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Senior Livestock Breeds Identification – 2022

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each livestock breed and for the important characteristics/traits. **You must bubble in the scantron sheet corresponding with Breed Name and Important Traits.** You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points for each part of the question. (60 points total for Seniors).

Breed Name	Important Traits
1. <u> S </u>	<u> M </u>
2. <u> N </u>	<u> G </u>
3. <u> A </u>	<u> A </u>
4. <u> R </u>	<u> L </u>
5. <u> C </u>	<u> B </u>
6. <u> Q </u>	<u> N </u>
7. <u> E </u>	<u> D </u>
8. <u> M </u>	<u> I </u>
9. <u> G </u>	<u> E </u>
10. <u> J </u>	<u> J </u>

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

<u>Beef Breeds</u>	<u>Goat Breeds</u>	<u>Sheep Breeds</u>	<u>Swine Breeds</u>
A. Charolais	G. Boer	I. Dorset	O. Berkshire
B. Chianina	H. Pygmy	J. Hampshire	P. Chester White
C. Limousin		K. Polypay	Q. Duroc
D. Red Angus		L. Shropshire	R. Landrace
E. Shorthorn		M. Southdown	S. Poland China
F. Tarentaise		N. Targhee	T. Tamworth

Important Characteristics/Traits Origins of Breeds – to be used in answer column 2 by Seniors

Beef Cattle Characteristics/Traits

- A. Terminal sire French breed known for muscle growth efficiency
- B. Continental Breed known for muscle, carcass yield, and feed efficiency; Originated in a small region in France.
- C. Known for excellent meat quality, calving ease, and hardy; originated in the British Isles.
- D. British breed that varies in color and is known for moderate frame size; originated in Tees River Valley in England.

Goats Characteristics/Traits

- E. Known for carcass qualities; its breed name is the Dutch word “Farmer”; originated in Africa
- F. Nigerian dwarf breed, heavily muscled and short legs; originated in Africa

Sheep Characteristics/Traits

- G. Open-faced dual-purpose breed that is hardy and adaptable; Originated in Dubois, ID.
- H. Dual-purpose breed known for high prolificacy and large lamb crop; Originated in Dubois, ID.
- I. English breed known for carcass conformation and early maturity rates.
- J. English breed known for carcass conformation, growth rate, and milking ability.

Swine Characteristics/Traits

- K. Named after a PA county; known for mothing ability, durability, and soundness.
- L. Designated “America’s Sowherd”; Danish breed that is prolific and known for length of body.
- M. Rugged, heavy boned Ohio breed that requires six white points for registry.
- N. Developed by crossing NY and NJ pigs; terminal sire noted for lean grain efficiency.

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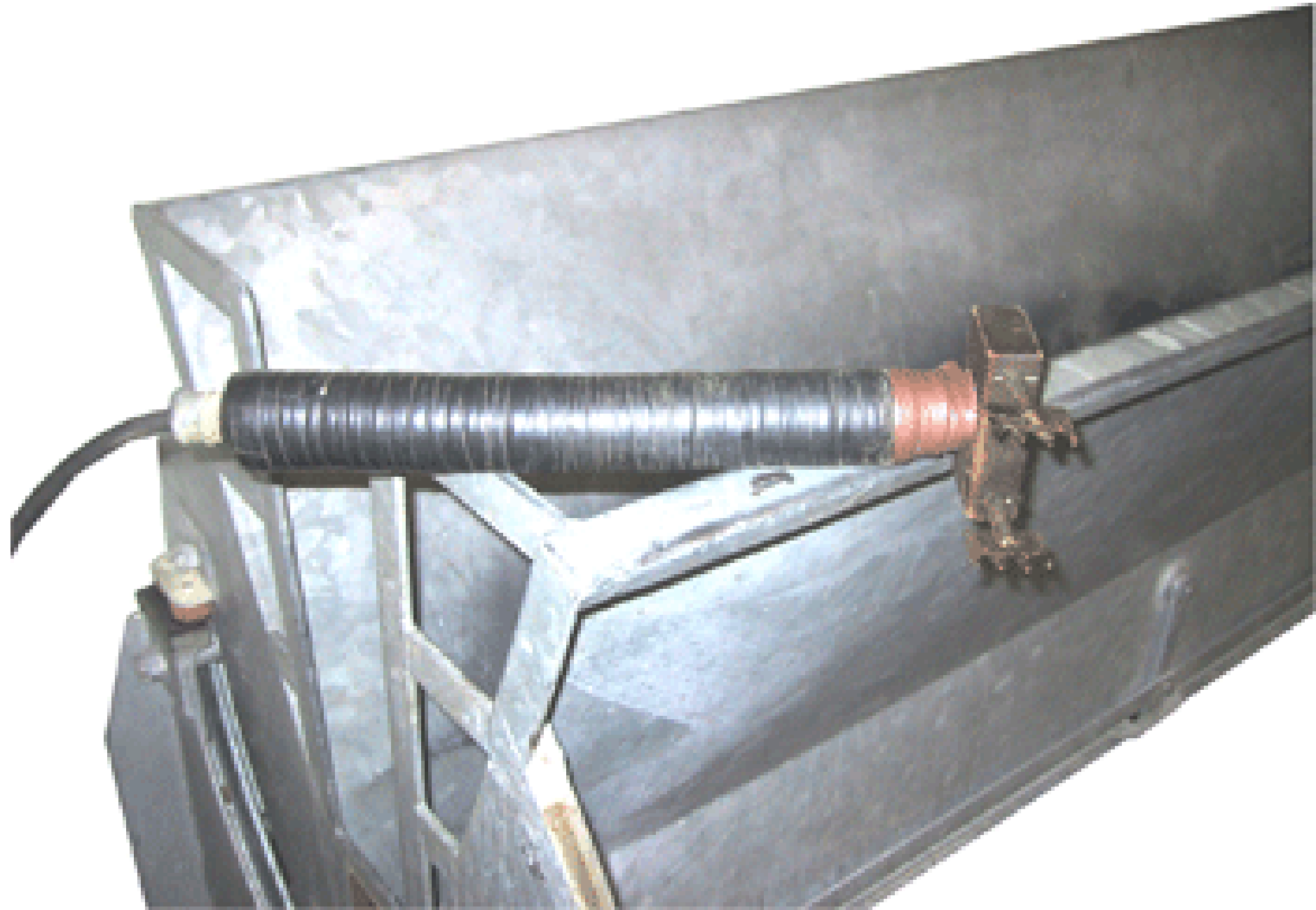
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Name _____ KEY _____

Senior Livestock and Meat Equipment Identification – 2022

INSTRUCTIONS: For each picture, use the column on the right to choose the letter that indicates your answer for each piece of equipment. **You must bubble in the scantron sheet corresponding with Equipment Identification.** You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points (60 points total for Seniors).

Equipment
Name

1. L

2. C

3. R

4. I

5. D

6. G

7. J

8. O

9. K

10. T

11. N

12. M

13. P

14. S

15. Q

16. E

17. H

18. A

19. B

20. F

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

Livestock/Meat Equipment

- A. Balling Gun
- B. Band Saw
- C. Bone Dust Scraper
- D. Dehairing Machine
- E. Drench Gun
- F. Ear Notchers
- G. Elastrator
- H. Electrical Stunner
- I. Emasculator
- J. Emulsifier
- K. Foot Rot Shears
- L. Metal Knife Scabbard
- M. Meat Tenderizer
- N. Needle Teeth Nippers
- O. Obstetrical (O.B.) Chain
- P. Scotch Comb
- Q. Slap Tattoo
- R. Tumbler
- S. Wells Saw
- T. Wool card

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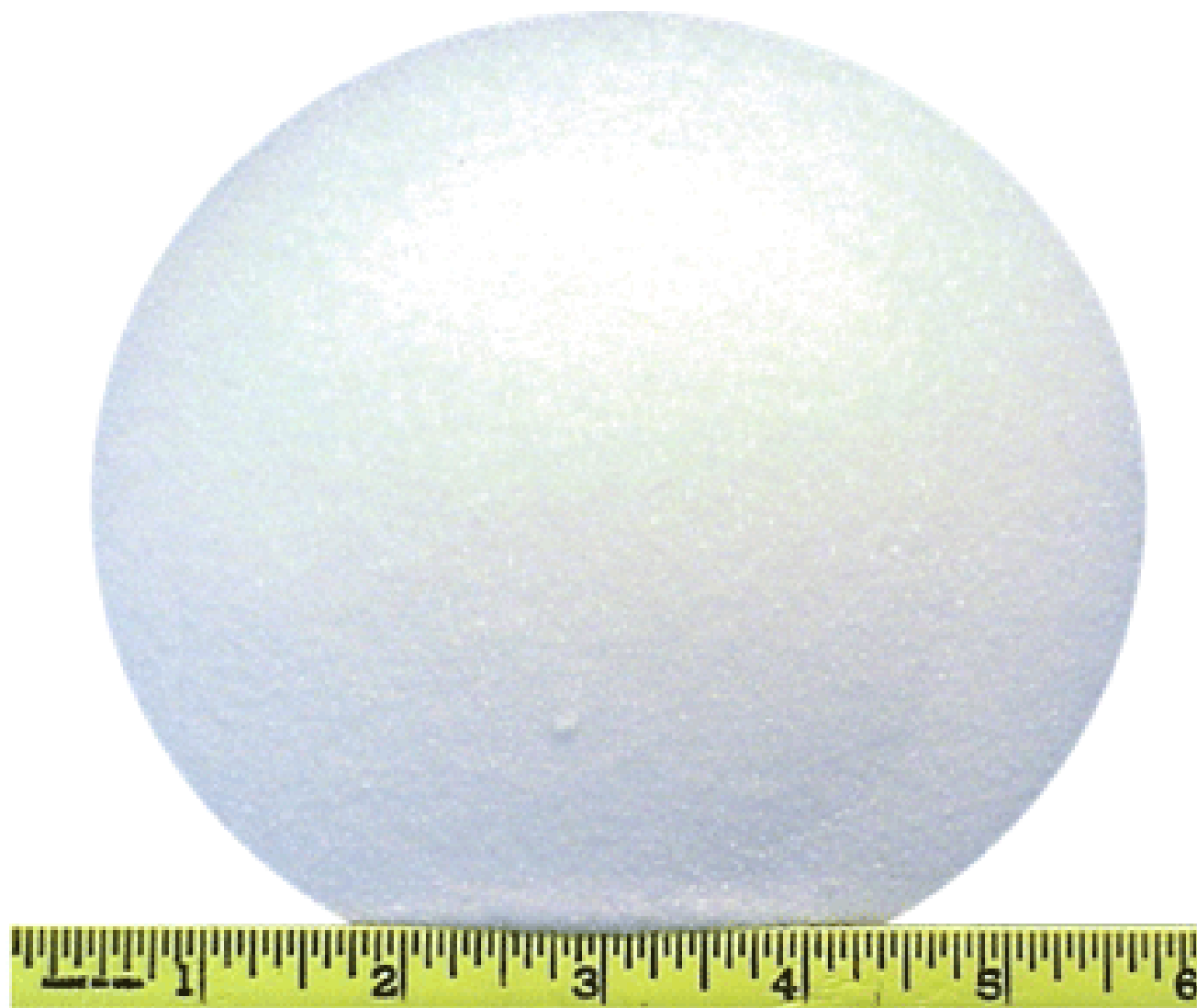
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Name _____ **KEY** _____

Senior Livestock Feed Identification – 2021

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each feedstuff name and for the important characteristics/use. **You must bubble in the scantron sheet corresponding with feed identification and feed usage.** You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points for each part of the question. (60 points total for Seniors).

Feedstuff Name	Characteristic/Uses
1. <u> F </u>	<u> J </u>
2. <u> G </u>	<u> B </u>
3. <u> D </u>	<u> M </u>
4. <u> M </u>	<u> E </u>
5. <u> O </u>	<u> D </u>
6. <u> T </u>	<u> I </u>
7. <u> S </u>	<u> A </u>
8. <u> B </u>	<u> F </u>
9. <u> N </u>	<u> K </u>
10. <u> E </u>	<u> G </u>

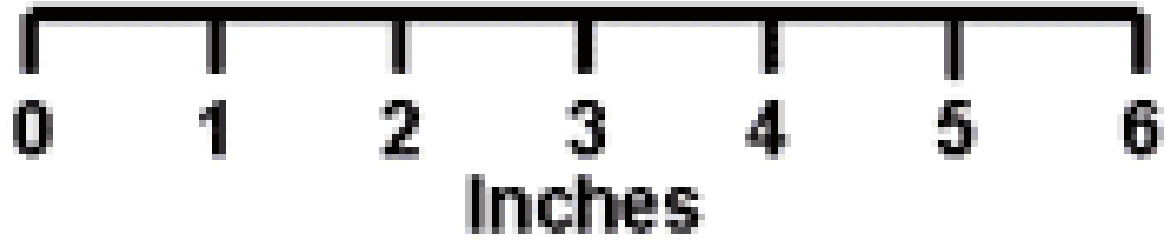
Feed Names – to be used in answer column 1 by Seniors

- A. Barley (whole)
- B. Corn Distillers Dried Grain with soluble
- C. Cottonseed Meal
- D. Dicalcium Phosphate
- E. Dried Beet Pulp
- F. Dried Molasses
- G. Ground Ear Corn
- H. Ground Limestone
- I. Ground Shelled Corn
- J. Millet (whole)
- K. Oats (whole)
- L. Shelled Corn
- M. Soybean Meal
- N. Steam Flaked Corn
- O. Steam Rolled Oats
- P. Trace-Mineralized Salt
- Q. Urea
- R. Wheat Middlings
- S. Wheat (whole)
- T. White Salt

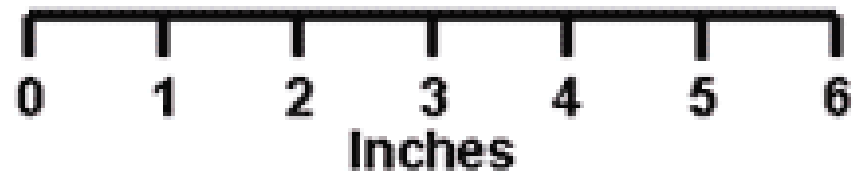
Important Characteristics/Uses of Feedstuffs – to be used in answer column 2 by Seniors

- A. A carbohydrate that is widely grown in the U.S. Primarily used in human food but can be fed to livestock. Lower in energy compared to corn, but higher in protein compared to corn.
- B. A carbohydrate that has been ground entirely through a hammer mill or burr mill. Reduces particle size which increases the surface area and improves starch digestibility. Due to high fiber content, it is fed primarily to ruminant animals.
- C. A carbohydrate that is widely grown in the cool moist climates of the U.S. This feedstuff is used extensively in horse feeds and feeds for starving young animals. Can be fed whole, but usually processed prior to feeding.
- D. A carbohydrate that is formed by exposure to a short period of high- moisture steam and then rolled to produce a flake. This grain improves energy utilization and is primarily used in horse or young animal diets.
- E. A protein that is an excellent source of amino acids and is the most widely used protein supplement in the U.S.
- F. A protein that is a by-product of the distillers industry. Primarily used as a protein and energy source in ruminant and horse feeds but may be fed in limited amounts to monogastrics.
- G. A by-product feed produced by extracting the sugar from sugar beets and drying the remaining pulp.
- H. A protein that should only be fed to ruminants. Often referred to as non-protein nitrogen. Can be toxic if fed at excessive levels.
- I. The most fed mineral supplement that can be provided in block, granulated, or rock form.
- J. A dried carbohydrate that is highly palatable and a readily available source of energy. Most commonly added to ruminant and horse diets.
- K. A carbohydrate that is formed by exposure to a long period of high-moisture steam and then rolled to produce a flake. This helps make the grain more digestible because it increases the surface area and gelatinizes some of the starch.
- L. A by-product of the wheat flour milling industry and is commonly added to cattle diets.
- M. A mineral that obtained by processing rock phosphates into phosphoric acid, which is then reacted with calcium carbonate. Used in livestock horse and poultry feeds.
- N. A mineral that is a natural source of calcium. Also called calcium carbonate. An inexpensive source of calcium used in livestock, horse and poultry diets.

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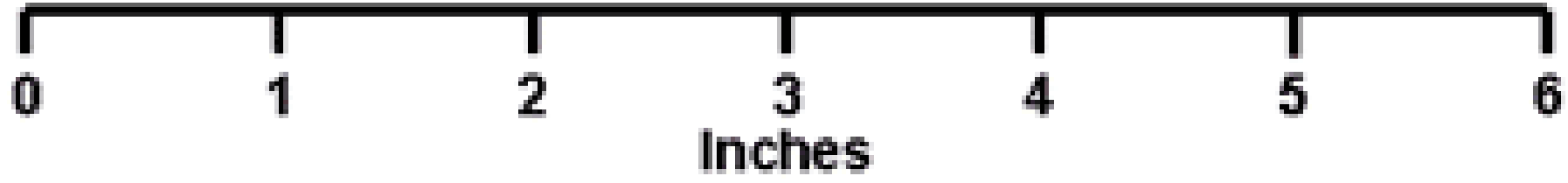


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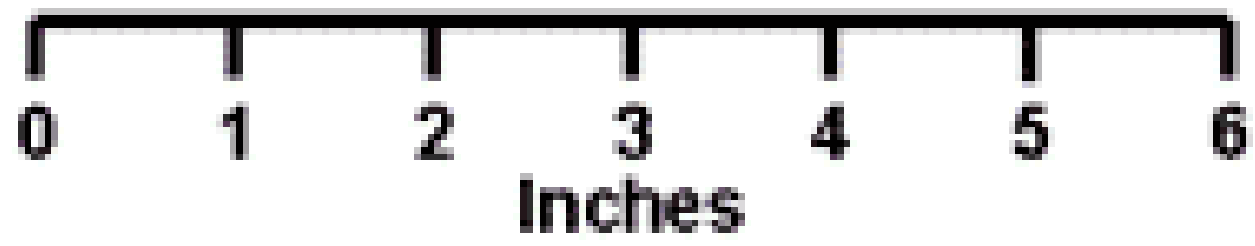


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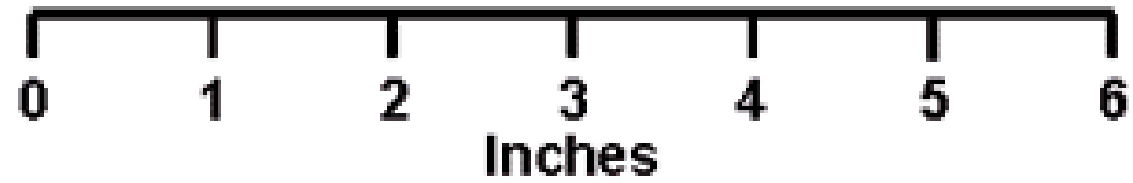
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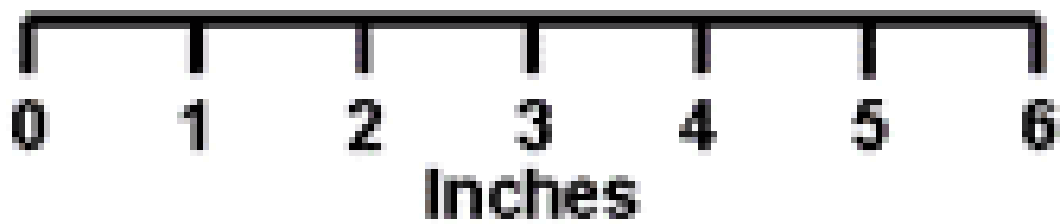
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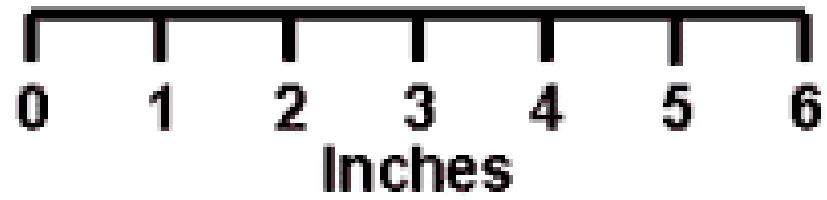


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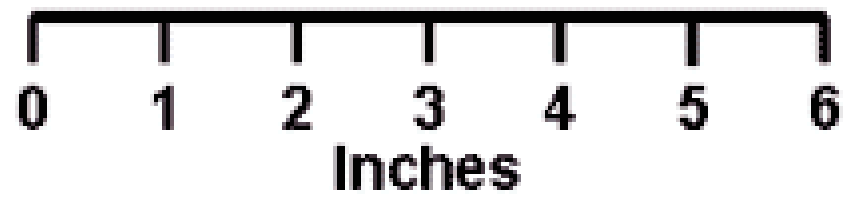


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Inches

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Senior Retail Meat Judging Class 1 – 2022

Bubble in placing on scantron sheet under

“Placing Class 1”

3,2,4,1 cuts: 6-2-4

Name _____ Contestant # _____ County _____

Placing is worth a possible 50 points

Contestant Number _____	
Placing Score _____	
<i>University of Kentucky College of Agriculture Animal Sciences Department</i>	
Contestant's Name _____ _____	A 1 2 3 4
	B 1 2 4 3
	C 1 3 2 4
	D 1 3 4 2
	E 1 4 2 3
	F 1 4 3 2
	G 2 1 3 4
	H 2 1 4 3
Address _____ _____	I 2 3 1 4
	J 2 3 4 1
	K 2 4 1 3
	L 2 4 3 1
	M 3 1 2 4
	N 3 1 4 2
County _____	O 3 2 1 4
	P 3 2 4 1
	Q 3 4 1 2
	R 3 4 2 1
	S 4 1 2 3
	T 4 1 3 2
	U 4 2 1 3
	V 4 2 3 1
	W 4 3 1 2
	X 4 3 2 1

Senior Hay Judging Class – 2022

You may keep this for your own records. Please make sure to bubble your scantron in placing column #2.

(50 points possible)

Contestant Number _____

Placing Score _____ **1,4,2,3**
4-2-5 _____

*University of Kentucky
College of Agriculture
Animal Sciences Department*

Contestant's Name

Address

County

Class

Hay Judging Class

A	1 2 3 4	
B	1 2 4 3	
C	1 3 2 4	
D	1 3 4 2	
E	1 4 2 3	
F	1 4 3 2	
G	2 1 3 4	
H	2 1 4 3	
I	2 3 1 4	
J	2 3 4 1	
K	2 4 1 3	
L	2 4 3 1	
M	3 1 2 4	
N	3 1 4 2	
O	3 2 1 4	
P	3 2 4 1	
Q	3 4 1 2	
R	3 4 2 1	
S	4 1 2 3	
T	4 1 3 2	
U	4 2 1 3	
V	4 2 3 1	
W	4 3 1 2	
X	4 3 2 1	

[Turn over for Scenario and Forage Analysis Information]

Scenario:

You are backgrounding a load of feeder heifer 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 fed for the first three 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 mature 400 pound, feeder heifers to gain 1.5 pounds per day.

Dry Matter: 10.7 pounds per day

Crude Protein: 12.1%

TDN: 64%

Forage Analysis

	Hay Lot #1	Hay Lot #2	Hay Lot #3	Hay Lot # 4
Dry matter	88.6%	87.9%	84.9%	87.9%
Crude protein	13.9%	12.0%	9.2%	11.9%
Acid detergent fiber (ADF)	41.5%	44.8%	40.9%	45.7%
Neutral detergent fiber (NDF)	61.4%	67.5%	60.2%	68.2%
Total digestible nutrients (TDN)	65.5%	66.5%	60.1%	66.5%

Senior Quiz – 2022

Circle your answer on this sheet and bubble your answers in the Exam section of your scantron sheet. Only use a number 2 pencil on your scantron sheet. You can keep this sheet for reference to review with your coach after the contest. (Each question is worth 2 pts. each for 60 pts. Total)

- 1.) A bull breeding soundness exam includes:
 - a. An evaluation of sperm number
 - b. An evaluation of sperm morphology
 - c. A physical examination
 - d. All of the above
- 2.) Myotonic Congenita (Fainting Goat Syndrome) is a condition that affects:
 - a. Muscle Tissue
 - b. Nervous Tissue
 - c. gastrointestinal tract
 - d. skeletal tissue
- 3.) Beef Carcasses are ribbed for evaluation at the:
 - a. 10th rib
 - b. 8th rib
 - c. 12th rib
 - d. 11th rib
- 4.) The highest prices are usually received for which grade of feeder cattle?
 - a. L-2
 - b. M-1
 - c. S-2
 - d. M-2
- 5.) A lamb should receive _____ in colostrum within the first 24 hours after birth.
 - a. 50% of body weight
 - b. 5% of body weight
 - c. 10% of body weight
 - d. 75% of body weight
- 6.) The flat iron steak comes from which wholesale cut?
 - a. Chuck
 - b. Rib
 - c. loin
 - d. round
- 7.) What is the best way to prevent the occurrence of PSE in pork products?
 - a. Prevent stress during transport and slaughter
 - b. Shower pigs in cold water before slaughter
 - c. Select for pigs with PSS genetics
 - d. Both A and B

- 8.) Which of the following can be supplemented in beef cattle diets to extend the shelf life of final products by preventing discoloration and oxidation of the meat?
- a. Vitamin E
 - b. Phosphorous
 - c. ionophores
 - d. salt
- 9.) If a cow has shown no outward signs of heat in 3 months, and she has not been bred, then she is probably exhibiting signs of:
- a. estrus
 - b. Johnes Disease
 - c. Anestrus
 - d. Dystocia
- 10.) Wethers raised on a grain diet are at high risk for contracting
- a. Urinary calculi
 - b. Foot rot
 - c. respiratory diseases
 - d. parasites
- 11.) When is the best time to breed your doe for the first time?
- a. She has reached 75% of her adult weight
 - b. She is in good Body Condition & health
 - c. she is 4-5 months old
 - d. Both A & B are correct
- 12.) Which of the following microorganisms are NOT found in the rumen of a cow?
- a. yeast
 - b. protozoa
 - c. bacteria
 - d. all of the above are found in the rumen
- 13.) Which reproductive structure is designed to restrict access to the uterus?
- a. vagina
 - b. cervix
 - c. fallopian tube
 - d. follicle
- 14.) Ionophores are fed to cattle in order to:
- a. Increase feed per pound of gain
 - b. Prevent infection
 - c. increase feed efficiency
 - d. prevent heifers from coming into heat
- 15.) Which mineral can be toxic to sheep, but is often deficient in feeding programs for cattle and goats?
- a. copper
 - b. calcium
 - c. magnesium
 - d. iron
- 16.) The heritability of fertility is:
- a. Low
 - b. Moderate
 - c. High
 - d. Unknown due to little research
- 17.) The part of the intestine where the greatest amount of nutrient absorption occurs is the:
- a. Duodenum
 - b. Jejunum
 - c. Ileum
 - d. Colon

18.) If two sheep that have the genotype QR mate what is the chance they will produce a homozygous scrapie resistant offspring?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

19.) A 1000 pound steer with a 63% dressing percentage will have a hot carcass weight of?

- a. 630 pounds
- b. 63 pounds
- c. 6300 pounds
- d. 325 pounds

20.) How do you tell the difference between first cutting and second cutting tall fescue hay?

- a. Color of hay
- b. Dustiness
- c. presence of stems and seedheads
- d. length of leaves

21.) In swine, the genotype that results in 30-50% PSE, but allows for a greater percentage of lean and the potential for superior growth is:

- a. NN
- b. Nn
- c. nn
- d. None of the above

22.) The action of many growth promotants is to increase muscle size. This is done by a process called:

- a. Hormone
- b. Hypertrophy
- c. Hyperplasia
- d. Maturation

23.) The EPD used in swine to predict the potential growth of their offspring is:

- a. Number Born Alive
- b. 21-Day Litter Weight
- c. 250-Day weight
- d. Litter Size

24.) Why would you use a CIDR device in a mature Red Angus cow?

- a. To treat bloat
- b. To synchronize estrus
- c. To apply a dewormer
- d. To measure the quality of the fleece

25.) The Cattlemen's Congress Livestock Show is held where?

- a. Denver
- b. Kansas City
- c. Oklahoma City
- d. Louisville

26.) Who is the current Kentucky Commissioner of Agriculture?

- a. James Comer
- b. Andy Beshear
- c. Matt Bevin
- d. Ryan Quarles

27.) Which grain is highest in fiber content?

- a. corn
- b. wheat
- c. barley
- d. oats

28.) What is mineral deficiency which can occur on lush, spring with cows in early lactation?

- a. Selenium
- b. Calcium
- c. Protein
- d. Magnesium

29.) Which vitamin requirement is typically met by a healthy functioning rumen and not supplemented?

- a. Vitamin A
- b. B Vitamins
- c. Vitamin D
- d. Vitamin E

30.) Traditionally, consumers were taught to cook pork until “well done”. What parasite formerly associated with pork were they trying to kill?

- a. Toxoplasma
- b. Roundworms
- c. Trichina
- d. Coccidia

Name _____ **KEY** _____

Senior Individual Quality Assurance – 2022

You are the owner of a swine and cattle operation in central Kentucky. You have made the decision to update your medications for the upcoming breeding/farrowing season to include medications for heat synchronization in cattle and parturition induction in swine. After discussing with your veterinarian, he recommended the use of Lutalyse Injection to meet both of your operations' needs. Although, not having used this product before, you must carefully evaluate the protocol for this new product. Please use the Lutalyse label and your knowledge of quality assurance management to answer the **20 questions** below relating to quality assurance.

Circle your answers and keep this sheet to go over with you coach at the conclusion of the contest. Bubble in scantron sheet in the Quality Assurance box. (20 questions worth 3 points per question for 60 total points).

1. What natural occurring hormone is injected when you use Lutalyse?

A.) Estradiol

C.) GnRH

B.) FSH

D.) PGF_{2α}

2. How should Lutalyse be administered in swine?

A.) On the skin

C.) Subcutaneously

B.) Intramuscularly

D.) Intravenously

3. What must be present on the ovaries of cattle for Lutalyse to be most effective?

A.) Corpus Ablicans

C.) Corpus Hemorrhagicum

B.) Corpus Luteum

D.) None of the above

4. What is the withdrawal period for Lutalyse?

A.) 14 days

C.) 30 days

B.) 21 days

D.) No withdrawal period

5. What ways can Lutalyse be used within your cattle and swine operation?

- A.) To induce farrowing in gilts and sows
- B.) To attempt for all heifers to be in heat at the same time
- C.) To induce abortion in bred cows
- D.) All of the above

6. True or False. This product can be used as a heat synchronization tool in swine.

- A.) True
- B.) False

7. What can you use this product with in order to synchronize estrus in cattle?

- A.) FACTREL
- B.) EAZI-BREED CIDR
- C.) This product is not meant for use in estrus synchronization
- D.) Both A & B

8. True or False. When offering management considerations, this label indicates that nutrition has a direct effect on cattle conception.

- A.) True
- B.) False

9. Although response time varies, approximately how soon can you expect a gilt or sow to farrow after proper administration of this product?

- A.) 30 hours
- B.) 3 days
- C.) 72 hours
- D.) Not specified on label

10. Lutalyse should be stored at _____.

- A.) Does not matter as long as it is closed C.) 36 degrees F to 46 degrees F
B.) 68 degrees F to 77 degrees F D.) None of the above

11. Which of the following is crucial to be recorded when utilizing Lutalyse in swine?

- A.) Gestation Period C.) Both A & B
B.) Projected Farrowing Dates D.) None of the above

12. True or False. According to the label, if you first use this product on March 2nd, it is still approved to be used on July 14th.

- A.) True B.) False

13. Which of the following are advised to handle Lutalyse with extreme caution?

- A.) All women who are of child-bearing age
B.) Anyone with Asthma
C.) Anyone with respiratory problems
D.) All of the above

14. What is the injection interval for this product when being used alone for estrus synchronization in cattle?

- A.) 1-5 days C.) 10-12 days
B.) 6-8 days D.) 35 days

15. How much Lutalyse should be administered for treatment of Pyometra in cattle?

- A.) 5 mL C.) 2 mL
B.) 25 mL D.) 2-4 mL

16. What species can the 100 mL bottle be used for?

A.) Cattle

C.) Mares

B.) Swine

D.) All of the above

17. When should you breed cattle after the second Lutalyse injection?

A.) Time detected by estrus

C.) Both A & B

B.) 80 hours after injection

D.) None of the above

18. True or False: Lutalyse can be absorbed through the skin, so it is highly important to ensure user safety.

A.) True

B.) False

19. After analyzing the label, and even though you thought you hadn't, you realized that you have used this product in the past for one of your gilts. You remember that she was acting differently after given this product by increased vocalization and more apparent nesting behaviors. Were these actions possibly caused by the Lutalyse injection?

A.) Yes, these are both side effects of Lutalyse

B.) Only one of these actions are a side effect of Lutalyse

C.) No, but there are other side effects of Lutalyse

D.) There are no known side effects of Lutalyse

20. Your neighbor, Bob, has used Lutalyse in the past within his swine operation. When talking to you about this product he mentioned that, unfortunately, his sow had multiple stillbirths when he administered Lutalyse on December 5th even though she was not due until December 12th. Given the label information, is it possible that Lutalyse may have caused Bob's sow's increased stillbirths?

A.) Yes

B.) No

Label

Use/Dose

ZOETIS INC.

333 PORTAGE STREET, KALAMAZOO, MI, 49007

Telephone: 269-359-4414

Customer Service: 888-963-8471

Website: www.zoetis.com



THIS SERVICE AND DATA ARE PROVIDED "AS IS". DVMetrics assumes no liability, and each user assumes full risk, responsibility, and liability, related to its use of the DVMetrics service and data. See the Terms of Use for further details.

Lutalyse® Injection



Zoetis

(dinoprost tromethamine injection)

5 mg dinoprost/mL as dinoprost tromethamine

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

DESCRIPTION

LUTALYSE® Injection (5 mg dinoprost/mL) is a sterile solution containing the naturally occurring prostaglandin F₂ alpha (dinoprost) as the tromethamine salt. Each mL contains dinoprost tromethamine equivalent to 5 mg dinoprost: also, benzyl alcohol, 16.5 mg added as preservative and water for injection. When necessary, pH was adjusted with sodium hydroxide and/or hydrochloric acid. Dinoprost tromethamine is a white or slightly off-white crystalline powder that is readily soluble in water at room temperature in concentrations to at least 200 mg/mL.

INDICATIONS FOR USE

Cattle: LUTALYSE Injection is indicated as a luteolytic agent. LUTALYSE Injection is effective only in those cattle having a corpus luteum, i.e., those which ovulated at least five days prior to treatment.

Future reproductive performance of animals that are not cycling will be unaffected by injection of LUTALYSE Injection.

- For estrus synchronization in beef cows, beef heifers and replacement dairy heifers
- For unobserved (silent) estrus in lactating dairy cows with a corpus luteum
- For treatment of pyometra (chronic endometritis) in cattle
- For abortion in beef cows, beef heifers and replacement dairy heifers
- For use with FACTREL (gonadorelin injection) Injection to synchronize estrous cycles to allow fixed-time artificial insemination (FTAI) in lactating dairy cows
- For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for synchronization of estrus in lactating dairy cows
- For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for synchronization of estrus in suckled beef cows and replacement beef and dairy heifers, advancement of first postpartum estrus in suckled beef cows, and advancement of first pubertal estrus in beef heifers

Swine:

- For parturition induction in swine

Mares:

- For controlling the timing of estrus in estrous cycling mares
- For difficult-to-breed mares (clinically anestrous mares that have a corpus luteum)

MANAGEMENT CONSIDERATIONS

Many factors contribute to success and failure of reproduction management, and these factors are important also when time of breeding is to be regulated with LUTALYSE Injection. Some of these factors are:

- a. Cattle must be ready to breed—they must have a corpus luteum and be healthy;
- b. Nutritional status must be adequate as this has a direct effect on conception and the initiation of estrus in heifers or return of estrous cycles in cows following calving;
- c. Physical facilities must be adequate to allow cattle handling without being detrimental to the animal;
- d. Estrus must be detected accurately if timed AI is not employed;
- e. Semen of high fertility must be used;
- f. Semen must be inseminated properly.

A successful breeding program can employ LUTALYSE Injection effectively, but a poorly managed breeding program will continue to be poor when

LUTALYSE Injection is employed unless other management deficiencies are remedied first. Cattle expressing estrus following LUTALYSE Injection are receptive to breeding by a bull. Using bulls to breed large numbers of cattle in heat following LUTALYSE Injection will require proper management of bulls and cattle.

DOSAGE AND ADMINISTRATION

As with any multi-dose vial, practice aseptic techniques in withdrawing each dose to decrease the possibility of post-injection bacterial infections. Adequately clean and disinfect the vial stopper prior to entry with a sterile needle and syringe. Use only sterile needles, and use each needle only once. No vial stopper should be entered more than 20 times. For this reason, the 100 mL bottle should only be used for cattle. The 30 mL bottle may be used for cattle, swine, or mares.

Cattle:

1. For Estrus Synchronization in Beef Cows, Beef Heifers and Replacement Dairy Heifers.

LUTALYSE Injection is used to control the timing of estrus and ovulation in estrous cycling cattle that have a corpus luteum. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly either once or twice at a 10 to 12 day interval. With the single injection, cattle should be bred at the usual time relative to estrus. With the two injections cattle can be bred after the second injection either at the usual time relative to detected estrus or at about 80 hours after the second injection of LUTALYSE Injection. Estrus is expected to occur 1 to 5 days after injection if a corpus luteum was present. Cattle that do not become pregnant to breeding at estrus on days 1 to 5 after injection will be expected to return to estrus in about 18 to 24 days.

2. For Unobserved (Silent) Estrus in Lactating Dairy Cows with a Corpus Luteum. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly. Breed cows as they are detected in estrus. If estrus has not been observed by 80 hours after injection, breed at 80 hours. If the cow returns to estrus, breed at the usual time relative to estrus.

3. For Treatment of Pyometra (chronic endometritis) in Cattle. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly.

4. For Abortion in Beef Cows, Beef Heifers and Replacement Dairy Heifers. LUTALYSE Injection is indicated for its abortifacient effect in beef cows, beef heifers and replacement dairy heifers during the first 100 days of gestation. Inject a dose of 25 mg dinoprost (5 mL) intramuscularly.

Cattle that abort will abort within 35 days of injection.

5. For use with FACTREL® (gonadorelin injection) Injection to synchronize estrous cycles to allow fixed-time artificial insemination (FTAI) in lactating dairy cows: Administer 2 to 4 mL FACTREL Injection (100-200 mcg gonadorelin) per cow as an intramuscular injection in a treatment regimen with the following framework:

- Administer the first dose of FACTREL Injection (2-4 mL) at Day 0
- Administer LUTALYSE (25 mg dinoprost, as dinoprost tromethamine) Injection by intramuscular injection 6-8 days after the first dose of FACTREL Injection.
- Administer a second dose of FACTREL Injection (2-4 mL) 30 to 72 hours after the LUTALYSE injection.
- Perform FTAI 0 to 24 hours after the second dose of FACTREL Injection, or inseminate cows on detected estrus using standard herd practices.

Below are three examples of treatment regimens for FTAI that fit within the dosage regimen framework described immediately above:

	Example 1	Example 2	Example 3
Day 0 (Monday)	1 st FACTREL	1 st FACTREL	1 st FACTREL
Day 7 (the following Monday)	LUTALYSE	LUTALYSE	LUTALYSE
Day 9 (Wednesday)	2 nd FACTREL + FTAI at 48 hours after LUTALYSE	2 nd FACTREL 48 hours after LUTALYSE	2 nd FACTREL 56 hours after LUTALYSE
Day 10 (Thursday)		FTAI 24 hours after 2 nd FACTREL	FTAI 18 hours after 2 nd FACTREL

6. For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for Synchronization of Estrus in Lactating Dairy Cows:

- Administer one EAZI-BREED CIDR Cattle Insert per animal and remove 7 days later (for example if administered on a Monday remove the following Monday).
- Administer 5 mL LUTALYSE Injection at the time of removal of the EAZI-BREED CIDR Cattle Insert.
- Observe animals for signs of estrus on Days 2 to 5 after removal of the EAZI-BREED CIDR Cattle Insert and inseminate animals found in estrus following normal herd practices.

7. For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for synchronization of estrus in suckled beef cows and replacement beef and dairy heifers, advancement of first postpartum estrus in suckled beef cows, and advancement of first pubertal estrus in beef heifers:

- Administer one EAZI-BREED CIDR Cattle Insert per animal for 7 days (for example, if administered on a Monday remove on the following Monday).
- Inject 5 mL LUTALYSE Injection (equivalent to 5 mg/mL dinoprost) 1 day prior to EAZI-BREED CIDR Cattle Insert removal, on Day 6 of the 7 day administration period.
- Observe animals for signs of estrus on Days 1 to 3 after removal of the EAZI-BREED CIDR Cattle Insert and inseminate animals about 12 hours

after onset of estrus.

Swine:

For Parturition Induction in Swine: For intramuscular use for parturition induction in swine.

LUTALYSE Injection is indicated for parturition induction in swine when injected within 3 days of normal predicted farrowing. The response to treatment varies by individual animals with a mean interval from administration of 2 mL LUTALYSE Injection (10 mg dinoprost) to parturition of approximately 30 hours. This can be employed to control the time of farrowing in sows and gilts in late gestation.

Management Considerations: Several factors must be considered for the successful use of LUTALYSE Injection for parturition induction in swine. The product must be administered at a relatively specific time (treatment earlier than 3 days prior to normal predicted farrowing may result in increased piglet mortality). It is important that adequate records be maintained on (1) the average length of gestation period for the animals on a specific location, and (2) the breeding and projected farrowing dates for each animal. This information is essential to determine the appropriate time for administration of LUTALYSE Injection.

Mares: LUTALYSE Injection is indicated for its luteolytic effect in mares. Administer a single intramuscular injection of 1 mg per 100 lbs (45.5 kg) body weight which is usually 1 mL to 2 mL LUTALYSE Injection. This luteolytic effect can be utilized to control the timing of estrus in estrous cycling and clinically anestrous mares that have a corpus luteum in the following circumstances:

- 1. Controlling Time of Estrus of Estrous Cycling Mares:** Mares treated with LUTALYSE Injection during diestrus (4 or more days after ovulation) will return to estrus within 2 to 4 days in most cases and ovulate 8 to 12 days after treatment. This procedure may be utilized as an aid to scheduling the use of stallions.
- 2. Difficult-to-Breed Mares:** In extended diestrus there is failure to exhibit regular estrous cycles which is different from true anestrus. Many mares described as anestrus during the breeding season have serum progesterone levels consistent with the presence of a functional corpus luteum. A proportion of "barren", maiden, and lactating mares do not exhibit regular estrous cycles and may be in extended diestrus. Following abortion, early fetal death and resorption, or as a result of "pseudopregnancy", there may be serum progesterone levels consistent with a functional corpus luteum. Treatment of such mares with LUTALYSE Injection usually results in regression of the corpus luteum followed by estrus and/or ovulation. Treatment of "anestrous" mares which abort subsequent to 36 days of pregnancy may not result in return to estrus due to presence of functional endometrial cups.

WARNINGS AND PRECAUTIONS

User Safety: Not for human use. Keep out of the reach of children. Women of childbearing age, asthmatics, and persons with bronchial and other respiratory problems should exercise **extreme caution** when handling this product. In the early stages, women may be unaware of their pregnancies. Dinoprost tromethamine is readily absorbed through the skin and can cause abortion and/or bronchospasms. Accidental spillage on the skin should be washed off **immediately** with soap and water.

Residue Warnings: No milk discard or preslaughter drug withdrawal period is required for labeled uses in cattle. No preslaughter drug withdrawal period is required for labeled uses in swine. Use of this product in excess of the approved dose may result in drug residues. Do not use in horses intended for human consumption.

Animal Safety Warnings: Severe localized clostridial infections associated with injection of LUTALYSE Injection have been reported. In rare instances, such infections have resulted in death.

Aggressive antibiotic therapy should be employed at the first sign of infection at the injection site whether localized or diffuse. Do not administer intravenously (IV) as this route may potentiate adverse reactions. Non-steroidal anti-inflammatory drugs may inhibit prostaglandin synthesis; therefore this class of drugs should not be administered concurrently. Do not administer to pregnant cattle, unless abortion is desired. Cattle administered a progestin would be expected to have a reduced response to LUTALYSE Injection. Do not administer to sows and/or gilts prior to 3 days of normal predicted farrowing as an increased number of stillbirths and postnatal mortality may result. In mares, LUTALYSE Injection is ineffective when administered prior to day-5 after ovulation.

Mare pregnancy status should be determined prior to treatment since LUTALYSE Injection has been reported to induce abortion and parturition when sufficient doses were administered. Mares should not be treated if they suffer from either acute or subacute disorders of the vascular system, gastrointestinal tract, respiratory system, or reproductive tract.

ADVERSE REACTIONS

Cattle: Limited salivation has been reported in some instances.

Swine: The most frequently observed side effects were erythema and pruritus, slight incoordination, nesting behavior, itching, urination, defecation, abdominal muscle spasms, tail movements, hyperpnea or dyspnea, increased vocalization, salivation, and at the 100 mg (10x) dose only, possible vomiting. These side effects are transitory, lasting from 10 minutes to 3 hours, and were not detrimental to the health of the animal.

Mares: The most frequently observed side effects are sweating and decreased rectal temperature. However, these have been transient in all cases observed and have not been detrimental to the animal.

Other reactions seen have been increase in heart rate, increase in respiration rate, some abdominal discomfort, locomotor incoordination, and lying down. These effects are usually seen within 15 minutes of injection and disappear within one hour. Mares usually continue to eat during the period of expression of side effects. One anaphylactic reaction of several hundred mares treated with LUTALYSE Injection was reported but was not confirmed.

CONTACT INFORMATION

For a copy of the Safety Data Sheet or to report adverse reactions, call Zoetis Inc. at 1-888-963-8471. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or www.fda.gov/reportanimalae.

CLINICAL PHARMACOLOGY

General Biologic Activity: Prostaglandins occur in nearly all mammalian tissues. Prostaglandins, especially PGE's and PGF's, have been shown, in certain species, to 1) increase at time of parturition in amniotic fluid, maternal placenta, myometrium, and blood, 2) stimulate myometrial activity, and 3) to induce either abortion or parturition. Prostaglandins, especially PGF₂α, have been shown to 1) increase in the uterus and blood to levels similar to levels achieved by exogenous administration which elicited luteolysis, 2) be capable of crossing from the uterine vein to the ovarian artery (sheep), 3) be related to IUD induced luteal regression (sheep), and 4) be capable of regressing the corpus luteum of most mammalian species studied to date. Prostaglandins have been reported to result in release of pituitary tropic hormones. Data suggest prostaglandins, especially PGE's and PGF's, may be involved in the process of ovulation and gamete transport. Also PGF₂α has been reported to cause increase in blood pressure, bronchoconstriction, and smooth muscle stimulation in certain species.

Metabolism: A number of metabolism studies have been done in laboratory animals. The metabolism of tritium labeled dinoprost (³H PGF₂ alpha) in the rat and in the monkey was similar.

Although quantitative differences were observed, qualitatively similar metabolites were produced.

A study demonstrated that equimolar doses of ³H PGF₂ alpha Tham and ³H PGF₂ alpha free acid administered intravenously to rats demonstrated no significant differences in blood concentration of dinoprost. An interesting observation in the above study was that the radioactive dose of ³H PGF₂ alpha rapidly distributed in tissues and dissipated in tissues with almost the same curve as it did in the serum. The half-life of dinoprost in bovine blood has been reported to be on the order of minutes. A complete study on the distribution of decline of ³H PGF₂ alpha Tham in the tissue of rats was well correlated with the work done in the cow. Cattle serum collected during 24 hours after doses of 0 to 250 mg dinoprost have been assayed by RIA for dinoprost and the 15-keto metabolites. These data support previous reports that dinoprost has a half-life of minutes. Dinoprost is a natural prostaglandin. All systems associated with dinoprost metabolism exist in the body; therefore, no new metabolic, transport, excretory, binding or other systems need be established by the body to metabolize injected dinoprost.

TARGET ANIMAL SAFETY

Laboratory Animals: Dinoprost was non-teratogenic in rats when administered orally at 1.25, 3.2, 10.0 and 20.0 mg dinoprost/kg/day from day 6th-15th of gestation or when administered subcutaneously at 0.5 and 1.0 mg/kg/day on gestation days 6, 7 and 8 or 9, 10 and 11 or 12, 13 and 14. Dinoprost was non-teratogenic in the rabbit when administered either subcutaneously at doses of 0.5 and 1.0 mg dinoprost/kg/day on gestation days 6, 7 and 8 or 9, 10 and 11 or 12, 13 and 14 or 15, 16 and 17 or orally at doses of 0.01, 0.1 and 1.0 mg dinoprost/kg/day on days 6-18 or 5.0 mg/kg/day on days 8-18 of gestation. A slight and marked embryo lethal effect was observed in dams given 1.0 and 5.0 mg dinoprost/kg/day respectively. This was due to the expected luteolytic properties of the drug.

A 14-day continuous intravenous infusion study in rats at 20 mg PGF₂α per kg body weight indicated prostaglandins of the F series could induce bone deposition. However, such bone changes were not observed in monkeys similarly administered LUTALYSE Injection at 15 mg dinoprost per kg body weight for 14 days.

Cattle: In cattle, evaluation was made of clinical observations, clinical chemistry, hematology, urinalysis, organ weights, and gross plus microscopic measurements following treatment with various doses up to 250 mg dinoprost administered twice intramuscularly at a 10 day interval or doses of 25 mg administered daily for 10 days. There was no unequivocal effect of dinoprost on the hematology or clinical chemistry parameters measured. Clinically, a slight transitory increase in heart rate was detected. Rectal temperature was elevated about 1.5° F through the 6th hour after injection with 250 mg dinoprost, but had returned to baseline at 24 hours after injection. No dinoprost associated gross lesions were detected. There was no evidence of toxicological effects. Thus, dinoprost had a safety factor of **at least 10X** on injection (25 mg luteolytic dose vs. 250 mg safe dose), based on studies conducted with cattle. At luteolytic doses, dinoprost had no effect on progeny. If given to a pregnant cow, it may cause abortion; the dose required for abortion varies considerably with the stage of gestation. Induction of abortion in feedlot cattle at stages of gestation up to 100 days of gestation did not result in dystocia, retained placenta or death of heifers in the field studies. The smallness of the fetus at this early stage of gestation should not lead to complications at abortion. However, induction of parturition or abortion with any exogenous compound may precipitate dystocia, fetal death, retained placenta and/or metritis, especially at latter stages of gestation.

Swine: In pigs, evaluation was made of clinical observations, food consumption, clinical pathologic determinations, body weight changes, urinalysis, organ weights, and gross and microscopic observations following treatment with single doses of 10, 30, 50 and 100 mg dinoprost administered intramuscularly. The results indicated no treatment related effects from dinoprost treatment that were deleterious to the health of the animals or to their offspring.

Mares: Dinoprost tromethamine was administered to adult mares (weighing 320 to 485 kg; 2 to 20 years old), at the rates of 0, 100, 200, 400, and 800 mg per mare per day for 8 days. Route of administration for each dose group was both intramuscularly (2 mares) and subcutaneously (2 mares). Changes were detected in all treated groups for clinical (reduced sensitivity to pain; locomotor incoordination; hypergastromotility; sweating; hyperthermia; labored respiration), blood chemistry (elevated cholesterol, total bilirubin, LDH, and glucose), and hematology (decreased eosinophils; increased hemoglobin, hematocrit, and erythrocytes) measurements. The effects in the 100 mg dose, and to a lesser extent, the 200 mg dose groups were transient in nature, lasting for a few minutes to several hours. Mares did not appear to sustain adverse effects following termination of the side effects.

Mares treated with either 400 mg or 800 mg exhibited more profound symptoms. The excessive hyperstimulation of the gastrointestinal tract caused a protracted diarrhea, slight electrolyte imbalance (decreased sodium and potassium), dehydration, gastrointestinal irritation, and slight liver malfunction (elevated SGOT, SGPT at 800 mg only). Heart rate was increased but pH of the urine was decreased. Other measurements evaluated in the study

remained within normal limits. No mortality occurred in any of the groups. No apparent differences were observed between the intramuscular and subcutaneous routes of administration. Luteolytic doses of dinoprost tromethamine are on the order of 5 to 10 mg administered on one day, therefore, LUTALYSE Injection was demonstrated to have a wide margin of safety. Thus, the 100 mg dose gave a safety margin of 10 to 20X for a single injection or 80 to 160X for the 8 daily injections.

Additional studies investigated the effects in the mare of single intramuscular doses of 0, 0.25, 1.0, 2.5, 3.0, 5.0, and 10.0 mg dinoprost tromethamine. Heart rate, respiration rate, rectal temperature, and sweating were measured at 0, 0.25, 0.50, 0.75, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, and 6.0 hr. after injection. Neither heart rate nor respiration rates were significantly altered ($P > 0.05$) when compared to contemporary control values. Sweating was observed for 0 of 9, 2 of 9, 7 of 9, 9 of 9, and 8 of 9 mares injected with 0.25, 1.0, 2.5, 3.0, 5.0, or 10.0 mg dinoprost tromethamine, respectively. Sweating was temporary in all cases and was mild for doses of 3.0 mg or less but was extensive (beads of sweat over the entire body and dripping) for the 10 mg dose. Sweating after the 5.0 mg dose was intermediate between that seen for mares treated with 3.0 and 10.0 mg. Sweating began within 15 minutes after injection and ceased by 45 to 60 minutes after injection. Rectal temperature was decreased during the interval 0.5 until 1.0, 3 to 4, or 5 hours after injection for 0.25 and 1.0 mg, 2.5 and 3.0, or 5.0 and 10.0 mg dose groups, respectively. Average rectal temperature during the periods of decreased temperature was on the order of 97.5 to 99.6, with the greatest decreases observed in the 10 mg dose group.

EFFECTIVENESS

Cattle:

For Treatment of Pyometra (chronic endometritis) in Cattle: In studies conducted with LUTALYSE Injection, pyometra was defined as presence of a corpus luteum in the ovary and uterine horns containing fluid but not a conceptus based on palpation per rectum. Return to normal was defined as evacuation of fluid and return of the uterine horn size to 40mm or less based on palpation per rectum at 14 and 28 days. Most cattle that recovered in response to LUTALYSE Injection recovered within 14 days after injection. After 14 days, recovery rate of treated cattle was no different than that of non-treated cattle.

For Abortion in Beef Cows, Beef Heifers and Replacement Dairy Heifers: Commercial cattle were palpated per rectum for pregnancy in six feedlots. The percent of pregnant cattle in each feedlot less than 100 days of gestation ranged between 26 and 84; 80% or more of the pregnant cattle were less than 150 days of gestation. The abortion rates following injection of LUTALYSE Injection increased with increasing doses up to about 25 mg. As examples, the abortion rates, over 7 feedlots on the dose titration study, were 22%, 50%, 71%, 90% and 78% for cattle up to 100 days of gestation when injected IM with LUTALYSE Injection doses of 0,1 (5 mg), 2 (10 mg), 4 (20 mg) and 8 (40 mg) mL, respectively. The statistical predicted relative abortion rate based on the dose titration data, was about 93% for the 5 mL (25 mg) LUTALYSE Injection dose for cattle injected up to 100 days of gestation.

For use with FACTREL® (gonadorelin injection) Injection to synchronize estrous cycles to allow fixed-time artificial insemination (FTAI) in lactating dairy cows: For a full description of the studies conducted for the use of FACTREL Injection and LUTALYSE Injection, please refer to the labeling for FACTREL Injection.

Mares:

For Difficult-to-Breed Mares: In one study with 122 Standardbred and Thoroughbred mares in clinical anestrus for an average of 58 days and treated during the breeding season, behavioral estrus was detected in 81 percent at an average time of 3.7 days after injection with 5 mg LUTALYSE Injection; ovulation occurred an average of 7.0 days after treatment. Of those mares bred, 59% were pregnant following an average of 1.4 services during that estrus.

HOW SUPPLIED

LUTALYSE Injection is available in 30 and 100 mL vials.

STORAGE, HANDLING, AND DISPOSAL

Store at controlled room temperature 20° to 25°C (68° to 77°F).

Use contents within 12 weeks of first vial puncture. Protect from freezing.

Approved by FDA under NADA # 108-901

Distributed by:

Zoetis Inc., Kalamazoo, MI 49007

Revised: September

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CPN: 3690361.4

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KEY

2022 Kentucky Skillathon Contest – Senior Team Feeding Activity
15 pts. / question for 150 points and the feed label placing class for 50 points. 200
point total. Only turn in one packet per team!

You have purchased a group of 10 feeder pigs (average weight = 60 lb.) at \$0.65/lb. Your plans are to feed the pigs for 100 days and sell them at 250 lb. for freezer pork. Explain how you think the pigs have grown, why people might want to buy from you and will you make a profit?

1. What is the expected daily gain per day for each pig?

$$(250 \text{ lb} - 60 \text{ lb}) / 100 \text{ d} = 1.90 \text{ lb/hd/d}$$

1.90 lb/d

lb/d 2decimals

2. If the expected feed/gain efficiency is 3.0,
 what is the expected total feed consumption for the group?

$$(3.0 \text{ lb feed/lb gain}) \times 1.90 \text{ lb gain} = 5.70 \times 100 \text{ d} = 570 \times 10 \text{ pigs} = 5,700 \text{ lb feed}$$

5,700 lb feed

lbs

3. If feed cost is \$320/ton, what is the estimated total group
 feed cost?

$$(5,700 \text{ lb feed} / 2,000 \text{ lb per ton}) = 2.85 \text{ tons feed}$$

$$2.85 \text{ tons} \times \$320 / \text{ton} = \$912.00 \text{ total feed cost}$$

\$912.00 feed cost

Total \$

4. What is the feed cost of gain per pig?

$$\$912.00 \text{ feed cost} / [(250 \text{ lb} - 60 \text{ lb} = 190 \text{ lb gained}) \times 10 \text{ pigs}]$$

$$\text{So, } \$912 / 1900 = \$0.48/\text{lb.}$$

\$.48/lb

\$/lb, 2 decimals

5. If you are considering a premix to add to your feed and the inclusion rate was 5% of the total
 amount of feed, how much of the premix would you need to purchase?

$$5,700 \text{ lb feed} \times .05 = 285.00 \text{ lb}$$

285.00 lb

lbs

6. If the premix was packaged in 50lb bags costing \$20/bag, what is your total premix cost?

$$285.00 \text{ lb} / 50 \text{ lb} = 5.7 \text{ bags. So, you have to round to 6 bags}$$

$$6 \text{ bags} \times \$20/\text{bag} = \$120.00$$

\$120.00

\$, 2 decimals

7. What is breakeven live price (\$/cwt) you would have to receive to cover your investment in pigs
 and feed (not including premix)?

$$[10 \text{ pigs} \times (60 \text{ lb} \times .65 = \$39.00)] = \$390 \text{ purchase price}$$

$$\$390.00 \text{ purchase price} + \$912.00 \text{ feed cost} = \$1302.00$$

$$\$1302.00 / (10 \text{ pigs} \times 250 \text{ lb} = 2,500 \text{ lb sold}) = 0.5208 \times 100 \text{ (because it is cwt)}$$

\$52.08/cwt.

\$/cwt, 2 decimals

8. If your customers preferred to purchase pigs on a carcass price basis, what would be an
 equivalent carcass price? Assume your pigs will dress 72%

$$\$52.08 / .72 = \$72.33$$

\$72.33

\$/cwt, 2 decimals

9. Based on a \$1.25/lb carcass price, your projected net return above pig and feed costs should
 be _____ for the pen of pigs.

$$10 \text{ pigs} \times (250 \times .72) \times (\$1.25) = \$2,250.00 \text{ income}$$

$$\$2,250 - [\$390 \text{ (pigs)} + \$912 \text{ (feed)}]$$

$$\$2250 - \$1302 = \$948.00$$

\$948.00

\$ 2 decimals

10. If miscellaneous costs were an additional \$10/pig and you estimated that you spent 60 minutes
 per day on your pig project what was your return to your labor? (express on an hourly basis)

$$[\$948 - (10 \text{ pigs} \times \$10)] / (100 \text{ days} \times 1 \text{ hr.})$$

$$(\$948 - \$100) / 100 = \$848 / 100 \text{ hrs} = \$8.48/\text{hr}$$

\$8.48/hr.

\$/hr, 2 Decimals

Mark Your Placing on the class of feed Labels. Scenario is provided with labels.

Contestant Number _____

Placing Score _____

*University of Kentucky
College of Agriculture
Animal Sciences Department*

Team Number

Team Member Names

County

Class: Feed Label

A	1 2 3 4	_____
B	1 2 4 3	_____
C	1 3 2 4	_____
D	1 3 4 2	_____
E	1 4 2 3	_____
F	1 4 3 2	_____
G	2 1 3 4	_____
H	2 1 4 3	_____
I	2 3 1 4	_____
J	2 3 4 1	_____
K	2 4 1 3	_____
L	2 4 3 1	_____
M	3 1 2 4	_____
N	3 1 4 2	_____
O	3 2 1 4	_____
P	3 2 4 1	_____
Q	3 4 1 2	_____
R	3 4 2 1	_____
S	4 1 2 3	_____
T	4 1 3 2	_____
U	4 2 1 3	_____
V	4 2 3 1	_____
W	4 3 1 2	_____
X	4 3 2 1	_____

Official Placing – 3214

Cuts - 4-2-5

#1

SHOW·RITE®

TEAM 18

Formulated as a grower/finisher feed for all classes of swine.

GUARANTEED ANALYSIS:

Crude Protein, min.....	18.0%
Crude Fat, min.....	6.0%
Crude Fiber, max.....	3.0%
Calcium, min.....	0.3%
Calcium, max.....	0.8%
Phosphorus, min.....	0.5%
Salt, min.....	0.2%
Salt, max.....	0.7%
Lysine, min.....	1.0%
Selenium, min.....	0.3 ppm
Zinc, min.....	120 ppm
Phytase, min*.....	140 FTU/lb.

*One unit of phytase activity (FTU) is defined as the quantity of enzyme which liberates 1 micromol of inorganic phosphorus per minute. Environmental factors such as feed pH, moisture and processing methods such as pelleting and extrusion may affect enzyme activity.

PROFILE:

Show-Rite® Team 18 is a meal feed to use throughout all growth stages.

- Flexible feeding for all sizes of show pigs
- Simple start to finish plan
- Economically friendly

FEEDING INSTRUCTIONS:

Feed as a sole ration. Always supply a source of fresh, clean water.

Hubbard does not use "Restricted-use Proteins" in their products and is in compliance with FDA and state requirements regarding the use, handling and storage of "Restricted-use Protein" products.

INGREDIENTS:

Please refer to the product label/tag for a complete list of ingredients.

WARNING: This product, which contains added copper, should not be fed to sheep or related species that have a low tolerance to copper.

This product has been formulated specifically for swine and is not intended for other species.

THIS IS A PRODUCT INFORMATION SHEET ONLY IN NO WAY SHOULD THIS BE UTILIZED AS A LABEL

Options in a 50-lb bag #28394 or bulk invoice

#2

SHOW·RITE®

17.5% GROUND

Designed to be fed as the sole ration for the growing and finishing phases of your show pig project.

GUARANTEED ANALYSIS:

Crude Protein, min.....	17.5%
Lysine, min.....	0.9%
Crude Fat, min.....	6.0%
Crude Fiber, max.....	3.0%
Calcium, min.....	0.5%
Calcium, max.....	1.0%
Phosphorus, min.....	0.5%
Salt, min.....	0.3%
Salt, max.....	0.8%
Chromium, min.....	0.3 ppm
Selenium, min.....	0.3 ppm
Zinc, min.....	100 ppm
Phytase, min*.....	136 FYT/lb.
Phytase, min**.....	27.0 SPU/lb.

*One unit of phytase activity (FTU) is defined as the quantity of enzyme which liberates 1 micromol of inorganic phosphorus per minute. Environmental factors such as feed pH, moisture, and processing methods such as pelleting or extrusion, may affect enzyme activity.

**One Solid State Fermentation Phytase unit (SPU) is defined as the amount of enzyme that will liberate 1 mmol of inorganic phosphate per minute under the conditions of the assay.

PROFILE:

Show-Rite 17.5% Ground is a ground or meal feed designed to be fed throughout the show season. It incorporates the optimal lysine level for muscle development and appropriate level fat for condition. Built with multiple gut health products to aid in digestion and immunity building throughout the pigs life stages.

FEEDING INSTRUCTIONS:

Feed Show-Rite 17.5%Ground as a sole ration to swine. Always supply a fresh source of water.

Hubbard does not use "Restricted-use Proteins" in their products and is in compliance with FDA and state requirements regarding the use, handling and storage of "Restricted-use Protein" products.

INGREDIENTS:

Please refer to the product label/tag for a complete list of ingredients.

WARNING: This product, which contains added copper, should not be fed to sheep or related species that have a low tolerance to copper.

This product has been formulated specifically for swine and is not intended for other species.

Caution: Follow label directions. Feeding this feed containing added selenium at levels higher than recommended is not permitted.

Caution: Follow label directions. Chromium from all sources of supplemental chromium cannot exceed 0.2 ppm of the complete feed for swine.

THIS IS A PRODUCT INFORMATION SHEET ONLY IN NO WAY SHOULD THIS BE UTILIZED AS A LABEL

Options in a 50-lb bag #70189 or bulk invoice

TONED DOWN

Designed as the ultimate pelleted finishing product for all classes of swine. Can also be utilized to tone down heavier muscled pigs.

GUARANTEED ANALYSIS:

Crude Protein, min.....	15.0%
Lysine, min.....	1.0%
Crude Fat, min.....	5.0%
Crude Fiber, max.....	4.0%
Calcium, min.....	0.4%
Calcium, max.....	0.9%
Phosphorus, min.....	0.5%
Salt, min.....	0.3%
Salt, max.....	0.8%
Chromium, min.....	0.2%
Selenium, min.....	0.3 ppm
Zinc, min.....	120 ppm
Phytase, min*.....	272 FTU/lb.

*One unit of phytase activity (FTU) is defined as the quantity of enzyme which liberates 1 micromol of inorganic phosphorus per minute. Environmental factors such as feed pH, moisture, and processing methods such as pelleting or extrusion, may affect enzyme activity.

PROFILE:

Show-Rite® Toned Down is a pelleted feed designed to add body and finish to heavier muscled pigs. Need to soften or tone down a heavy muscled one? Toned Down will help on both. Can be fed throughout the season to tone down extreme muscle or to moderate growth.

FEEDING INSTRUCTIONS:

Feed as a sole ration. A clean, fresh source of drinking water is also necessary.

Hubbard does not use "Restricted-use Proteins" in their products and is in compliance with FDA and state requirements regarding the use, handling and storage of "Restricted-use Protein" products.

INGREDIENTS:

Please refer to the product label/tag for a complete list of ingredients.

WARNING: This product, which contains added copper, should not be fed to sheep or related species that have a low tolerance to copper.

This product has been formulated specifically for swine and is not intended for other species.

Caution: Follow label directions. Feeding this feed containing added selenium at levels higher than recommended is not permitted.

Caution: Follow label directions. Chromium from all sources of supplemental chromium cannot exceed 0.2 ppm of the complete feed for swine.

THIS IS A PRODUCT INFORMATION SHEET ONLY IN NO WAY SHOULD THIS BE UTILIZED AS A LABEL

Options in a 50-lb bag #70427 or bulk invoice

#4

SHOW·RITE®

CHARGED UP

Designed to be a versatile pelleted grower/finisher complete feed for all classes of swine.

GUARANTEED ANALYSIS:

Crude Protein, min.....	18.0%
Lysine, min.....	1.2%
Crude Fat, min.....	5.0%
Crude Fiber, max.....	4.0%
Calcium, min.....	0.4%
Calcium, max.....	0.9%
Phosphorus, min.....	0.5%
Salt, min.....	0.3%
Salt, max.....	0.8%
Chromium, min.....	0.2 ppm
Selenium, min.....	0.3 ppm
Zinc, min.....	120 ppm
Phytase, min*.....	272 FTU/lb.

*One unit of phytase activity (FTU) is defined as the quantity of enzyme which liberates 1 micromol of inorganic phosphorus per minute. Environmental factors such as feed pH, moisture, and processing methods such as pelleting or extrusion, may affect enzyme activity.

PROFILE:

Show-Rite® Charged Up is a pelleted feed designed to optimize skeletal development and muscularity for growing pigs. The perfect transition feed from a starter or as you first purchase your show pigs and get them home.

FEEDING INSTRUCTIONS:

Feed as the sole ration. A clean, fresh source of drinking water is also necessary.

Hubbard does not use "Restricted-use Proteins" in their products and is in compliance with FDA and state requirements regarding the use, handling and storage of "Restricted-use Protein" products.

INGREDIENTS:

Please refer to the product label/tag for a complete list of ingredients.

WARNING: This product, which contains added copper, should not be fed to sheep or related species that have a low tolerance to copper.

This product has been formulated specifically for swine and is not intended for other species.

Caution: Follow label directions. Feeding this feed containing added selenium at levels higher than recommended is not permitted.

Caution: Follow label directions. Chromium from all sources of supplemental chromium cannot exceed 0.2 ppm of the complete feed for swine.

THIS IS A PRODUCT INFORMATION SHEET ONLY IN NO WAY SHOULD THIS BE UTILIZED AS A LABEL

Options in a 50-lb bag #70426 or bulk invoice

Feed Label Scenario

Please use the following scenario to rank the four feed labels that have been provided. Provide your ranking of the labels on the Team Feeding Answer Sheet. One sheet will be turned in per team.

You and your team are volunteering your time and expertise to a local 4-H family who just started showing pigs. In total the family has 6 hogs they are feeding out for state fair. They are wanting to find a feed that will benefit all 6 hogs different needs as they are only able to feed them together in a creep feeder. Currently the hogs weigh around 200 (give or take on some of the hogs). The family has decided since they are so close to the market weight they wish to achieve and state fair is just around the corner, that they will stick to the feed that you and your team pick for the final stretch. 4 of the hogs are very lean and muscular. At this point they need to be softened up and mellowed out in their bodies as well as their joints. The remaining 2 hogs are middle of the road. Their center body is plenty soft, but they still have lean shape up high. Clean water is provided to the hogs each day and fresh bedding is supplied.

Please rank the four feeds in the order that you would select them based on the scenario described above.

County/County Team # _____

Team Members _____ **KEY** _____

Senior Team Breeding Exercise – 2022

Animal ID	DOB	Birth Type	Rear Type	Adjusted 90 Day Weight	Adjusted 150 Day Weight	Dam's Progeny Track Record	Price
1	1/1/21	Single	Single	32	60	Progeny make top 30% of sales	\$750
2	12/18/20	Twin	Twin	44	70	Progeny make top 20% of sales	\$1,500
3	12/18/20	Twin	Twin	41	72	Progeny make top 20% of sales	\$1,500
4	11/25/20	Twin	Single	45	75	Progeny make top 10% of sales	\$2,000
5	12/19/20	Twin	Twin	49	79	No known progeny track record.	\$1,750

Your group is working with Goat Rancher Sally. Sally has asked your group to help her select two (2) does as potential replacements for a Commercial Boer Goat Herd in the Southern U.S. Primary income is derived from the sale of offspring to youth show exhibitors. Fifteen (15%) percent of female progeny will be kept as replacements. The remainder of the progeny will be fed out and marketed to various ethnic markets at a variety of final weights. Sally has asked you to limit the budget to \$3,500 but if you can justify why going above the budget is in her best interest, she will certainly entertain it. Please select the two (2) best does for this situation and answer the questions below. Once you have made your selections, please discuss your findings with the official. All team members must actively participate in the group discussion for total points to be awarded.

[The questions are worth 10 points each for a total of 100 possible points and your discussion with the Official is worth 100 possible points for a grand total of 200 possible points.]

1. Which doe offers the most phenotypic appeal?

1 2 3 **4** 5

2. Which doe offers the least amount of phenotypic appeal?

1 **2** 3 4 5

3. Which doe is the fastest growing according to the paper?

1 2 3 4 **5**

4. True or false: Does 2 and 5 are potentially twins.

True **False**

5. True or false: The youngest doe is also the slowest growing on paper?

True False

6. Of the does \$1,500 or less, which doe offers the most muscle to inject into future progeny?

1 **2** 3 4 5

7. Which doe is the frailest featured?

1 2 3 4 5

8. Of the December born does, who offers the most balanced, symmetrical look?

1 2 3 4 5

9. Which does cull progeny should experience the fastest growth rate and most value to the ethnic markets?

1 2 3 4 5

10. How many does dam's progeny have made at least the top 30% of sales.

1 2 3 4 5

Team Number: _____ Team members: _____

Senior Team Quality Assurance

During this station your team must complete 5 different activities. You may complete the activities in the order you and your team prefer. Please make sure contest official can watch you complete the activity before starting. This is real time grading based on performance of each activity. Each activity is worth up to 40 points each for a total of 200 points.

1. Draw up the correct dosage for scenario below. In order to receive full points team must draw exact amount based on label direction.
 - 600 pound calf that is sick with pneumonia. Please treat with the Penicillin provided. Label is printed off beside the vial.
2. Show where you would administer the penicillin on the stuffed cow provided. In order to receive full points team must demonstrate the proper technique.
3. Show where you would approach the calf in the chute and administer shot while calf is in chute. In order to receive full points team must show proper technique to administer shot while calf is in chute.
4. Implant a ralgro implant into ear. In order to receive full points team must show all steps necessary to implant a calf. Additionally, official must be able to feel implanted properly into ear.
5. Tag the demonstration ear. In order to receive full points team must show how to load tagger properly, and place tag in ear.

Activity #1 points awarded: _____

Activity #2 points awarded: _____

Activity #3 points awarded: _____

Activity #4 points awarded: _____

Activity #5 points awarded: _____

Total Points _____

Penicillin Injectable (DURVET, INC.)

Label

Use/Dose

DURVET, INC.**100 S.E. MAGELLAN DRIVE, BLUE SPRINGS, MO, 64014**

Telephone: 816-229-9101

Toll-Free: 800-821-5570

Fax: 816-224-3080

Website: www.durvet.comEmail: info@durvet.com

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PENICILLIN INJECTABLE***Durvet***

Approved by FDA under NADA # 065-010

(penicillin G procaine injectable suspension)**For use in Cattle, Sheep, Swine and Horses.****ANTIBIOTIC****FOR INTRAMUSCULAR INJECTION ONLY**

300,000 UNITS PER mL

READ ENTIRE BROCHURE CAREFULLY BEFORE USING THIS PRODUCT**Description:**

Penicillin Injectable is a suspension of penicillin G procaine in 100, 250, and 500 mL multiple dose vials. Each mL is designed to provide 300,000 units of penicillin G as procaine in a stable suspension. Penicillin G procaine is an antibacterial agent which has activity against a variety of pathogenic organisms, mainly in the Gram-positive category.

Indications:

Penicillin Injectable is indicated for treatment of bacterial pneumonia (shipping fever) caused by *Pasteurella multocida* in cattle and sheep, erysipelas caused by *Erysipelothrix rhusiopathiae* in swine, and strangles caused by *Streptococcus equi* in horses.

Directions for Use:

A thoroughly cleaned, sterile needle and syringe should be used for each injection (needles and syringes may be sterilized in boiling water for 15 minutes). Before withdrawing the solution from the bottle, disinfect the rubber cap top with 70% alcohol. The injection site should be similarly disinfected with alcohol. Needles of 16 to 18 gauge and 1 to 1.5 inches long are adequate for intramuscular injections.

In livestock intramuscular injections should be made by directing the needle of suitable gauge and length into the fleshy part of a thick muscle, such as rump, hip, or thigh region; avoid blood vessels and major nerves. Before injecting the solution, pull back gently on the plunger. If blood appears in the syringe, a blood vessel has been entered; withdraw the needle and select a different site.

Dosage:

Penicillin Injectable is administered by the intramuscular route. The product is ready for injection after warming the vial to room temperature and shaking to ensure a uniform suspension.

The daily dose of penicillin is 3,000 units per pound of body weight (1 mL per 100 lbs body weight). Continue daily treatment until recovery is apparent and for at least one day after symptoms disappear, usually in two to three days.

Treatment should not exceed four consecutive days.

No more than 10 mL should be injected at any one site. Rotate injection sites for each succeeding treatment.

Care of Sick Animals:

The use of antibiotics in the management of diseases is based on an accurate diagnosis and an adequate course of treatment. When properly used in the treatment of diseases caused by penicillin-susceptible organisms, most animals treated with Penicillin Injectable show a noticeable improvement within 24 to 48 hours. If improvement does not occur within this period of time, the diagnosis and course of treatment should be re-evaluated. It is recommended that the diagnosis and treatment of animal diseases be carried out by a veterinarian.

Since many diseases look alike but require different types of treatment, the use of professional veterinary and laboratory services can reduce treatment time, costs and needless losses. Good housing, sanitation and nutrition are important in the maintenance of healthy animals and are essential in the treatment of disease.

Residue Warnings:

Exceeding the daily dosage of 3,000 units per pound of body weight, administering for more than four consecutive days, or exceeding the maximum injection site volume per injection site may result in antibiotic residues beyond the withdrawal time. Milk taken from treated dairy animals within 48 hours after the last treatment must not be used for food. Discontinue use of this drug for the following time period before

treated animals are slaughtered for food:

Cattle - 14 days, Sheep - 9 days, Swine - 7 days.

A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

Warning:

Do not use in horses intended for human consumption. Not for use in humans. Keep out of reach of children.

Precautions:

Intramuscular injection in cattle, sheep, and swine may result in a local tissue reaction which persists beyond the withdrawal period of 14 days (cattle), 9 days (sheep), or 7 days (swine). This may result in trim loss of edible tissue at slaughter.

Allergic or anaphylactic reactions, sometimes fatal, have been known to occur in animals hypersensitive to penicillin and procaine. Such reactions can occur unpredictably with varying intensity. Animals administered penicillin G procaine should be kept under close observation for at least one half hour. Should allergic or anaphylactic reactions occur, discontinue use of the product and call a veterinarian. If respiratory distress is severe, immediate injection of epinephrine or antihistamine following manufacturer's recommendations may be necessary.

As with all antibiotic preparations, use of this drug may result in overgrowth of nonsusceptible organisms, including fungi. A lack of response by the treated animal, or the development of new signs or symptoms suggest that an overgrowth of nonsusceptible organisms has occurred. In such instances, consult your veterinarian.

It is advisable to avoid giving penicillin in conjunction with bacteriostatic drugs such as tetracyclines.

To report a suspected adverse reaction call 1-866-591-5777.

Storage Conditions:

Penicillin Injectable should be stored between 2 to 8°C (36 to 46°F).

Restricted Drug - California. Use Only as Directed.

SHAKE WELL BEFORE USING.

Made in the UK.

Norbrook Laboratories Limited, Newry, Northern Ireland

Distributed by: DURVET INC., Blue Springs, Missouri 64014

104215I03

ISS19XB11

NET CONTENTS:	NDC	
100 mL	30798-236-10	ISS19XB11 106215L03
250 mL	30798-236-13	ISS19XB11 018215L03
500 mL	30798-236-17	ISS19XB11 109215L04

CPN: 1084312.3

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