Implant Considerations at the Ranch & Feedyard

Robbi H. Pritchard, Ph.D.
Considerations of implant use

• Consumer views
• Superior genetics
• Logistics
• Another Management Issue
• Impact on Product
Considerations of implant use

• Reduce Labor / serving of beef
• Reduce C footprint / serving beef
• Increase WW and HCW without having to change cows or bulls
• Don’t cause dystocia
• Most reliable & predictable tool we have
Considerations of implant use

Greed is a Sin

Ignorance is no excuse
What we were doing

- Calves born late Mar- May 1
- Syn C at branding or Aug
- Wean Halloween at 675 lb
- Syn S at pre-Thanksgiving
- Syn Plus at Valentines Day
- Ship at Memorial Day
What we were doing - OutCome

Calves born late Mar- May 1
Syn C at branding or Aug
Wean Halloween at 675 lb
Syn S at preThanksgiving
Syn Plus at Valentines Day
Ship at Memorial Day

HCW 865 lb
CAB 42%
Cho or better 94%
Y4 15%
Suckling Calf Implants

- No influence on post-weaning performance
- No influence on Quality Grade
- Added WW is sustained to hot carcass scale
- Systemwide favorable outcomes require
  - communication and proper strategy
## WW & Suckling Calf Implants

<table>
<thead>
<tr>
<th>Cows</th>
<th>None</th>
<th>May</th>
<th>August</th>
<th>Average</th>
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<tbody>
<tr>
<td>Young</td>
<td>518&lt;sup&gt;a&lt;/sup&gt;</td>
<td>527&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>543&lt;sup&gt;b&lt;/sup&gt;</td>
<td>530</td>
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<tr>
<td>Mature</td>
<td>561&lt;sup&gt;c&lt;/sup&gt;</td>
<td>601&lt;sup&gt;e&lt;/sup&gt;</td>
<td>578&lt;sup&gt;d&lt;/sup&gt;</td>
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## WW & Suckling Calf Implants

<table>
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<tr>
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<th>Cows</th>
<th>None</th>
<th>May</th>
<th>August</th>
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<tbody>
<tr>
<td>Young</td>
<td>None</td>
<td>518(^a)</td>
<td>527(^{a,b})</td>
<td>543(^b)</td>
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<tr>
<td>Mature</td>
<td>None</td>
<td>561(^c)</td>
<td>601(^e)</td>
<td>578(^d)</td>
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<tr>
<td>Average</td>
<td>None</td>
<td>540</td>
<td>564</td>
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</tr>
<tr>
<td>Average</td>
<td>540</td>
<td>564</td>
<td>561</td>
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Mature - May Young – Aug 575 lb
Weaning Wt since 1990

Graph Compliments of Z Smith

WW, lb = 542 + 4.74x
$r^2 = 0.41$
What Implants Do

• Response is Potency Dependent
• Response is % basis
• Estradiol increases Frame Size
• Animals revert to genetic potential if therapy is withdrawn
<table>
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<tr>
<th></th>
<th>No Impl</th>
<th>Branding Only</th>
<th>Weaning Only</th>
<th>Both Implants</th>
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<tr>
<td>WeanWt</td>
<td>610</td>
<td>650</td>
<td>610</td>
<td>650</td>
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<tr>
<td>120d Wt (Feb)</td>
<td>784</td>
<td>784</td>
<td>801</td>
<td>841</td>
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<tr>
<td>Postwean CoG, $/cwt</td>
<td></td>
<td></td>
<td>80.60</td>
<td>81.61</td>
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<tr>
<td>Marginal $/Cow</td>
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<td>(3.13)</td>
<td>8.83</td>
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Options on the Ranch Selling at...

a) Weaning
b) 45 days post-weaning
c) 100 days post-weaning
d) Carry over to grass
e) R-O high performance
Options on the Ranch Selling at…

a) Weaning  
  branding Syn C or Ralgro

b) 45 days post-weaning  
  lo dose reimplant in Aug

c) 100 days post-weaning  
  a) + mod dose implant (at or after)

d) Carry over to grass  
  none on cow or at weaning

e) R-O high performance  
  see slide 5
Options on the Ranch

Creep feeder - you need to implant

Fenceline weaning – no implant at that time

Deworm – except at high plains branding

Downsizing cow weights – calves need implant frame boost
Post-Weaning Implants

• Strategies can add 75 – 100 lb to Mkt Wt at same days on feed

• Match Potency to Frame Size & Caloric Intake

• Grade depression is inadequate caloric intake
  • Mistake happens on the front end
  • Mistake cannot be resolved without increasing Y4 carcasses
Ribfat, Marbling v HCW

Bruns et al., 1999
Feedlot Implants

• Step up dosage over time
• Terminal Potency pays best as growth curve tries to fatten
• Get your days count right!!!
• Adjust Potency to Frame Size at diet NE fed
• No upside to O/D. O/D does have downside ramifications.
Long Acting Implants

Crescent wrench or combination wrenches

Elanco – Compudose and Encore

Merck – Revalor XS and Revalor XH

Zoetis – Synovex One Grass and Synovex One Feedlot

Products are Very different in function
Figure 1. Biphasic nature of hormone absorption from an ear implant.

- Threshold "a"
- Threshold "b"
- Threshold "c"

Serum Concentration, pg/ml versus Days after implantation. Brandt. 1997
Figure 1. Biphasic nature of hormone absorption from an ear implant.

Brandt. 1997
Figure 1. Biphasic nature of hormone absorption from an ear implant.

Brandt. 1997
Long Acting Implants or Re-implant

Control and Adaptability

Performance

Logistics, Labor, Facilities, & Management

Price
Consider This…

There are 2 classes of cattle that don’t benefit from implants.
  I. Sick or Parasitized
  II. Massive. Think Canadian Simm x

Management Matters
  I. Nutritional Environ, Feed/Bunk Mgmt, Implant Strategy
  II. Mud
Wrap Up

The 3 things to worry about regarding implants.

Not using them

Not getting them administered properly

Using them without sound technical advice
Thank you
<table>
<thead>
<tr>
<th>Cattle Class</th>
<th>System</th>
<th>Active Ingredients</th>
<th>mg (*)</th>
<th>Original Brand</th>
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<tr>
<td>S, H, C</td>
<td>P, F</td>
<td>Zeranol</td>
<td>36‡</td>
<td>Ralgro</td>
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<tr>
<td>S, H, C</td>
<td>F</td>
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<td>Synovex C</td>
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<tr>
<td>S</td>
<td>F</td>
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<td>Ralgro Magnum</td>
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<tr>
<td>S</td>
<td>P, F</td>
<td>Trenbolone Acetate (TBA)</td>
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<tr>
<td>H</td>
<td>F</td>
<td>TBA</td>
<td>200</td>
<td>Finaplix H</td>
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<tr>
<td>S</td>
<td>P, F</td>
<td>Estradiol B</td>
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<td>Synovex S</td>
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<th>Original Brand</th>
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<tr>
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<td>Revalor-G</td>
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<td>Revalor IH</td>
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<tr>
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<td>F</td>
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<td>14 (10)</td>
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<td>F</td>
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<td>Revalor XS (timed release)</td>
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<tr>
<td>S, H</td>
<td>F</td>
<td>Estradiol B</td>
<td>28(20)</td>
<td>Synovex One Feedlot (timed release)</td>
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</table>

a S = Steer; H = heifer; c = suckling calves; b P = pasture, F = feedlot; * Estradiol equivalent, mg; ‡ As zeranol