</b>					
Revalor®-IH	80	8	4	10:1	130
Revalor®-H	140	14	7	10:1	130
Revalor®-200	200	20	10	10:1	130
Revalor®-XH	200	20	10*	10:1	200
Finaplix®-H	200	0	10	N/A	105
<b>Steers Fed in Confinement for Slaughter</b>					
Revalor®-IS	80	16	4	5:1	130
Revalor®-S	120	24	6	5:1	130
Revalor®-200	200	20	10	10:1	130
Revalor®-XS	200	40	10*	5:1	200

<b>Suckling, Grazing and Confinement Steers and Heifers</b>			
Product	Zeranol, mg	Pellets	Payout (days)
Ralgro®	36	3	90

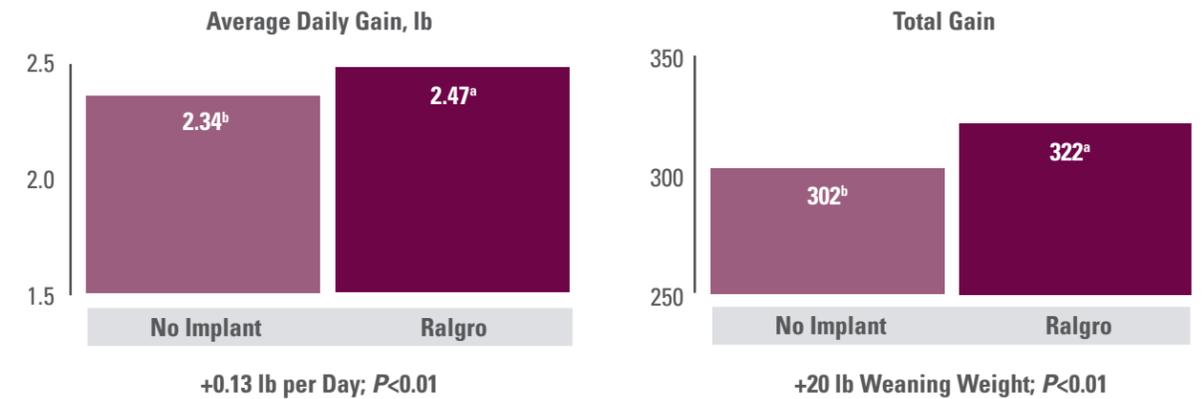
\*4 immediate release, 6 delayed release (around day 70)

## SUCKLING CALF IMPLANT STRATEGY



Implants for nursing calves contain a different (less aggressive) and/or lower dose active ingredient compared to products for older cattle. However, research shows that a single Ralgro implant is sufficient to provide maximum improvements in daily gain in suckling calves.

AVERAGE DAILY GAINS AND WEIGHT GAINS FOR SUCKLING CALVES GIVEN A SINGLE RALGRO IMPLANT<sup>1</sup>



— AROUND A —

# \$1 = 20

INVESTMENT EXTRA LBS.

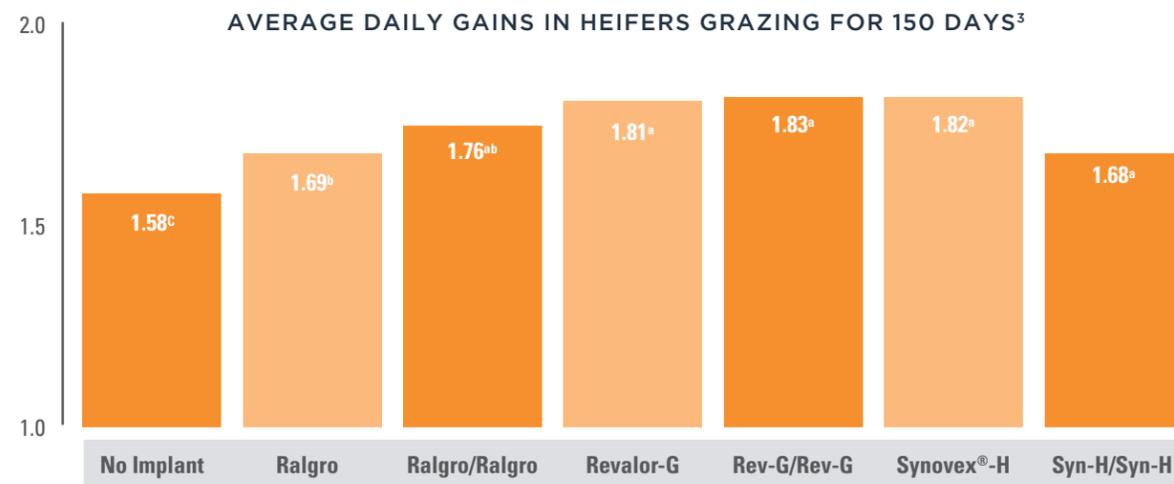
AVERAGE DAILY GAINS COMPARED IN SUCKLING CALVES IMPLANTED WITH ONE OR TWO RALGRO IMPLANTS<sup>2</sup>

	Controls	Single Ralgro Implant	Ralgro Reimplanted
Simms, et al., 1983	2.11	2.17	2.3
Simms, et al., 1983	1.91	1.96	1.95
Simms and Schalles, 1984	2.06	2.12	2.19
Simms, 1986	2.08	2.25	2.21
Simms, 1986	1.89	1.93	1.95
Simms, et al., 1986	1.78	1.83	1.87
Bagley, et al., 1989	1.56	1.63	1.62
Adams, et al., 1991	1.81	1.94	1.99
Average	1.90	1.98	2.01

## GRAZING CATTLE (STOCKER) IMPLANT STRATEGIES

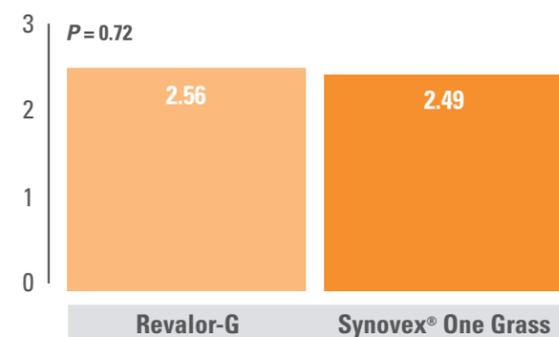


Typically, stocker cattle are grazed for 150 days or less. Most stocker implants contain a moderate dose of active ingredient. The practical payout period of each implant in any given production scenario depends on the carrier ingredients in the implant, the hormone dose and size of the animal. For example, in cattle grazing for 150 days or less, a single Revalor-G implant provided gains that were similar or better than other implant programs with greater hormone concentrations, including reimplant programs to extend payout. Typically, more hormone or extended payout beyond what is provided by a single Revalor-G is not needed in stocker cattle grazing for 150 days or less.



<sup>a</sup>Means for that lack common superscript differ P< 0.05

**AVERAGE DAILY GAINS IN STEERS GRAZING FLINT HILLS GRASS FOR 90 DAYS<sup>4</sup>**



## FINISHING CATTLE IMPLANT STRATEGIES

The length of the finishing period can vary greatly in different classes of cattle which will impact the implant strategy.

### OPERATORS HAVE SEVERAL OPTIONS FOR TERMINAL IMPLANTS INCLUDING:

- Using a single implant (lasting around 100 to 130 days)
- Reimplanting to extend payout
- A single, dual-phase release (two doses in a single implant, immediate and delayed)

### GOALS

- Maximize growth and efficiency OR
- Maximize carcass quality
- Target a market date or days on feed

### OTHER CONSIDERATIONS:

- Risk of loss of feed intake due to reimplant/stress on cattle
- Labor and facilities to reimplant cattle
- Risk of injury to employees and cattle
- Potential for inclement weather at time of reimplant

To meet their desired performance and carcass quality goals, producers should work with a



qualified nutritionist to design a nutrition and cattle management program.

### OPTIMAL DAYS ON TERMINAL IMPLANT

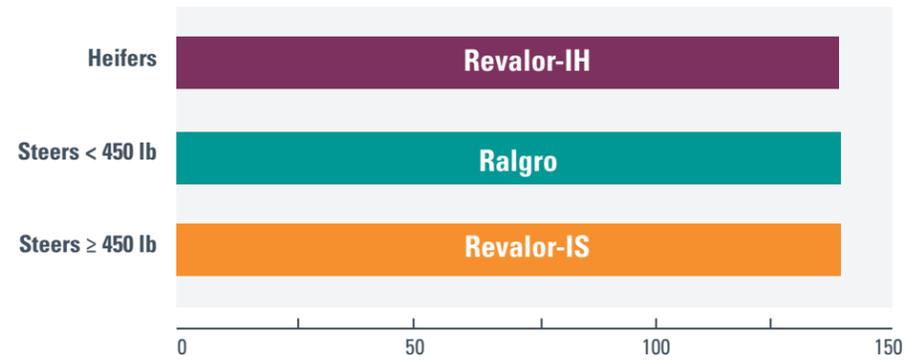
Item	Feed: Grain	Hot Carcass Weight, lb
Optimal days on terminal implant (DOT)	90 Days	94 Days
Value for variable at optimal DOT	5.37	769 lb
	Expected Differences	
± 7 days from optimal DOT	+ 0.002	- 0.113 lb
± 14 days from optimal DOT	+ 0.008	- 0.451 lb
± 21 days from optimal DOT	+ 0.033	- 1.803 lb

Research has shown that the optimal number of days on the terminal (i.e., last) implant is between 90 and 94 days in finishing cattle, unless it is a dual-phase extended payout implant such as Revalor-XS or Revalor-XH.

# IMPLANT STRATEGIES FOR EVERY STAGE

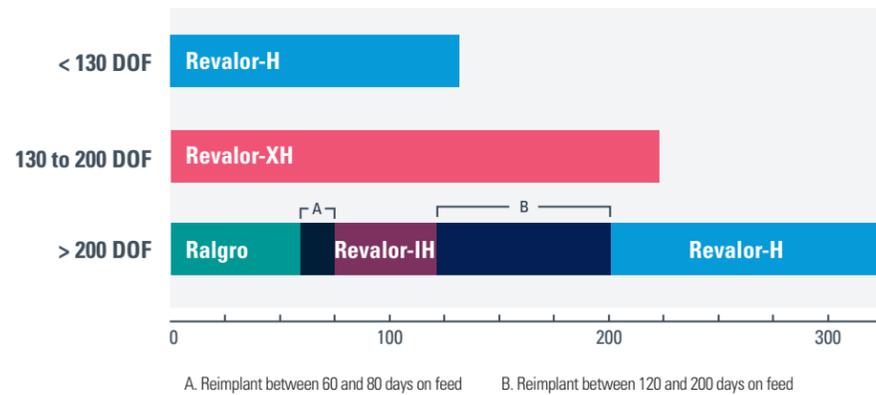
## GROWING/BACKGROUNDING - STEERS AND HEIFERS<sup>5-7</sup>

### GROWTH FOCUSED

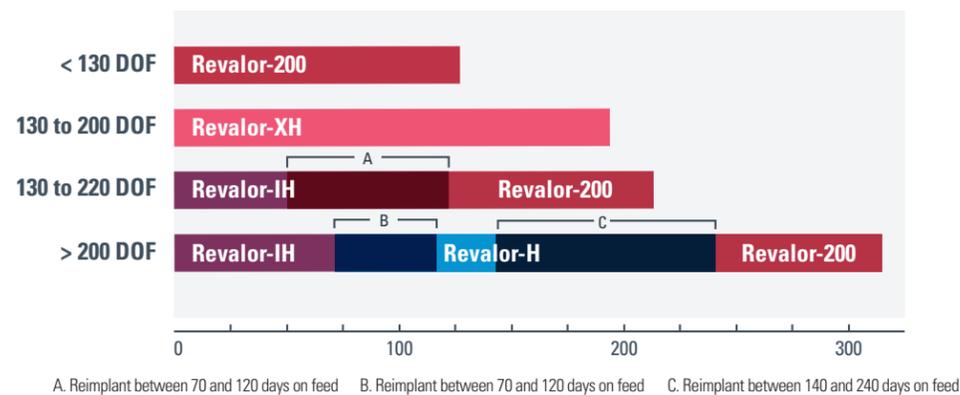


## FINISHING - HEIFERS<sup>8-10</sup>

### CARCASS QUALITY AND LABOR FOCUSED IMPLANT PROGRAMS - HEIFERS

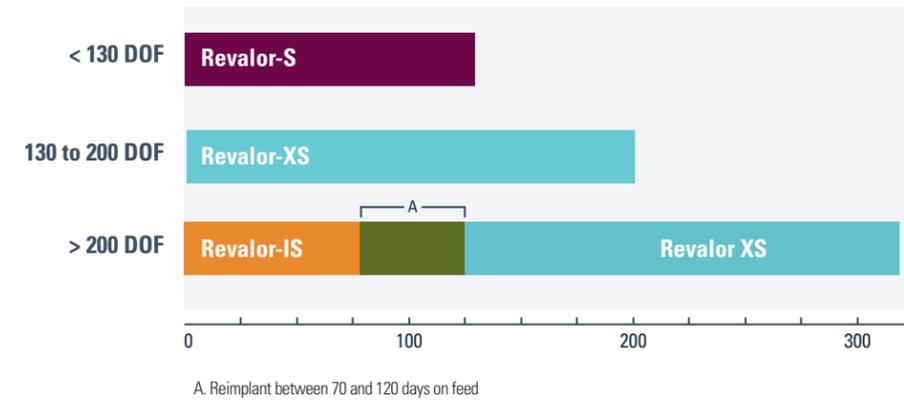


### GROWTH PERFORMANCE FOCUSED IMPLANT PROGRAMS - HEIFERS

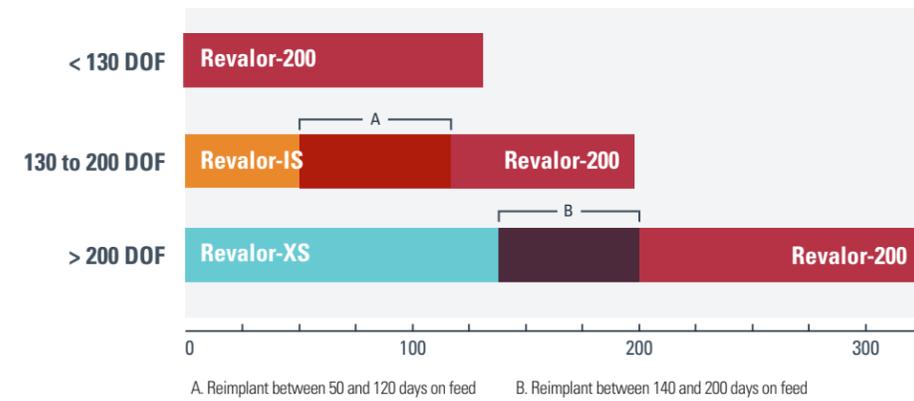


## FINISHING - STEERS<sup>11-16</sup>

### CARCASS QUALITY AND LABOR FOCUSED IMPLANT PROGRAMS - STEERS



### GROWTH PERFORMANCE FOCUSED IMPLANT PROGRAMS - STEERS



### CALF-FED HOLSTEIN IMPLANT PROGRAMS - STEERS





## REFERENCES:

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2. Selk G. Implants for suckling steer and heifer calves and potential replacement heifers. In *Proceedings: Impact of implants on performance and carcass value of beef cattle.* Oklahoma State University.1997;P957:40.
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4. Farney J, Corrigan ME. 417 Evaluation of two grass-based implants in a short season summer grazing management practice. *J Anim Sci.* 2018;96:224.
5. Merck Study IV-Rev-IH-TR1: Evaluation of Various Implant Programs for Light Weight Finishing Heifers on Performance and Carcass Merit.
6. Merck Study IV-Rev-IS-TR1: Evaluation of Various Implant Programs for Light Weight Finishing Steers on Performance, Carcass Merit and Beef Tenderness.
7. Merck Study Wyoming-R-114: The effect of Ralgro in steers fed growing rations of corn and corn silage.
8. Merck Study MS-Revalor-XH-2-15: Effect of Revalor-XH Compared with Revalor-IH Followed By Revalor-200 on Feedlot Performance and Carcass Characteristics of Heifers Fed to Three Different Endpoints.
9. Merck Study MS-Revalor-XH-1-15: Evaluation of Revalor-XH, a new extended release, long acting implant in beef heifers.
10. Merck Study MS-Revalor-XH-8-17: Comparison of Revalor-XH, Revalor-200 and Revalor-IH/Revalor-200 re-implant program on feedlot performance and carcass traits of yearling heifers.
11. Merck Study X-1: The effect of Revalor-XS when compared to a reimplant program of Revalor-IS followed by Revalor-S or a single Revalor-S on feedlot performance and carcass traits in finishing steers fed for 131 days.
12. Merck Study X-3: The effect of Revalor-XS when compared to a reimplant program of Revalor-IS followed by Revalor-S on feedlot performance and carcass traits in finishing steers fed for 197 days.
13. Merck Study AHBT-RX-09-11: 204-Day Revalor-XS vs. Revalor-IS Re-implanted with Revalor-200 or Revalor-S.
14. Merck Study MS-Revalor-XS-01-11: Impact of Revalor-XS in an Aggressive Implant Strategy on Performance, Animal Health, and Carcass Characteristics of Steers on Feed 220 Days.
15. Merck Study AHBT-RX-09-02: Growth Performance and Carcass Characteristics by Yearling Steers Implanted with Revalor-IS followed by Revalor-200 or Revalor-XS.
16. Merck Study AHBT-RX-09-01: 360-Day Revalor-XS implant strategies in calf-fed Holsteins.

## MAXIMIZING YOUR INVESTMENT

Implants are one of the most cost-effective technologies available to cattle producers with returns of six to 30 times per dollar spent depending on phase of production. By working with the end result in mind and their veterinarians and nutritionists, producers can maximize their results by implanting at the right time with the right product.

**REVALOR.COM**

**IMPORTANT SAFETY INFORMATION:**

A WITHDRAWAL PERIOD HAS NOT BEEN ESTABLISHED FOR REVALOR, FINAPLIX OR RALGRO IN PRE-RUMINATING CALVES. DO NOT USE IN CALVES TO BE PROCESSED FOR VEAL. FOR COMPLETE PRODUCT INFORMATION, REFER TO PRODUCT LABELS.

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