Senior Retail Meat Cut Identification – 2014

INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each retail meat cut. Use capital letters and write neatly. Seniors provide answers for retail cut name, species of cut, and wholesale cut of origin. Each question is worth 5 points (150 points total for Seniors).

<table>
<thead>
<tr>
<th>Retail Cut Name</th>
<th>Species of Cut</th>
<th>Wholesale Cut of Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 48</td>
<td>L</td>
<td>J</td>
</tr>
<tr>
<td>2. 13</td>
<td>B</td>
<td>D</td>
</tr>
<tr>
<td>3. 66</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td>4. 2</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>5. 63</td>
<td>L</td>
<td>O</td>
</tr>
<tr>
<td>6. 77</td>
<td>P</td>
<td>T</td>
</tr>
<tr>
<td>7. 50</td>
<td>L</td>
<td>K</td>
</tr>
<tr>
<td>8. 73</td>
<td>P</td>
<td>T</td>
</tr>
<tr>
<td>9. 46</td>
<td>B</td>
<td>H</td>
</tr>
<tr>
<td>10. 57</td>
<td>L</td>
<td>L</td>
</tr>
</tbody>
</table>

Retail Names – to be used in answer column 1 by Seniors

Beef Retail Meat Cuts
1. Beef for stew
2. Brisket, point half
3. Brisket, whole
4. Arm roast
5. Arm roast, boneless
6. Arm steak
7. Arm steak, boneless
8. Blade roast
9. Blade steak
10. 7-bone roast
11. 7-bone steak
12. Flank steak
13. Sirloin steak, flat bone
14. Sirloin steak, pin bone
15. Sirloin steak, round bone
16. Sirloin steak, wedge bone
17. Sirloin steak, shell
18. Sirloin steak, boneless
19. Tenderloin steak
20. Porterhouse steak
21. T-bone steak
22. Top loin steak
23. Top loin steak, boneless
24. Short ribs
25. Skirt steak
26. Rib roast, large end
27. Rib roast, small end
28. Rib steak, small end
29. Rib steak, small end, boneless
30. Ribeye roast
31. Ribeye steak
32. Bottom round roast
33. Bottom round steak
34. Eye round roast
35. Eye round steak
36. Heel of round roast
37. Rump roast, boneless
38. Round steak
39. Round steak, boneless
40. Tip roast
41. Tip roast, cap off
42. Tip steak
43. Tip steak, cap off
44. Top round roast
45. Top round steak
46. Cross cuts
47. Cross cuts, boneless

Lamb Retail Meat Cuts
48. Breast
49. Breast riblets
50. American style roast
51. Leg Center slice
52. French style roast
53. Leg shank half
54. Sirloin chop
55. Leg sirloin half
56. Loin chop
57. Loin double chop
58. Loin roast
59. Rib chop
60. Rib roast
61. Rib roast, boneless
62. Shanks
63. Blade chop
64. Neck slice
65. Shoulder square cut

Pork Retail Meat Cuts
66. Fresh ham center slice
67. Fresh ham rump portion
68. Fresh ham shank portion
69. Fresh side pork
70. Blade chop
71. Blade roast
72. Butterfly chop
73. Center rib roast
74. Center loin roast
75. Loin chop
76. Rib chop
77. Sirloin chop
78. Top loin chop
79. Arm picnic roast
80. Arm roast
81. Arm steak
82. Blade Boston roast
83. Sliced bacon
84. Smoked jowl
85. Smoked Canadian Style Bacon

Species of Cut – to be used in answer column 2 by Seniors
(You may use the letter more than once!!)

B. Beef L. Lamb P. Pork

Wholesale Cut of Origin – to be used in answer column 3 by Seniors

Beef Wholesale Cuts
A. Brisket
B. Chuck
C. Flank
D. Loin
E. Plate
F. Rib
G. Round
H. Shank
I. Variety cut

Lamb Wholesale Cuts
J. Breast
K. Leg
L. Loin
M. Rack
N. Shank
O. Shoulder

Pork Wholesale Cuts
P. Belly (Side, Bacon)
Q. Boston Butt
R. Ham
S. Jowl
T. Loin
U. Picnic Shoulder
4
## Senior Livestock Feed Identification – 2014

INSTRUCTIONS: For each sample, use the columns on the right to choose the number or letter that indicates your answer for each livestock feedstuff. Use capital letters and write neatly. **Seniors** provide answers for feedstuff name, nutrient group, and characteristics/uses of the feedstuff. Each question is worth 5 points (150 points total for Seniors).

<table>
<thead>
<tr>
<th>Feedstuff Name</th>
<th>Nutrient Group</th>
<th>Characteristics/Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>21</strong></td>
<td><strong>B or C</strong></td>
<td><strong>M</strong></td>
</tr>
<tr>
<td>2. <strong>37</strong></td>
<td><strong>C</strong></td>
<td><strong>E</strong></td>
</tr>
<tr>
<td>3. <strong>38</strong></td>
<td><strong>B</strong></td>
<td><strong>N</strong></td>
</tr>
<tr>
<td>4. <strong>73</strong></td>
<td><strong>B</strong></td>
<td><strong>C</strong></td>
</tr>
<tr>
<td>5. <strong>33</strong></td>
<td><strong>P</strong></td>
<td><strong>H</strong></td>
</tr>
<tr>
<td>6. <strong>52</strong></td>
<td><strong>P or F</strong></td>
<td><strong>G</strong></td>
</tr>
<tr>
<td>7. <strong>1</strong></td>
<td><strong>P or C</strong></td>
<td><strong>A</strong></td>
</tr>
<tr>
<td>8. <strong>56</strong></td>
<td><strong>C</strong></td>
<td><strong>I</strong></td>
</tr>
<tr>
<td>9. <strong>49</strong></td>
<td><strong>C</strong></td>
<td><strong>D</strong></td>
</tr>
<tr>
<td>10. <strong>15</strong></td>
<td><strong>C</strong></td>
<td><strong>B</strong></td>
</tr>
</tbody>
</table>

### Feed Names – to be used in answer column 1 by Seniors
1. Alfalfa cubes  
2. Alfalfa pasture  
3. Barley (whole)  
4. Blood meal  
5. Brewers dried grain  
6. Canola meal  
7. Copper sulfate  
8. Corn distillers dried grain  
9. Corn distillers dried grain with soluble  
10. Corn gluten feed  
11. Copper Sulfate  
12. Cottonseed (whole)  
13. Cottonseed hulls  
14. Cottonseed meal  
15. Cracked shelled corn  
16. Crimped oats  
17. Defluorinated rock phosphate  
18. Dicalcium phosphate  
19. DL-methionine  
20. Dried Beet pulp  
21. Dried molasses  
22. Dried skim milk  
23. Feather meal  
24. Fish meal  
25. Grain sorghum (whole)  
26. Ground ear corn  
27. Ground limestone  
28. Ground shelled corn  
29. Kentucky Bluegrass pasture  
30. L-lysine HCl  
31. L-threonine  
32. L-tryptophan  
33. Linseed meal  
34. Liquid molasses  
35. Meat and bone meal  
36. Millet (whole)  
37. Oats (whole)  
38. Oat hulls  
39. Orchardgrass hay  
40. Orchardgrass pasture  
41. Oyster shells  
42. Peanut meal  
43. Red Clover hay  
44. Red Clover pasture  
45. Roller dried whey  
46. Rye (whole)  
47. Salt, white  
48. Santoquin  
49. Shelled corn  
50. Soybean hulls  
51. Soybean meal  
52. Soybeans (whole)  
53. Spray-dried animal plasma  
54. Spray-dried whey  
55. Steam flaked corn  
56. Steam rolled barley  
57. Steam rolled oats  
58. Steamed bone meal  
59. Sunflower meal  
60. Tall Fescue hay  
61. Tall Fescue pasture  
62. Timothy hay  
63. Timothy pasture  
64. Trace-mineral premix  
65. Trace-mineralized salt  
66. Triticale (whole)  
67. Tryptosine  
68. Urea  
69. Vegetable oil  
70. Vitamin premix  
71. Wheat (whole)  
72. Wheat bran  
73. Wheat middlings  
74. White Clover hay  
75. White Clover pasture  
76. Alfalfa cubes  
77. Alfalfa pasture  
78. Barley (whole)  
79. Blood meal  
80. Brewers dried grain  
81. Canola meal  
82. Copper sulfate  
83. Corn distillers dried grain  
84. Corn distillers dried grain with soluble  
85. Corn gluten feed  
86. Copper Sulfate  
87. Cottonseed (whole)  
88. Cottonseed hulls  
89. Cottonseed meal  
90. Cracked shelled corn  
91. Crimped oats  
92. Defluorinated rock phosphate  
93. Dicalcium phosphate  
94. DL-methionine  
95. Dried Beet pulp  
96. Dried molasses  
97. Dried skim milk  
98. Feather meal  
99. Fish meal  
100. Grain sorghum (whole)  
101. Ground ear corn  
102. Ground limestone  
103. Ground shelled corn  
104. Kentucky Bluegrass pasture  
105. L-lysine HCl  
106. L-threonine  
107. L-tryptophan  
108. Linseed meal  
109. Liquid molasses  
110. Meat and bone meal  
111. Millet (whole)  
112. Oats (whole)  
113. Oat hulls  
114. Orchardgrass hay  
115. Orchardgrass pasture  
116. Oyster shells  
117. Peanut meal  
118. Red Clover hay  
119. Red Clover pasture  
120. Roller dried whey  
121. Rye (whole)  
122. Salt, white  
123. Santoquin  
124. Shelled corn  
125. Soybean hulls  
126. Soybean meal  
127. Soybeans (whole)  
128. Spray-dried animal plasma  
129. Spray-dried whey  
130. Steam flaked corn  
131. Steam rolled barley  
132. Steam rolled oats  
133. Steamed bone meal  
134. Sunflower meal  
135. Tall Fescue hay  
136. Tall Fescue pasture  
137. Timothy hay  
138. Timothy pasture  
139. Trace-mineral premix  
140. Trace-mineralized salt  
141. Triticale (whole)  
142. Tryptosine  
143. Urea  
144. Vegetable oil  
145. Vitamin premix  
146. Wheat (whole)  
147. Wheat bran  
148. Wheat middlings  
149. White Clover hay  
150. White Clover pasture

### Feeds Nutrient Groups – to be used in answer column 2 by Seniors
(You may use the letter more than once!!)

- B. By-product feed
- C. Carbohydrate (energy)
- F. Fats (energy)
- H. Produced by grinding the flakes which remain after the oil is extracted from whole flaxseed.
- I. Whole barley that is subjected to high-moisture steam for a short period of time (usually 1 to 8 minutes) and then rolled to produce a flat flake.
- J. High in protein, and contains active immunoglobulins.
- K. Commonly used source of calcium and phosphorus in livestock feeds.
- L. Also referred to as bluestone.
- M. Dried byproduct of the manufacture of sugar from either sugar beets or, more commonly, sugarcane.
- N. Primarily used as a ruminant roughage extender during times when forages are in short supply.
- P. Protein
- V. Vitamin

### Important Characteristics/Uses of Feedstuffs – to be used in answer column 3 by and Seniors

- A. Excellent feedstuff for horses that is high in protein, minerals, and vitamins.
- B. Shelled corn that has been passed through a roller mill to break it into smaller particles.
- C. Byproduct of wheat flour milling that consists of the fine particles of wheat bran, wheat shorts, wheat germ, wheat flour, and some of the offal from the “tail of the mill”.
- D. Bulk density = 56 pounds/bushel
- E. Bulk density = 32 pounds/bushel
- F. Bulk density = 48 pounds/bushel
- G. Rarely fed to livestock in the whole, full-fat form, but can be if first heated to destroy anti-nutritional factors (trypsin inhibitor).
## Senior Livestock Breeds Identification – 2014

**INSTRUCTIONS:** For each picture, use the columns on the right to choose the number or letter that indicates your answer for each livestock breed. Use capital letters and write neatly. **Seniors** provide answers for breed name, origin of breed, and important characteristics/traits. Each question is worth 5 points (150 points total for Seniors).

<table>
<thead>
<tr>
<th>Breed Name</th>
<th>Origin of Breed</th>
<th>Important Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>16 L A</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>33 A J</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>53 C Q</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>9 K E</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>26 I F</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>52 H P</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>32 B L</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>17 F G</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>44 D N</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>8 E D</td>
<td></td>
</tr>
</tbody>
</table>

### Breed Names – to be used in answer column 1 by Seniors

<table>
<thead>
<tr>
<th>Beef Breeds</th>
<th>Goat Breeds</th>
<th>Sheep Breeds</th>
<th>Swine Breeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Santa Gertrudis</td>
<td>29. Topgenburg</td>
<td>42. Rambouillet</td>
<td></td>
</tr>
<tr>
<td>14. Shorthorn</td>
<td></td>
<td>43. Romney</td>
<td></td>
</tr>
<tr>
<td>15. Simmental</td>
<td></td>
<td>44. Southdown</td>
<td></td>
</tr>
<tr>
<td>16. Tarentaise</td>
<td></td>
<td>45. Suffolk</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>46. White Dorper</td>
<td></td>
</tr>
</tbody>
</table>

### Origins of Breeds – to be used in answer column 2 by Seniors

<table>
<thead>
<tr>
<th>Beef Breeds</th>
<th>Goat Breeds</th>
<th>Sheep Breeds</th>
<th>Swine Breeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. South Africa</td>
<td>F. Alps of Switzerland</td>
<td>J. Herefordshire, England</td>
<td></td>
</tr>
<tr>
<td>B. New Zealand and Australia</td>
<td>G. Putnam &amp; Hendricks Counties in Indiana</td>
<td>K. Maine and Anjou river valleys in France</td>
<td></td>
</tr>
<tr>
<td>C. Pietrain, Belgium</td>
<td>H. Descendants of the Danish</td>
<td>L. Tarentaise valley of France</td>
<td></td>
</tr>
<tr>
<td>D. Sussex, England</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Limousin and Marche regions of France</td>
<td>I. Saanen valley of Switzerland</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Important Characteristics/Traits Origins of Breeds – to be used in answer column 3 by and Seniors

#### Beef Characteristics/Traits
- A. Milking ability, calving ease, and thriftiness.
- B. Growth rate, muscling, early puberty, calving ease, and mothering ability.
- C. Foraging ability, docile, and good fertility.
- D. Heavily muscled, high carcass yield, growth rate, and feed efficiency.
- E. Muscling and growth rate, disposition, and milk production.

#### Goats Characteristics/Traits
- F. Heavy milkers, rugged bone, and vigor. Sensitive to sunlight and perform best in cooler conditions.
- G. Hardy, adaptable animals that thrive in any climate while maintaining good health and excellent production.
- H. High butterfat content extended breeding season, best suited for hot conditions, and multi-purpose use (milk, meat, and hide).
- I. Meat yield, growth rate, high milk production

#### Sheep Characteristics/Traits
- J. Extremely hardy, fast growing, fertile, can survive and thrive under harsh conditions.
- K. Carcass conformation, growth rate, lambing percentage, and wool production.
- L. Good carcass quality, fast growth, and combines good meat and wool characteristics.
- M. Carcass conformation, growth rate, feed conversion, and milking ability.
- N. Carcass conformation, early maturity, and adaptability to varied climates.

#### Swine Characteristics/Traits
- O. Aggressive breeder and high growth rate.
- P. Prolificacy (litter size), milking ability, mothering ability.
- Q. Extreme muscling and leanness.
- R. Excellent rate of gain and feed efficiency.
- S. Meat quality (intramuscular fat)
INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each piece of equipment. Use capital letters and write neatly. Seniors provide answers for livestock/meat equipment names and equipment use. Each question is worth 5 points (100 points total for Seniors).

### Equipment Names – to be used in answer column 1 by Seniors

<table>
<thead>
<tr>
<th>Equipment Name</th>
<th>Equipment Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>36</td>
</tr>
<tr>
<td>2.</td>
<td>33</td>
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<tr>
<td>3.</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>47</td>
</tr>
<tr>
<td>5.</td>
<td>20</td>
</tr>
<tr>
<td>6.</td>
<td>39</td>
</tr>
<tr>
<td>7.</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>16</td>
</tr>
<tr>
<td>9.</td>
<td>61</td>
</tr>
<tr>
<td>10.</td>
<td>19</td>
</tr>
</tbody>
</table>

### Equipment Names – to be used in answer column 2 by Seniors

<table>
<thead>
<tr>
<th>Equipment Name</th>
<th>Livestock Equipment</th>
<th>Meat Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All-in-one castrator/docker</td>
<td>26. Lamb tube feeder</td>
<td>43. Backfat ruler</td>
</tr>
<tr>
<td>2. Artificial insemination pipettes</td>
<td>27. Needle teeth nippers</td>
<td>44. Band saw</td>
</tr>
<tr>
<td>(Swine)</td>
<td>28. Nipple waterer</td>
<td>45. Bone dust scraper</td>
</tr>
<tr>
<td>4. Balling gun</td>
<td>30. Nose ring pliers</td>
<td>47. Bowl chopper</td>
</tr>
<tr>
<td>6. Cattle clippers</td>
<td>32. Plastic Sleeve</td>
<td>49. Electrical stunner</td>
</tr>
<tr>
<td>7. Clipper comb</td>
<td>33. Ralgro pellet injector</td>
<td>50. Emulsifier</td>
</tr>
<tr>
<td>8. Clipper cutter</td>
<td>34. Ram marking harness</td>
<td>51. Ham net</td>
</tr>
<tr>
<td>9. Currycomb</td>
<td>35. Rumen magnate</td>
<td>52. Hand saw</td>
</tr>
<tr>
<td>11. Drench gun</td>
<td>37. Slap tattoo</td>
<td>54. Loin eye area grid</td>
</tr>
<tr>
<td>12. Ear notchers</td>
<td>38. SYNOVEX Implant cartridge</td>
<td>55. Meat grinder</td>
</tr>
<tr>
<td>15. Electric branding iron</td>
<td>41. Tattoo pliers</td>
<td>58. Meat grinder plate</td>
</tr>
<tr>
<td>16. Electric docker</td>
<td>42. Wood post electric fence insulator</td>
<td>59. Meat grinder stuffing rod</td>
</tr>
<tr>
<td>17. Electric fence wire roller</td>
<td>18. Electric sheep shears</td>
<td>60. Meat hook</td>
</tr>
<tr>
<td>19. Emanuslatore (Burdizzo)</td>
<td>20. Ewe prolapse retainer</td>
<td>61. Meat tenderizer</td>
</tr>
<tr>
<td>23. Freeze branding iron</td>
<td>24. Hanging Scale</td>
<td>63. Metal knife scabbard</td>
</tr>
<tr>
<td>25. Hand shear shears</td>
<td></td>
<td>64. Rubber apron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65. Sharpening steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66. Smoke house</td>
</tr>
<tr>
<td></td>
<td></td>
<td>67. Thermometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68. Tumbler</td>
</tr>
<tr>
<td></td>
<td></td>
<td>69. Vacuum sausage stuffer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70. Whale saw</td>
</tr>
</tbody>
</table>

### Equipment Uses – to be used in answer column 2 by Seniors

A. Used to pick up meat pieces during fabrication.
B. A device placed on rams that shows when a ewe has been serviced.
C. Used to chop meat for sausages.
D. Used to cut up meat carcasses.
E. An instrument used for the bloodless castration (young male calves, lambs, and goats) and docking of tails (young lambs and goats). It is used to place a small rubber ring over the scrotum or tail to shut off circulation.
F. Used to shear and groom the wool from sheep. Blade lengths typically range from 3 to 6½ inches.
G. An instrument used to control vaginal prolapse in ewes.
H. Used to administer various pills (medications) to cattle and horses. It is placed down the throat to administer the pills.
I. Used to inject a RALGRO pellet under the loose skin and above the cartilage on the back side of a beef calf’s ear.
J. An automatic waterer used to provide clean, fresh water to pigs.
K. Used to remove dirt and loose hair from cattle when grooming.
L. An instrument used for the bloodless castration of young male calves, lambs, and goats by severing (crushing) the testicular cord.
M. Used to tenderize the less tender cuts of meat.
N. Used to comb (groom) the hair on cattle.
O. Used to dock the tails of lambs and piglets. It cauterizes as it cuts the tail to eliminate excessive bleeding.
P. Used to trim hooves of cattle, sheep, and goats to help prevent foot diseases.
Q. Used to inject a SYNOVEX implant under the loose skin and above the cartilage on the back side of a beef calf’s ear.
2

Inches

0 1 2 3 4 5 6

Inches
7
Official Placing =  4–1–2–3
Cuts =  2–3–4
(50 points possible)

Contestant Number _______________
Placing Score _________________

University of Kentucky
College of Agriculture
Animal Sciences Department

<table>
<thead>
<tr>
<th>Contestant’s Name</th>
<th>Placing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 1 2 3 4</td>
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<td>B 1 2 4 3</td>
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<tr>
<td>C 1 3 2 4</td>
<td>30</td>
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<tr>
<td>D 1 3 4 2</td>
<td>35</td>
</tr>
<tr>
<td>E 1 4 2 3</td>
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</tr>
<tr>
<td>F 1 4 3 2</td>
<td>44</td>
</tr>
<tr>
<td>G 2 1 3 4</td>
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<tr>
<td>K 2 4 1 3</td>
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<tr>
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<tr>
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<td>27</td>
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<td>X 4 3 2 1</td>
<td>36</td>
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</table>
Official Placing = 1–3–4–2

Cuts = 2–3–2

(Placing the meat is worth a possible 50 points and each of the 5 questions is worth 10 points for 50 possible points – Grand Total of 100 possible points)

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<tr>
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<td>D 1 3 4 2 50</td>
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<td>E 1 4 2 3 42</td>
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<td>F 1 4 3 2 47</td>
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<td></td>
</tr>
<tr>
<td>X 4 3 2 1 33</td>
<td></td>
</tr>
</tbody>
</table>
QUESTIONS

1) Which steak has the smallest tenderloin? ____3____

2) Which steak has the least amount of fat over the top loin? ____1____

3) Between 2 and 3, which steak has the least amount of bone? ____3____

4) Which is the thinnest steak? ____2____

5) Which steak will have the most plate loss? ____4____
Senior Hay Judging Class – 2014

Official Placing = 4–3–2–1
Cuts = 2–4–7
(50 points possible)

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<td>V 4 2 3 1 46</td>
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<td>W 4 3 1 2 43</td>
<td></td>
</tr>
<tr>
<td>X 4 3 2 1 50</td>
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</table>

[Turn over for Scenario and Forage Analysis Information]
**Scenario:**
You are backgrounding a load of feeder heifers with an average weight of 400 pounds. The calves have been purchased from a local stockyard and have not been vaccinated or weaned. Rank the four hay samples in the order that you would utilize them as the most cost effective source of forage for these feeder heifers. A commercial preconditioning feed will be feed for the first 3 weeks of the backgrounding period in addition to the hay that you choose. Ultimately the hay you choose will be the main source of feed until spring grass arrives.

**Nutrient Requirements for 400 pound feeder heifers to gain 1.5 pounds per day.**
- Dry Matter: 10.7 pounds per day
- Crude Protein: 12.1%
- Total Digestible Nutrients: 64%

**Forage Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Hay Lot #1 Mixed Grass</th>
<th>Hay Lot #2 Grass/Legume Mixture</th>
<th>Hay Lot #3 1st Cutting Orchardgrass</th>
<th>Hay Lot #4 2nd Cutting Orchardgrass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry matter</td>
<td>88.9%</td>
<td>88.6%</td>
<td>87.9%</td>
<td>88.6%</td>
</tr>
<tr>
<td>Crude protein</td>
<td>7.4%</td>
<td>15.2%</td>
<td>12.7%</td>
<td>13.5%</td>
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<tr>
<td>Acid detergent fiber (ADF)</td>
<td>49.9%</td>
<td>41.5%</td>
<td>44.8%</td>
<td>44.2%</td>
</tr>
<tr>
<td>Neutral detergent fiber (NDF)</td>
<td>69.2%</td>
<td>61.4%</td>
<td>67.5%</td>
<td>67.2%</td>
</tr>
<tr>
<td>Total digestible nutrients (TDN)</td>
<td>50.0%</td>
<td>66.5%</td>
<td>64.6%</td>
<td>65.5%</td>
</tr>
<tr>
<td>Price per ton</td>
<td>$80</td>
<td>$145</td>
<td>$100</td>
<td>$110</td>
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</table>
You are the manager of a 10,000 head contract wean-to-finish operation. Recently, you noticed a large percentage of the pigs had reduced feed intakes, had developed a persistent cough and began running temperatures. Your veterinarian has prescribed Pulmotil 90 for treatment. Use the Pulmotil 90 label and your knowledge of quality assurance management to answer the 10 questions below relating to quality assurance. Circle your answers. (10 questions worth 5 points per question for 50 total points)

1. Pulmotil 90 is labeled for what other species of farm animal(s)?
   - A.) Cattle
   - B.) Sheep
   - C.) Turkeys
   - D.) Horses

2. What is the active ingredient in Pulmotil 90?
   - A.) Sulfamethazine
   - B.) Oxytetracycline
   - C.) Tilmicosin
   - D.) Ground corn cobs

3. What is the best way to fully understand how to properly use Pulmotil 90?
   - A.) Carefully read and follow the entire medication insert for Pulmotil 90
   - B.) Follow your veterinarians instructions
   - C.) Carefully read and follow the entire medication label for Pulmotil 90
   - D.) All are correct

4. What is the appropriate amount of Pulmotil 90 that is recommend for use in pigs?
   - A.) 568-757 grams per ton of feed
   - B.) 181-363 grams per ton of feed
   - C.) 12.5 mg per kg per head per day
   - D.) 90.7 grams per pound

5. How is Pulmotil 90 to administered to your pigs?
   - A.) On the skin (topically)
   - B.) Under the skin (subcutaneously)
   - C.) In the nose (intranasally)
   - D.) In the feed
6. Which of the following is not a true statement?

A.) Swine intended for human consumption must not be slaughtered within 7 days of the last treatment of this drug product.

B.) This drug product is not approved for use in calves intended to be processed for veal.

C.) Cattle intended for human consumption must not be slaughtered within 28 days of the last treatment of this drug product.

D.) This drug product is not approved for use in male dairy cattle 20 months of age or older.

E.) All of the statements are true.

7. What is the maximum length of time Pulmotil 90 can be given to pigs?

A.) 7 days before expected outbreak C.) 14 days

B.) 21 days D.) 45 days

8. If your veterinarian instructed you to provide add 3.5 pounds of Pulmotil 90 to each ton of feed, how many grams of tilmicosin would be in the mixed feed?

A.) 317.5 grams per ton C.) 317.5 grams per pound

B.) 400.5 grams per ton D.) 200.5 grams per ton

9. Treatment with Pulmotil 90 should not be at the same time or following the administration of what?

A.) Tilmicosin phosphate C.) Neutrophils

B.) Penicillin D.) Injectable macrolide

10. What class of drug product is Pulmotil 90?

A.) Prescription C.) Veterinary Feed Directive

B.) Swine Practitioners Approved D.) Over-the-counter
Type A Medicated Article

Do not feed undiluted.

CAUTION: Federal law limits this drug to use under the professional supervision of a licensed veterinarian. Animal feed bearing or containing this veterinary feed directive drug shall be fed to animals only by or upon a lawful veterinary feed directive issued by a licensed veterinarian in the course of the veterinarian’s professional practice.

Active Drug Ingredient: Tilmicosin (as tilmicosin phosphate) 90.7 g per lb (201 g per kg)

Ingredient Description: Ground corncobs.

Description: Pulmotil® is a formulation of the antibiotic tilmicosin. Tilmicosin is produced semi-synthetically and is in the macrolide class of antibiotics. Each kilogram of Type A Medicated Article contains 200 grams (0.44 lbs) of tilmicosin adsorbed on ground corncobs.

Indications: Swine: For the control of swine respiratory disease (SRD) associated with Actinobacillus pleuropneumoniae and Pasteurella multocida. Cattle: For the control of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida and Histoplasma somni in groups of beef and non-lactating dairy cattle, where active BRD has been diagnosed in at least 10% of the animals in the group.

Feeding Directions: Swine: Tilmicosin is to be fed continuously at 181 grams to 363 grams per ton (200 ppm to 400 ppm) of Type C medicated feed as the sole ration for a 21-day period, beginning approximately 7 days before an anticipated disease outbreak. Cattle: Tilmicosin is to be fed continuously for a single, 14 day period at 588 grams to 757 grams (628 ppm to 834 ppm) per ton on a 100% dry matter basis of Type C medicated feed as the sole ration to provide 12.5 mg tilmicosin/kg/head/day.

IMPORTANT: Must be thoroughly mixed in swine or cattle feeds before use.

Mixing Directions: For Incorporation into Swine Feeds: Thoroughly mix Pulmotil® Type A medicated article with feed to provide a Type B medicated feed containing up to 36,300 grams tilmicosin per ton or to provide a complete Type C medicated feed containing 363 to 363 grams tilmicosin per ton. Do not use in any feeds containing bentonite. Bentonite in feeds may affect the efficacy of tilmicosin.

For Incorporation into Cattle Feeds: Thoroughly mix Pulmotil® Type A medicated article with feed to provide a Type B medicated feed containing up to 36,300 grams tilmicosin per ton on a 100% dry matter basis or to provide a complete Type C medicated feed containing 588 to 757 grams tilmicosin per ton on a 100% dry matter basis. Complete Type C medicated feeds should not be pelleted. Do not use in any feeds containing bentonite, cottonseed meal, or cottoseed hulls. Bentonite, cottonseed meal, or cottoseed hulls in feeds may affect the efficacy of tilmicosin.

Starting concentration of Pulmotil® 90 Type A Medicated Article* Amount of Type A Medicated Article to add per ton Resulting concentration in Type B Medicated Feed

<table>
<thead>
<tr>
<th>grams per pound</th>
<th>pounds</th>
<th>grams per ton</th>
<th>grams per pound</th>
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<tbody>
<tr>
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<td>400</td>
<td>36.300</td>
<td>18.1</td>
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<td></td>
<td>200</td>
<td>27.200</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Starting concentration of Pulmotil® 90 Type A Medicated Article* Amount of Type A Medicated Article to add per ton Resulting concentration in Type B Medicated Feed

<table>
<thead>
<tr>
<th>grams per pound</th>
<th>pounds</th>
<th>grams per ton</th>
<th>grams per pound</th>
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<tbody>
<tr>
<td>90.7</td>
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<td>272</td>
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</tr>
<tr>
<td></td>
<td>2</td>
<td>181</td>
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</table>

*Pultmotil 90 contains 90.7 g tilmicosin phosphate per pound

User Safety Warnings: Avoid inhalation, oral exposure and direct contact with skin or eyes. Operators mixing and handling Pulmotil® 90 should use protective clothing, impervious gloves, goggles and a NIOSH-approved dust mask. Wash thoroughly with soap and water after handling. If accidental eye contact occurs, immediately rinse thoroughly with water. If irritation persists, seek medical attention. Not for human consumption. Keep out of reach of children. The Material Safety Data Sheet contains more detailed occupational safety information. To report adverse effects in users, to obtain more information, or to obtain a Material Safety Data Sheet, call 1-800-428-4441.

Clinical Pharmacology: Oral dosing of tilmicosin phosphate to swine at 181 to 363 g/ton of feed results in serum tilmicosin levels, which do not correlate with efficacy. Lung concentrations of tilmicosin are significantly higher than serum. Following consecutive days of administering tilmicosin medicated feeds to swine, the concentration of tilmicosin in respiratory tissues, pharyngeal cells, and nasal secretions was significantly higher than that of plasma or serum. Lung levels are achieved within 2 days after beginning feeding and plateau by 4 days. Using in-vitro incubation techniques, the ratio of intracellular to extracellular concentrations of tilmicosin for neutrophils, monocyte-macrophages and alveolar macrophages were 68, 19 and 17, respectively, after four hours of incubation. Although lower levels of accumulation were observed in-vivo, swine alveolar macrophages have been shown in-vitro and in-vivo to concentrate large amounts of tilmicosin; these cells may be important for in-vivo distribution of the drug and may serve as an important reservoir for tilmicosin in lung tissue.

Oral dosing of tilmicosin phosphate to cattle to target a dose of 12.5 mg/kg body weight resulted in serum tilmicosin concentrations above the analytical limit of quantification (0.5 ng/mL) within 12 hours following treatment administration.

The relationship of serum tilmicosin concentration to lung tilmicosin concentration has not been determined following oral administration of tilmicosin.

Toxicology: The cardiovascular system is the target of toxicity in laboratory and domestic animals given tilmicosin by oral or parenteral routes. Primary cardiac effects are increased heart rate (tachycardia) and decreased contractility (negative inotropy). Given orally, the median lethal dose is 800 mg/kg in fasted rats and 2050 mg/kg in non-fasted rats. No compound-related lesions were found at necropsy. Results of genotoxicology studies were all negative. Results of teratology and reproduction studies in rats were all negative. The no effect level in dogs after oral dosages for up to one year is 4 mg/kg of body weight. Tilmicosin was included in the diet of 18 adult horses for a period of 14 days at doses levels of 400, 1200 and 2050 ppm. Some horses at both the low and high dose levels demonstrated gastrointestinal disturbance with more severe colic evident at the higher levels. One horse died after consuming the 2000 ppm diet. A study was conducted in cattle administered oral tilmicosin at 12.5, 25.0 or 37.5 mg/kg for 42 days or administered 12.5 mg/kg of oral tilmicosin for 14 days followed by 20 mg/kg injection of tilmicosin or saline (volume equivalent). Cardiac lesions observed in one animal in the 12.5 mg/kg for 42 days treatment group; one animal in the 12.5 mg/kg for 14 days followed by tilmicosin injection treatment group) were not considered clinically significant as no other abnormalities were seen and the affected animals were clinically normal.

To report adverse effects, access medical information or obtain additional product information, call 1-800-428-4441.

Storage Information: Store at less than or equal to 25°C (77°F). Excursions to 40°C (104°F) are acceptable. Avoid excessive moisture.

Restricted Drug (California) - Use Only as Directed NADA # 141-064, Approved by FDA

Manufactured For: Elanco Animal Health A Division of Eli Lilly and Company Indianapolis, IN 46285, USA

Elanco, Pulmotil and the diagonal bar are trademarks owned or licensed by Eli Lilly and Company, its subsidiaries or affiliates.
Senior Quiz – 2014

Carefully circle the correct answer to each of the questions below. (Each question is worth 2 points each for a total of 50 points)

1.) The external opening of a doe’s reproductive tract is called the ___________.
   a. Urethra     c. Vulva
   b. Infundibulum d. Cervix

2.) The hormone that brings females into heat and prepares her for breeding is called ___________.
   a. Luteinizing hormone c. Estrogen
   b. Follicle stimulating hormone d. Prostaglandin

3.) What essential nutrient do sheep require the greatest amount of?
   a. Water c. Vitamins
   b. Protein d. Minerals

4.) What is the average gestation length in goats?
   a. 130 days c. 6 months
   b. 150 days d. 160 days

5.) Triticale is a cross between ___________ and ___________.
   a. Wheat and barley c. Wheat and rye
   b. Barley and corn d. Barley and rye

6.) What mineral should not be included in diets for sheep?
   a. Phosphorus c. Molybdenum
   b. Magnesium d. Copper

7.) Which of the following is not considered to be an essential amino acid for pigs?
   a. Glutamine c. Threonine
   b. Lysine d. Methionine

8.) Which of the following is a ruminant?
   a. Cow c. Buck
   b. Ram d. All of the above
9.) What is the average length of the estrous cycle in a heifer?
   a. 7 days     c. 21 days
   b. 14 days    d. 28 days

10.) What is the average length of gestation in cattle?
   a. 114 days    c. 244 days
   b. 150 days    d. 283 days

11.) Which one of the following hormones maintains pregnancy in farm animals?
   a. Estrogen
   b. Progesterone
   c. Prostaglandin
   d. Testosterone

12.) Which of the following is a quality grade for beef?
   a. Prime
   b. Unacceptable
   c. Choice
   d. Both a. and c.

13.) Which management practices are performed on baby piglets?
   a. Dock tails
   b. Clip needle teeth
   c. Give iron injection
   d. All of the above

14.) Which of the following should not be fed to pigs?
   a. Hominy feed
   b. Cottonseed meal
   c. Urea
   d. Both b. and c.

15.) The North American International Livestock Exposition is located where?
   a. Houston
   b. Louisville
   c. Denver
   d. Kansas City

16.) Which of the following is not fed to livestock primarily for energy?
   a. Canola meal
   b. Molasses
   c. Steam flaked corn
   d. Soybean hulls

17.) Which of the following is not a high priced wholesale cut in lambs?
   a. Breast
   b. Rack
   c. Loin
   d. Leg

18.) Which of the following pig breeds is known as the “mother breed”?
   a. Landrace
   b. Yorkshire
   c. Chester White
   d. Hampshire
19.) The marketing ad “The Other White Meat” refers to which species?
   a. Beef  c. Lamb  
   b. Pork  d. Chevon

20.) The female reproductive organ where the embryo develops is called the ____________.
   a. Ovary  c. Cervix  
   b. Oviduct  d. Uterus

21.) Which of the following is not a correct term for lamb carcasses?
   a. Easter Lamb  c. New Year Lamb  
   b. Spring Lamb  d. Genuine Spring Lamb

22.) Which of the following is considered a by-product feed?
   a. Corn Gluten Feed  c. Distillers Dried Grains  
   b. Soybean Hull Pellets  d. All of these are by-product feeds

23.) Which of the following is not a wool term?
   a. Britch  c. Cotted  
   b. Grease  d. Mottled

24.) Obtaining immunity by absorbing immunoglobulins from colostrum is called ____________.
   a. Partial immunity  c. Active immunity  
   b. Passive immunity  d. Postpartum immunity

25.) Where is the hormone testosterone produced?
   a. Testicle  c. Brain  
   b. Ovary  d. Pancreas
You are a beef producer and operate a 500-head feedlot that typically feeds calves from about 600 pounds to finished weight for market. As a practical way to keep track of steers that have been injured or treated for illness, you sort them into one pen that you keep designated as a hospital or “sick” pen. There are five (5) steers in the sick pen that have reached finish weight and have fully recovered their problems. You want to send as many of these steers as possible to market on Monday, February 17, 2014, and need to make sure any withdrawal times are over. Using the five (5) medication inserts provided, answer the questions below and finish filling in the table of treatment records on the reverse side of this page. Once the table is filled in, list the steers that can be sold tomorrow and those that should be held until a later date. A calendar is provided for your use as well. (Each answer is worth 7 points each for a total of 210 points)

NOTES ON TREATMENTS:
- Assume you accurately followed the directions on the medication insert.
- Assume the treatment date given in the treatment records is the last date of treatment.
- If a range of recommended dosage is given on the medication insert, assume you gave the highest dosage recommended.

1) Which medication is a modified live virus? ____________ BOVI-SHIELD GOLD 5

2) When giving Tylan 200, what is the largest amount that should be administered in one site? __10__ ml

3) Which of the medications could also be given to sheep? ____________ NONE

4) Which of the medications is approved for use in a 3-yr old lactating dairy cow? _____ EXCENEL

5) Which of the medications has to be rehydrated before use? _____ BOVI-SHIELD GOLD 5
<table>
<thead>
<tr>
<th>Treatment Date &amp; Time</th>
<th>Steer Treated (Tag #)</th>
<th>Steer Weight</th>
<th>Condition Being Treated</th>
<th>Medication Given</th>
<th>Route Given</th>
<th>Amount Given</th>
<th>Required Withdrawal Period (days)</th>
<th>Date &amp; Time Withdrawal Complete</th>
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<tbody>
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<td># 57</td>
<td>1200 lbs</td>
<td>Pneumonia</td>
<td>Tylan 200</td>
<td>IM</td>
<td>48 mL</td>
<td>21 days</td>
<td>Feb. 20, 2014 9:00 a.m.</td>
</tr>
<tr>
<td>Dec. 2, 2013 10:00 a.m.</td>
<td># 49</td>
<td>1210 lbs</td>
<td>Roundworms</td>
<td>Dectomax</td>
<td>SC or IM</td>
<td>11 mL</td>
<td>35 days</td>
<td>Jan. 6, 2014 10:00 a.m.</td>
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<tr>
<td>Dec. 24, 2013 2:30 p.m.</td>
<td># 76</td>
<td>1175 lbs</td>
<td>Bovine Viral Diarrhea Virus</td>
<td>Bovi-Shield Gold 5</td>
<td>IM</td>
<td>2 mL</td>
<td>21 days</td>
<td>Jan. 14, 2014 2:30 p.m.</td>
</tr>
<tr>
<td>Jan. 14, 2014 8:00 a.m.</td>
<td># 28</td>
<td>1250 lbs</td>
<td>Foot Rot</td>
<td>Draxxin</td>
<td>SC</td>
<td>13.75 mL</td>
<td>18 days</td>
<td>Feb. 1, 2014 8:00 a.m.</td>
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<tr>
<td>Feb. 10, 2014 12:00 noon</td>
<td># 50</td>
<td>1150 lbs</td>
<td>Bovine Respiratory Disease</td>
<td>Excenel</td>
<td>IM or SC</td>
<td>23 mL</td>
<td>3 days</td>
<td>Feb. 13, 2014 12:00 noon</td>
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Intramuscular = IM  
Subcutaneous = SC  
Intravenous = IV  
Topical = T  
Added to feed = F

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<thead>
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<th>Steers That Can be Sold Tomorrow</th>
<th>Steers to Hold Until a Later Date</th>
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<td>24</td>
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</table>
For Animal Use only
BOVI-SHIELD® GOLD 5
Reg. No. 3675 Act 36/1947
Namibia reg. no. NSR 1339

For use by or under the control of a veterinarian only

INDICATIONS:
Bovi-Shield® GOLD 5 is recommended for vaccination of healthy cattle as an aid in preventing disease caused by infectious bovine rhinotracheitis virus (IBRV), bovine viral diarrhoea virus (BVD Type 1 and 2), parainfluenza3 virus (PI3) and bovine respiratory syncytial virus (BRSV). Bovi-Shield® GOLD 5 may be administered to pregnant cattle provided they were vaccinated with Bovi-Shield® FP4+L5 vaccine within the past 12 months. It may also be administered to calves nursing pregnant cows provided their dams were vaccinated within the past 12 months with Bovi-Shield® FP 4+L5.

STORAGE INSTRUCTIONS:
The vaccine should be stored at temperatures between 2°C and 7°C, and must be protected from light. Do not freeze.

COMPOSITION:
Bovi-Shield® GOLD 5 is a freeze-dried preparation of modified live virus strains of IBR, BVD (Type 1 and 2), PI3 and BRS viruses, plus a sterile diluent used to re-hydrate the freeze-dried vaccine. Viral antigens are propagated on established cell lines.

WARNING:
Do not vaccinate within 21 days before slaughter. Keep out of reach of children and uninformed persons.
For veterinary use only.
Contains gentamicin as a preservative.
Do not use in pregnant cows, abortion can result, unless they were vaccinated strictly according to the instructions. As with many vaccines, anaphylaxis may occur after use.
This vaccine has been shown to be efficacious in healthy animals. A protective immune response may not be elicited:
• if animals are incubating an infectious disease,
• are malnourished or parasitized,
• are stressed due to shipment or environmental conditions,
• are otherwise immuno-compromised,
• or the vaccine is not administered in accordance with label directions.
Although this vaccine has been extensively tested under a large variety of conditions, failure thereof may ensue as a result of a wide range of reasons. If this is suspected, seek veterinary advice and notify the registration holder.

PRECAUTIONS:
Do not use in pregnant cows, unless they were vaccinated with Bovi-Shield® FP 4+L5 within the past 12 months.
Use the entire contents when first opened.
Do not use in calves nursing pregnant cows unless their dams were vaccinated within the past 12 months with Bovi-Shield® FP 4+L5. Sterilized syringes and needles should be used to administer the vaccine. Do not sterilize with chemicals because traces of disinfectant may inactivate the vaccine. Burn containers and all unused contents. If vaccination results in anaphylaxis, initial antidote of adrenalin, or equivalent is recommended, and should be followed with appropriate supportive therapy.

DOSAGE AND DIRECTIONS FOR USE:
Vaccination of healthy cattle is recommended.
Aseptically rehydrate the freeze-dried vaccine with the sterile diluent provided, shake well and administer 2 ml intramuscularly, in the muscular region of the neck.

**Primary Vaccination:** Administer a single 2 ml dose to healthy cattle, followed by a second dose of Bovi-Shield® GOLD 5, 3–4 weeks later.

**Revaccination:** Annual revaccination with a single dose is recommended.

**PRESENTATION:**
Bovi-Shield® GOLD 5 is marketed in clear, sterile, sealed, 10 and 50 dose vials. A 10 dose vial is rehydrated with 20 ml sterile diluent and a 50 dose vial with 100 ml sterile diluent.

**REGISTRATION HOLDER:**
Pfizer Laboratories (Pty) Ltd
Registration No. 1954/000781/07
85 Bute Lane, Sandton, 2196
P O Box 783720, Sandton, 2146
For more information phone: 011- 3206000

Bovi-Shield® Gold and the Pfizer Logo are registered trademarks.
**DECTOMAX® INJECTABLE SOLUTION**

_Pfizer Animal Health_

**(doramectin)**

**Antiparasitic**

**1% injectable solution for cattle and swine 10 mg/mL.**

**PRODUCT DESCRIPTION:** Dectomax injectable solution is a ready-to-use, colorless to pale yellow, sterile solution containing 1% w/v doramectin (10 mg/mL). In cattle, Dectomax is formulated to deliver the recommended dosage (200 mcg/kg of body weight) when given by subcutaneous (SC) or intramuscular (IM) injection at the rate of 1 mL/110 lb of body weight. In swine, Dectomax is formulated to deliver the recommended dosage (300 mcg/kg of body weight) when given by IM injection at the rate of 1 mL/75 lb of body weight.

**PRODUCT CHARACTERISTICS:** Dectomax injectable solution is a highly active, broad-spectrum parasiticide for parenteral administration to cattle and swine. It contains doramectin, a novel fermentation-derived macrocyclic lactone discovered by Pfizer Inc. Doramectin is isolated from fermentations of selected strains derived from the soil organism Streptomyces avermitilis.

A primary mode of action of macrocyclic lactones is to modulate chloride ion channel activity in the nervous system of nematodes and arthropods. Macrocyclic lactones bind to receptors that increase membrane permeability to chloride ions. This inhibits the electrical activity of nerve cells in nematodes and muscle cells in arthropods and causes paralysis and death of the parasites. In mammals, the neuronal receptors to which macrocyclic lactones bind are localized within the central nervous system (CNS), a site reached by only negligible concentrations of doramectin.

One dose of Dectomax injectable solution effectively treats and controls a wide range of roundworm and arthropod parasites that impair the health and productivity of cattle and swine. Studies have demonstrated the safety margin of Dectomax injection in cattle and swine. In USA trials, no toxic signs were seen in cattle given up to 25 times the recommended dose, or in swine given up to 10 times the recommended dose. Studies also demonstrated safety in neonatal calves and piglets treated with up to 3 times the recommended dose. In males (bulls and boars) and females (cows and sows) during folliculogenesis, implantation, organogenesis, and through gestation, a dose 3 times the recommended dose had no effect on breeding performance.

**PRODUCT INDICATIONS:** Cattle: Dectomax injectable solution is indicated for the treatment and control of the following species of gastrointestinal roundworms, lungworms, eye worms, grubs (see PRECAUTIONS), sucking lice (see PRECAUTIONS), and mange mites. Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

Gastrointestinal Roundworms (adults and fourth stage larvae) - *Ostertagia ostertagi* (including inhibited larvae), *O. lyrata*, *Haemonchus placei*, *Trichostrongylus axei*, *T. colubriformis*, *T. longispicularis*, *Cooperia oncophora*, *C. pectinata*, *C. punctata*, *C. sumabada* (syn. *mcmasteri*), *Bunostomum phlebotomum*, *Strongyloides papillosus*, *Oesophagostomum radiatum*, *Trichuris* spp.

Lungworms (adults and fourth stage larvae) - *Dictyocaulus viviparus*

Eye Worms (adults) - *Thelazia* spp.

Grubs (parasitic stages) - *Hypoderma bovis*, *H. lineatum*

Sucking Lice - *Haematopinus euryteix*, *Linognathus vituli*, *Solenopotes capitatus*

Mange Mites - *Psoroptes bovis*, *Sarcoptes scabei*  

**PRODUCT DESCRIPTION:** Dectomax injectable solution is a ready-to-use, colorless to pale yellow, sterile solution containing 1% w/v doramectin (10 mg/mL). In cattle, Dectomax is formulated to deliver the recommended dosage (300 mcg/kg of body weight) when given by IM injection at the rate of 1 mL/75 lb of body weight.

Dose (mL)

<table>
<thead>
<tr>
<th>Body Weight (lb)</th>
<th>Dose (mL)</th>
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<tbody>
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<td>990</td>
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</table>

**Swine:** Administer Dectomax injectable solution at the recommended dosage of 300 mcg doramectin per kg (136 mcg/lb) of body weight. Each mL contains 10 mg of doramectin, sufficient to treat 75 lb (34 kg) of body weight.

**PRODUCT CHARACTERISTICS:** Dectomax injectable solution is a ready-to-use, colorless to pale yellow, sterile solution containing 1% w/v doramectin (10 mg/mL). In cattle, Dectomax is formulated to deliver the recommended dosage (200 mcg/kg of body weight) when given by subcutaneous (SC) or intramuscular (IM) injection at the rate of 1 mL/110 lb of body weight. In swine, Dectomax is formulated to deliver the recommended dosage (300 mcg/kg of body weight) when given by IM injection at the rate of 1 mL/75 lb of body weight.

**PRODUCT INDICATIONS:** Cattle: Dectomax injectable solution is indicated for the treatment and control of the following species of gastrointestinal roundworms, lungworms, eye worms, grubs (see PRECAUTIONS), sucking lice (see PRECAUTIONS), and mange mites. Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

Gastrointestinal Roundworms (adults and fourth stage larvae) - *Ostertagia ostertagi* (including inhibited larvae), *O. lyrata*, *Haemonchus placei*, *Trichostrongylus axei*, *T. colubriformis*, *T. longispicularis*, *Cooperia oncophora*, *C. pectinata*, *C. punctata*, *C. sumabada* (syn. *mcmasteri*), *Bunostomum phlebotomum*, *Strongyloides papillosus*, *Oesophagostomum radiatum*, *Trichuris* spp.

Lungworms (adults and fourth stage larvae) - *Dictyocaulus viviparus*

Eye Worms (adults) - *Thelazia* spp.

Grubs (parasitic stages) - *Hypoderma bovis*, *H. lineatum*

Sucking Lice - *Haematopinus euryteix*, *Linognathus vituli*, *Solenopotes capitatus*

Mange Mites - *Psoroptes bovis*, *Sarcoptes scabei*  

**PRODUCT DESCRIPTION:** Dectomax injectable solution is a ready-to-use, colorless to pale yellow, sterile solution containing 1% w/v doramectin (10 mg/mL). In cattle, Dectomax is formulated to deliver the recommended dosage (300 mcg/kg of body weight) when given by IM injection at the rate of 1 mL/75 lb of body weight.

Dose (mL)

<table>
<thead>
<tr>
<th>Body Weight (lb)</th>
<th>Dose (mL)</th>
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<tbody>
<tr>
<td>15</td>
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<td>375</td>
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<td>450</td>
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RECOMMENDED TREATMENT PROGRAM FOR SWINE: To effectively initiate control of mange and sucking lice in swine, it is important to treat all animals in the herd. After initial treatment, use Dectomax regularly as follows:

**Breeding Animals:**
- Sows: Treat 7-14 days prior to farrowing to minimize exposure of piglets to mites and sucking lice.
- Gilts: Treat 7-14 days prior to breeding. Treat 7-14 days prior to farrowing.
- Boars: Treat a minimum of 2 times per year.

**Feeder Pigs:** Treat any new feeder pigs upon arrival at farm or before placement in clean quarters.

**Weaners, Growers, Finishers:** Weaners and grow-out/finisher pigs should be treated before placement in clean quarters.

For effective mange elimination, care must be taken to prevent reinfection from exposure to untreated animals or contaminated facilities. **ADMINISTRATION:** Dry, sterile equipment and aseptic procedures should be used when withdrawing and administering Dectomax. For multiple treatments either automatic injection equipment or an aspirating needle should be used.

Cattle: Administer Dectomax injectable solution by the SC or IM route. Injections should be made using a 16 gauge needle for adult cattle or an 18 gauge needle for young animals. Needles 1/2-3/4" in length are suggested for SC administration. A 1-1/2" needle is suggested for IM administration. SC injections should be administered under the loose skin in front of or behind the shoulder. IM injections should be administered into the muscular region of the neck. Beef Quality Assurance guidelines recommend SC administration as the preferred route.

**Hypoderma larva:** At the period when these grubs are in vital areas may cause undesirable host-parasite reactions including the possibility of fatalities. Killing *H. lineatum* when it is in the tissue surrounding the gullet may cause bloat; killing *H. bovis* when it is in the vertebral canal may cause staggering or paralysis. These reactions are not specific to treatment with Dectomax, but can occur with any successful treatment of grubs. Cattle should be treated either before or after these stages of grub development. Consult your veterinarian concerning the proper time for treatment.

Cattle treated with Dectomax after the end of the heel fly season may be re-treated with Dectomax during the winter for internal parasites, mange mites, or sucking lice, without danger of grub-related reactions. A planned parasite control program is recommended.

**ENVIRONMENTAL SAFETY:** Studies indicate that when doramectin comes in contact with the soil, it readily and tightly binds to the soil and becomes inactive over time. Free doramectin may adversely affect fish and certain aquatic organisms. Do not permit water runoff from feedlots to enter streams or ponds. Do not contaminate water by direct application or by the improper disposal of drug containers. Dispose of containers in an approved landfill. As with other avermectins, doramectin is excreted in the dung of treated animals and can inhibit the reproduction and growth of pest and beneficial insects that use dung as a source of food and for reproduction. The magnitude and duration of such effects are species and lifecycle specific. When used according to label directions, the product is not expected to have an adverse impact on populations of dung-dependent insects.

**HOW SUPPLIED:** Dectomax is available in 100-mL, 200-mL, and 500-mL multi-dose, rubber-capped glass vials. NADA #141-061, Approved by FDA

**Restrict Drug (CA) Use only as directed.**

**Laboratórios Pfizer Ltda. - Animal Health Division, Av. Monteiro Lobato, 2270, Guarulhos, São Paulo, Brasil CNPJ n° 46, 070,868/0001-69**

**Licenciado no Ministério da Agricultura sob o n° 4,055/92, em 14/08/92. Licensed in the Ministry of Agriculture under n° 4,055/92, on 08/14/92.**

**Distributed by: Pfizer Animal Health, Div. of Pfizer Inc. NY, NY 10017 79-5199-00-8**

**July 2005 Made in Brazil**

**NAC No.: 36900094**

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EXCENEL® RTU STERILE SUSPENSION

by Zoetis

brand of ceftiofur hydrochloride sterile suspension

For intramuscular and subcutaneous use in cattle and intramuscular use in swine. This product may be used in lactating dairy cattle.

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION

EXCENEL RTU Sterile Suspension is a ready to use formulation that contains the hydrochloride salt of ceftiofur, which is a broad spectrum cephalosporin antibiotic.

Each mL of this ready-to-use sterile suspension contains ceftiofur hydrochloride equivalent to 50 mg ceftiofur, 0.50 mg phospholipon, 1.5 mg sorbitan monooleate, 2.25 mg sterile water for injection, and cottonseed oil.

Structure:

![Chemical Structure of Ceftiofur Hydrochloride](image)

Figure 1.

Chemical Name of Ceftiofur Hydrochloride: 5-Thia-1-azabicyclo[4,2.0]oct-2-ene-2-carboxylic acid, 7-[(2-amino-4-thiazolyl) (methoxyimino)-acetyl]amino]-3-[(2-

β-(Z)

β-(Z)]-

trim loss of edible tissues at slaughter. Areas of discoloration at the injection site may persist beyond 28 days resulting in illegal residues in edible tissues. Following intramuscular administration in the rear leg, areas of discoloration associated with the injection site at time periods of 11 days or less may result in trim-out of edible tissues at slaughter. The safety of ceftiofur has not been demonstrated for pregnant swine or swine intended for breeding.

PRECAUTIONS

The effects of ceftiofur on cattle and swine reproductive performance, pregnancy, and lactation have not been determined.

Swine: Areas of discoloration associated with the injection site at time periods of 11 days or less may result in trim-out of edible tissues at slaughter. The safety of ceftiofur has not been demonstrated for pregnant swine or swine intended for breeding.

Cattle: Following intramuscular or subcutaneous administration in the neck, areas of discoloration at the site may persist beyond 11 days resulting in trim loss of edible tissues at slaughter. Following intramuscular administration in the rear leg, areas of discoloration at the injection site may persist beyond 28 days resulting in trim loss of edible tissues at slaughter.

INDICATIONS

Swine: EXCENEL RTU Sterile Suspension is indicated for treatment/control of swine bacterial respiratory disease (swine bacterial pneumonia) associated with Actinobacillus (Haemophilus) pleuropneumoniae, Pasteurella multocida, Salmonella choleraesuis and Streptococcus suis.

Cattle: EXCENEL RTU Sterile Suspension is indicated for treatment of the following bacterial diseases:

- Bovine respiratory disease (BRD, shipping fever, pneumonia) associated with Mannheimia haemolytica, Pasteurella multocida and Histophilus somni.
- Acute bovine interdigital necrobacillosis (foot rot, pododermatitis) associated with Fusobacterium necrophorum and Bacteroides melaninogenicus.
- Acute metritis (0 to 14 days post-partum) associated with bacterial organisms susceptible to ceftiofur.

DOSAGE AND ADMINISTRATION

Shake well before using.

Swine: Administer intramuscularly at a dosage of 1.36 to 2.27 mg ceftiofur equivalents/lb (3.0 to 5.0 mg/kg) BW (1 mL of sterile suspension per 22 to 37 lb BW). Treatment should be repeated at 24 h intervals for a total of 3 consecutive days.

Cattle:

- For bovine respiratory disease and acute interdigital necrobacillosis: administer by intramuscular or subcutaneous administration at the dosage of 0.5 to 1.0 mg ceftiofur equivalents/lb (1.1 to 2.2 mg/kg) BW (1 to 2 mL sterile suspension per 100 lb BW). Administer daily at 24 h intervals for a total of three consecutive days. Additional treatments may be administered on Days 4 and 5 for animals which do not show a satisfactory response (not recovered) after the initial three treatments.

CONTRAINDICATIONS

As with all drugs, the use of EXCENEL RTU Sterile Suspension is contraindicated in animals previously found to be hypersensitive to the drug.

WARNINGS

NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN.

Penicillins and cephalosporins can cause allergic reactions in sensitized individuals. Topical exposures to such antimicrobials, including ceftiofur, may elicit mild to severe allergic reactions in some individuals. Repeated or prolonged exposure may lead to sensitization. Avoid direct contact of the product with the skin, eyes, mouth, and clothing.

Persons with a known hypersensitivity to penicillin or cephalosporins should avoid exposure to this product.

In case of accidental eye exposure, flush with water for 15 minutes. In case of accidental skin exposure, wash with soap and water. Remove contaminated clothing. If allergic reaction occurs (e.g., skin rash, hives, difficult breathing), seek medical attention.

The material safety data sheet contains more detailed occupational safety information. To obtain a material safety data sheet (MSDS) please call 1-800-366-5288. To report any adverse event please call 1-800-366-5288.

RESIDUE WARNINGS:

Swine: When used according to label indications, dosage, and route of administration, treated swine must not be slaughtered for 4 days following the last treatment. Use of dosages in excess of those indicated or by unapproved routes of administration may result in illegal residues in edible tissues.

Cattle: When used according to label indications, dosage, and route of administration, treated cattle must not be slaughtered for 3 days following the last treatment. When used according to label indications, dosage and route of administration, a milk discard time is not required. Uses of dosages in excess of those indicated or by unapproved routes of administration, such as intramammary, may result in illegal residues in edible tissues and/or milk. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal.

In addition, for BRD only, administer intramuscularly or subcutaneously 1.0 mg ceftiofur equivalents/lb (2.2 mg/kg) BW every other day on Days 1 and 3 (48 h interval). Do not inject more than 15 mL per injection site.

Selection of dosage level (0.5 to 1.0 mg/lb) and regimen/duration (daily or every other day for BRD only) should be based on an assessment of the severity of disease, pathogen susceptibility and clinical response.

- For acute post-partum metritis: administer by intramuscular or subcutaneous administration at the dosage of 1.0 mg ceftiofur equivalents/lb (2.2 mg/kg) BW (2 mL sterile suspension per 100 lb BW). Administer at 24 h intervals for five consecutive days. Do not inject more than 15 mL per injection site.
**Antibiotic**

100 mg of tulathromycin/mL

For subcutaneous injection in beef and non-lactating dairy cattle and intramammary injection in swine only. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**DESCRIPTION**

DRAXXIN Injectable Solution is a ready-to-use sterile parenteral preparation containing a semi-synthetic macrolide antibiotic of the subclass triamilide. Each mL contains 100 mg of tulathromycin. Tulathromycin is a semi-synthetic macrolide antibiotic that is resistant to inactivation by erythromycin-resistant RNA methyltransferase. Tulathromycin is a stereoisomer of rapamycin and is a member of a chemical class known as macrolides. Each mL of DRAXXIN Injectable Solution contains 100 mg of tulathromycin/mL.

**PRECAUTIONS**

**Cattle**

The effects of DRAXXIN on bovine reproductive performance, pregnancy, and lactation, have not been determined. Sublimate-related reactions can cause transient local tissue reactions that may result in thinning of subcutis tissue at injection site. No information is available on renal or hepatic function in the animal species. The effects of tulathromycin on reproduction and development in pregnant mares have not been studied.

**Swine**

The effects of DRAXXIN on porcine reproductive performance, pregnancy, and lactation, have not been determined. Intramuscular injection can cause transient local tissue reactions at the site of injection that may result in thinning of subcutaneous tissue at the site of injection.

**ADVERSE REACTIONS**

**Cattle**

In one field study, two calves treated with DRAXXIN at 2.5 mg/kg BW exhibited transient hypersalivation. One of these calves also exhibited transient dyspnea, which may have been related to pneumonia.

**Swine**

In one field study, 10 out of 40 pigs treated with DRAXXIN at 2.5 mg/kg BW exhibited mild salivation resolved by less than four hours.

**CLINICAL PHARMACOLOGY**

At physiological pH, tulathromycin (a weak base) is approximately 60 times more soluble in water than erythromycin. Limited in vitro data indicate that tulathromycin is stable in plasma in the presence of a range of hydrolytic enzymes that are capable of degrading these hydrolyzed proteins.

Although the relationship between tulathromycin and its characteristics of an active compound has not been characterized, as a class, macrolides tend to be primary bactericidal through drug-dependent bacterial cell wall disruption and secondary bactericidal through membrane damage and eventual cell death. Tulathromycin is rapidly absorbed after subcutaneous administration. After a single dose of 2.5 mg/kg BW, tulathromycin is rapidly and nearly completely absorbed. Plasma protein binding is minimal to absent.

**INDICATIONS**

**Intravenous (Relaying Dairy Cattle)**

**BRD** – DRAXXIN Injectable Solution is indicated for the treatment of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis; and for the control of respiratory disease in cattle at high risk of developing BRD associated with Mycoplasma haemolymphitica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis.

**IBK** – DRAXXIN Injectable Solution is indicated for the treatment of infectious bovine keratoconjunctivitis (IBK) associated with Fusobacterium necrophorum and Porphyromonas xerophilic.

**Swine**

DRAXXIN Injectable Solution is indicated for the treatment of swine respiratory disease (SRD) associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Bordetella bronchiseptica, Moraxella bovis, and Mycoplasma hyopneumoniae; and for the control of SRD associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Moraxella bovis, and Mycoplasma hyopneumoniae.

**FOR INTRAMAMMARY INJECTIONS**

DRAXXIN Injectable Solution is indicated for the treatment of bovine mastitis caused by pathogens associated with Bovibacterium somnus, microorganisms associated with Mycoplasma bovis, and Mycoplasma mycoides.

**INDICATIONS AND USAGE**

**Swine**

DRAXXIN Injectable Solution is indicated for the treatment of bovine mastitis caused by pathogens associated with Bovibacterium somnus, microorganisms associated with Mycoplasma bovis, and Mycoplasma mycoides.

**CONTRAINDICATIONS**

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**ADVERSE REACTIONS**

Cattle

In one multi-location field study, 214 calves with naturally occurring BRD were treated with DRAXXIN. Responses to treatment were compared to saline-treated calves. One hundred and twenty-one calves were treated with DRAXXIN and 93 calves were treated with saline. 

**CONTRAINDICATIONS**

Cattle

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**WARNINGs**

**FOR USE IN ANIMALS ONLY.**

**KEEP OUT OF REACH OF CHILDREN.**

**NOT FOR USE IN OR ON HUMANS.**

**RESIDUE WARNINGS**

Cattle

Tulathromycin is intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older in calves. Withdrawal times for beef and dairy cattle have not been established. Do not use in animals intended for human consumption. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**Swine**

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment.

**EFFECTIVENESS**

Cattle

In one multi-location field study, 314 calves with naturally occurring BRD were treated with DRAXXIN. Responses to treatment were compared to saline-treated calves. One hundred and twenty-one calves were treated with DRAXXIN and 93 calves were treated with saline. 

**CONTRAINDICATIONS**

Cattle

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**WARNINGs**

**FOR USE IN ANIMALS ONLY.**

**KEEP OUT OF REACH OF CHILDREN.**

**NOT FOR USE IN OR ON HUMANS.**

**RESIDUE WARNINGS**

Cattle

Tulathromycin is intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older in calves. Withdrawal times for beef and dairy cattle have not been established. Do not use in animals intended for human consumption. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal. Do not use in female dairy cattle 20 months of age or older in calves to be processed for veal.

**Swine**

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**REFERENCES**

**ACKNOWLEDGMENTS**

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**Swine**

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**EFFECTIVENESS**

Cattle

In one multi-location field study, 314 calves with naturally occurring BRD were treated with DRAXXIN. Responses to treatment were compared to saline-treated calves. One hundred and twenty-one calves were treated with DRAXXIN and 93 calves were treated with saline. 

**CONTRAINDICATIONS**

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**Swine**

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment.
Tylosin

Para uso exclusivo en ganado vacuno y cerdos

200 mg por ml

Un antibiótico

Indicaciones: En ganado vacuno y cerdos. Tylosin 200 Inyectable se indica para el tratamiento del complejo respiratorio bovino (fibrosis de embarazo, neumonía), generalmente asociado con "Pasteurella multocida" y "Arcanobacterium pyogenes", pielón (pododermatitis necrótica), diarrea de los terneros provocada por "Fusobacterium necrophorum" y diarrea provocada por "Arcanobacterium pyogenes".

En cerdos, Tylosin 200 inyectable se indica para el tratamiento de artritis en cerdos provocada por "Mycoplasma hyosynoviae", neumonía porcinna causada por "Pasteurella spp.", erisipelas porcinna provocada por "Erysipelothrix rhoseoulae", diarrea porcinna asociada con "Treponema hydysenteriae" cuando está tratada con el medicamento apropiado a través del alimento y/o el agua para beber.

Cada ml contiene 200 mg de actividad de tylosina (como tiolosina base) en propilenglicol al 50 por ciento, alcohol benzoico al 4 por ciento y agua para inyección.

POSOLÓGÍA Y ADMINISTRACIÓN:

Tylosin 200 inyectable se administra por vía intramuscular.

GANADO VACUNO Y CASAS LEJERAS NO LACTANTES – Inyectar por vía intramuscular 8 mg por libra de peso corporal una vez al día (1 ml cada 25 libras). El tratamiento debe continuarse durante 24 horas luego de la remisión de los signos de la enfermedad sin extenderse más de 5 días. No aplicar más de 10 ml por lugar de inyección.

CERDOS – Inyectar por vía intramuscular 4 mg por libra de peso corporal (1 ml cada 50 libras) dos veces al día. El tratamiento debe continuarse durante 24 horas luego de la remisión de los signos de la enfermedad sin extenderse más de 3 días. No aplicar más de 5 ml por lugar de inyección.

Leer todas las instrucciones adjuntas antes de usar.

PRECAUCIÓN:

No mezclar la inyección Tylosin 200 con otras soluciones inyectables ya que esto puede ocasionar la precipitación de los principios activos.

ADVERTENCIAS:

ESTE PRODUCTO NO DEBE UTILIZARSE EN SERES HUMANOS. MANTENER FUERA DEL ALCANCE DE LOS NIÑOS.

Pueden ocurrir reacciones adversas, incluidos shock y muerte, en caso de sobredosis en crias de cerdos. No administrar la inyección a cerdos que pesen menos de 25 libras (0.5 ml) con la jeringa común. Se recomienda usar la inyección Tylosin 50 en cerdos que pesen menos de 25 libras. No administrar a caballos u otros equinos. La inyección de tylosina en equinos ha resultado mortal.

ADVERTENCIA ACERCA DE RESIDUOS: Ganado porcino: el ganado porcino previsto para consumo humano no se debe faenar durante los 14 días anteriores al último uso de este producto farmacológico.

ADVERTENCIA ACERCA DE RESIDUOS: Ganado bovino: el ganado bovino previsto para consumo humano no se debe faenar durante los 21 días anteriores al último uso de este producto farmacológico. Este producto farmacológico no está aprobado para su uso en ganado bovino lechero hembra de 20 meses de edad o más, incluidas las vacas lecheras secas. El uso en este ganado bovino puede producir residuos farmacológicos en la leche y/o en los terneros nacidos de estas vacas. Este producto no está aprobado para el uso en terneros que se procesarán para carne de ternera. No se ha establecido un periodo de retiro del fármaco en terneros pruanentes.

Si se suministra agua para beber con tiolosina como tratamiento de seguimiento para la diarrea porcina, el animal debe recibir posteriormente alimento que contenga entre 40 y 100 gramos de tiolosina por tonelada durante 2 semanas para garantizar la disolución de los residuos de tejidos.

Almacenar a 25 °C (77 °F) o menos.

Elanco, Tylen y la barra diagonal son marcas registradas propiedad de o licenciadas a Eli Lilly and Company o sus filiales.

Medicamento restringido (California). Usar únicamente según las instrucciones. NADA 12-965, Aprobado por la FDA

Fabricado por:
Elanco Animal Health
Una división de Eli Lilly y Company
Indianapolis, IN 46285, USA

Tylosin

Para use In Cattle and Swine Only

200 mg per mL

An Antibiotic

Indications: In Beef Cattle and Non-lactating Dairy Cattle, Tylosin 200 Injection is indicated for use in the treatment of bovine respiratory complex (shipping fever, pneumonia) usually associated with Pasteurella multocida and Arcanobacterium pyogenes; foot rot (necrotic pododermatitis) and calf diphtheria caused by Fusobacterium necrophorum and metritis caused by Arcanobacterium pyogenes.

In Swine, Tylosin 200 Injection is indicated for use in the treatment of swine arthritis caused by Mycoplasma hyosynoviae; swine pneumonia caused by Pasteurella spp.; swine erysipelas caused by Corynebacteri rhodococcus; swine dysentery associated with Treponema hydysenteriae when followed by appropriate medication in the drinking water and/or feed.

Each mL contains 200 mg of tylosin activity (as tylosin base) in 50 percent propylene glycol with 4 percent benzyl alcohol and water for injection.

ADMINISTRATION AND DOSAGE:

Tylosin 200 Injection is administered intramuscularly.

BEEF CATTLE AND NON-LACTATING DAIRY CATTLE – Inject intramuscularly 8 mg per pound of body weight one time daily (1 mL per 25 pounds). Treatment should be continued 24 hours following remission of disease signs, not to exceed 5 days. Do not inject more than 10 mL per site.

SWINE – Inject intramuscularly 4 mg per pound of body weight (1 mL per 50 pounds) twice daily. Treatment should be continued 24 hours following remission of disease signs, not to exceed 3 days. Do not inject more than 5 mL per site.

Read accompanying directions fully before use.

CAUTION:

Do not mix Tylosin 200 Injection with other injectable solutions as this may cause a precipitation of the active ingredients.

WARNINGS:

NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN.

Adverse reactions, including shock and death may result from overdosage in baby pigs. Do not attempt injection into pigs weighing less than 25 pounds (0.5 mL) with the common syringe. It is recommended that Tylosin 50 Injection be used in pigs weighing less than 25 pounds.

Do not administer to horses or other equines. Injection of tylosin in equines has been fatal.

RESIDUE WARNING: Swine:

Swine intended for human consumption must not be slaughtered within 14 days of the last use of this drug product.

RESIDUE WARNING: Cattle:

Cattle intended for human consumption must not be slaughtered within 21 days of the last use of this drug product. This drug product is not approved for use in female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. This product is not approved for use in calves intended to be processed for veal. A withdrawal period has not been established in pre-ruminating calves.

If tylosin medicated drinking water is used as a follow-up treatment for swine dysentery, the animal should thereafter receive feed containing 40 to 100 grams of tylosin per ton for 2 weeks to assure depletion of tissue residues.

Store at or below 25°C (77°F).

Elanco, Tylen and the diagonal bar are trademarks owned or licensed by Eli Lilly and Company, its subsidiaries or affiliates.

Restricted Drug (California) - Use Only as Directed.

NADA 12-965, Approved by FDA

To report adverse effects, access medical information, or obtain additional product information, call 1-800-426-4441.

Manufactured for:
Elanco Animal Health
A Division of Eli Lilly and Company
Indianapolis, IN 46285, USA
Senior Team Breeding Exercise – 2014

Your group is a genetic and marketing consultant for Bluegrass Cattle Company, a progressive registered Angus and Simmental seedstock operation that maintains 200 purebred Angus females and 100 purebred Simmental females in South Central Kentucky. The cowherd is managed much like any progressive commercial herd in the area. Due to this fact, the primary market for this operation is the sale of balanced trait Angus and Simmental bulls to progressive commercial beef operations across the southeast.

Nearly your entire customer base sells feeder cattle through preconditioned feeder cattle sales (e.g., the Kentucky CPH-45 Feeder Cattle Sales). Therefore, these bulls need to produce calves that will be moderate size at birth, grow fast, wean heavy, and continue to grow efficiently through a 45 day backgrounding period without becoming overly fleshy. Also many of your customers raise their own replacement females so efficient mature size, optimum milking ability, and longevity are also important. Most of the commercial cowherds you sell bulls to are made up of a mixture of Angus, Hereford, Red Angus, Gelbvieh, and Charolais genetics. Labor and feed resources of most of the commercial operations that you sell bulls to is average to limited.

Your job assignment is to use the EPD data provided to select three (3) Angus bulls and two (2) Simmental bulls to purchase semen from for use at Bluegrass Cattle Company. Answer the questions below and on the back side of this sheet, and then explain to the Contest Official why your group chose the 5 bulls that you did.

[There are 13 answers to the questions worth 10 points each for a total of 130 possible points and your discussion with the Official is worth 70 possible points for a grand total of 200 possible points.]

1.) What three (3) Angus Bulls did you select?

- Lancer
- Stockman
- Traveler
- New Design
- Extra

2.) What two (2) Simmental Bulls did you select?

- Macho
- Dream On
- Buck
- Big Sky
- Six Shooter

3.) Which Angus Bull would mostly like sire the calves that would have the most desirable USDA Yield Grade carcasses?

- Lancer
- Stockman
- Traveler
- New Design
- Extra
4.) Which Simmental Bull would most likely sire the calves that would have the most desirable USDA Quality Grade carcasses?

Macho   Dream On   Buck   **Big Sky**    Six Shooter

5.) Which Simmental Bull should sire the easiest keeping daughters?

Macho   Dream On   Buck   **Big Sky**    Six Shooter

6.) Which Simmental Bull would be the least desirable bull to breed to heifers?

**Macho**   Dream On   Buck   Big Sky    Six Shooter

7.) Which Angus Bull would most likely sire the heaviest muscled feeder cattle?

Lancer   **Stockman**   Traveler   New Design   Extra

8.) Which Angus Bull would most likely sire the smallest framed finished cattle and replacement females?

Lancer   **Stockman**   Traveler   New Design   Extra

9.) Which Simmental Bull’s daughters would most likely have the lowest number of assisted births?

**Macho**   Dream On   Buck   **Big Sky**   Six Shooter

10.) Which Angus Bull will likely sire daughters that will be the hardest to maintain in a limited resource environment?

**Lancer**   **Stockman**   Traveler   New Design   Extra
## EPDs for Angus Bulls

<table>
<thead>
<tr>
<th>Bulls</th>
<th>Calving Ease Direct</th>
<th>Birth Weight</th>
<th>Weaning Weight</th>
<th>Yearling Weight</th>
<th>Yearling Height</th>
<th>Calving Ease Maternal</th>
<th>Milk</th>
<th>Carcass Weight</th>
<th>Marbling</th>
<th>Rib Eye Area</th>
<th>Fat</th>
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<td>+12</td>
<td>−2.5</td>
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<td>Stockman</td>
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<td>+4</td>
<td>+15</td>
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<td>New Design</td>
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<td>Breed Averages</td>
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<td>+84</td>
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<td>+6</td>
<td>+23</td>
<td>+5.0</td>
<td>+0.43</td>
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**EPDs for Simmental Bulls**

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<tr>
<th>Bulls</th>
<th>Calving Ease</th>
<th>Birth Weight</th>
<th>Weaning Weight</th>
<th>Yearling Weight</th>
<th>Maternal Calving Ease</th>
<th>Milk</th>
<th>Maternal Weaning Weight</th>
<th>Stayability</th>
<th>Carcass Weight</th>
<th>Yield Grade</th>
<th>Marbling</th>
<th>Rib Eye Area</th>
<th>Backfat</th>
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</thead>
<tbody>
<tr>
<td>Macho</td>
<td>−1.3</td>
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<td>+92</td>
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<td>+56</td>
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<td>+90</td>
<td>+9.5</td>
<td>+20</td>
<td>+57</td>
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<td>+0.10</td>
<td>+0.55</td>
<td>+0.01</td>
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<tr>
<td>Big Sky</td>
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<td>+48</td>
<td>+57</td>
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<td>+13</td>
<td>+59</td>
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<td>Breed Averages</td>
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</table>
Senior Team Feeding Exercise – 2014

You are the manager of a progressive commercial beef cattle operation that utilizes Simmental and SimAngus Bulls on a herd of commercial Angus females to produce top-notch replacement heifers. You need a cost effective supplemental ration to meet the needs of your mature cowherd that is moderate framed (1200 pounds) and above average in milking ability. The herd has just finished calving in a tight 45 day calving season. The cows are currently on free choice fescue hay that tested 10% protein and 50% TDN. They are eating about 2% of their body weight per day of this hay. The cows have access to a high quality vitamin/mineral supplement and a free choice water system.

Your job assignment is to use the list of available supplements and nutrient requirements for a 1200 pound cow provided to choose one or two supplements to feed. Answer the questions below and on the back side of this sheet, and then explain to the Contest Official the basis for your decision.

[There are 8 questions worth 10 points each for a total of 80 possible points and your discussion with the Official is worth 120 possible points for a grand total of 200 possible points.]

1.) What stage of production are these cows currently in?
   - Mid Gestation
   - Late Gestation
   - Early Lactation

2.) Approximately how many pounds of hay are these cows consuming on a per cow per day basis?
   - 10 pounds
   - 20 pounds
   - 24 pounds
   - 30 pounds

3.) Which nutrient is this hay most deficient in?
   - Protein
   - TDN (energy)

4.) Of the supplements that are 20% or higher in protein, which is the most expensive to feed on a cost per pound of protein basis?
   - Corn Gluten
   - Protein Block
   - Distillers Dried Grains
   - Soybean Meal
5.) In terms of dollars per ton, which is the cheapest supplement?

- Cracked Corn
- Soyhulls
- Corn Gluten
- Protein Block
- Distillers Dried Grains
- Soybean Meal

6.) If the hay costs $30 per roll and a roll weighs 1000 lbs, what is the hay feeding cost per cow per day?

$0.72 per cow per day

7.) Which supplement or supplements did you choose and how much did you feed of each?

**Full Credit Answers**
- 3 lbs Distillers Dried Grains + 3 lbs Cracked Corn
  - OR –
  - 5 lbs Distillers Dried Grains

**Partial Credit Answers**
- 7 lbs Soyhulls
  - OR –
  - 7 lbs Corn Gluten

8.) Excluding hay costs, how much does your supplement cost per cow per day?

**Full Credit Answers**
- 3 lbs Distillers Dried Grains + 3 lbs Cracked Corn = $0.63/cow/day
  - OR –
  - 5 lbs Distillers Dried Grains = $0.65/cow/day

**Partial Credit Answers**
- 7 lbs Soyhulls = $0.70/cow/day
  - OR –
  - 7 lbs Corn Gluten = $0.70/cow/day
# Supplements Available

<table>
<thead>
<tr>
<th>Supplement</th>
<th>Protein%</th>
<th>TDN% (energy)</th>
<th>Maximum intake (lbs)</th>
<th>Price ($ per pound as fed)</th>
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<tr>
<td>Cracked Corn</td>
<td>8</td>
<td>90</td>
<td>6</td>
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<td>Soybean Meal</td>
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### Nutrient Requirements

**1200 pound cow – 20 pounds milk**

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<th>Stage of Production</th>
<th>Dry Matter Intake</th>
<th>TDN (Energy)</th>
<th>Protein</th>
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<td></td>
<td>% Body Weight</td>
<td>% Body Weight</td>
<td>% Body Weight</td>
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<tr>
<td></td>
<td>Pounds</td>
<td>Pounds</td>
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