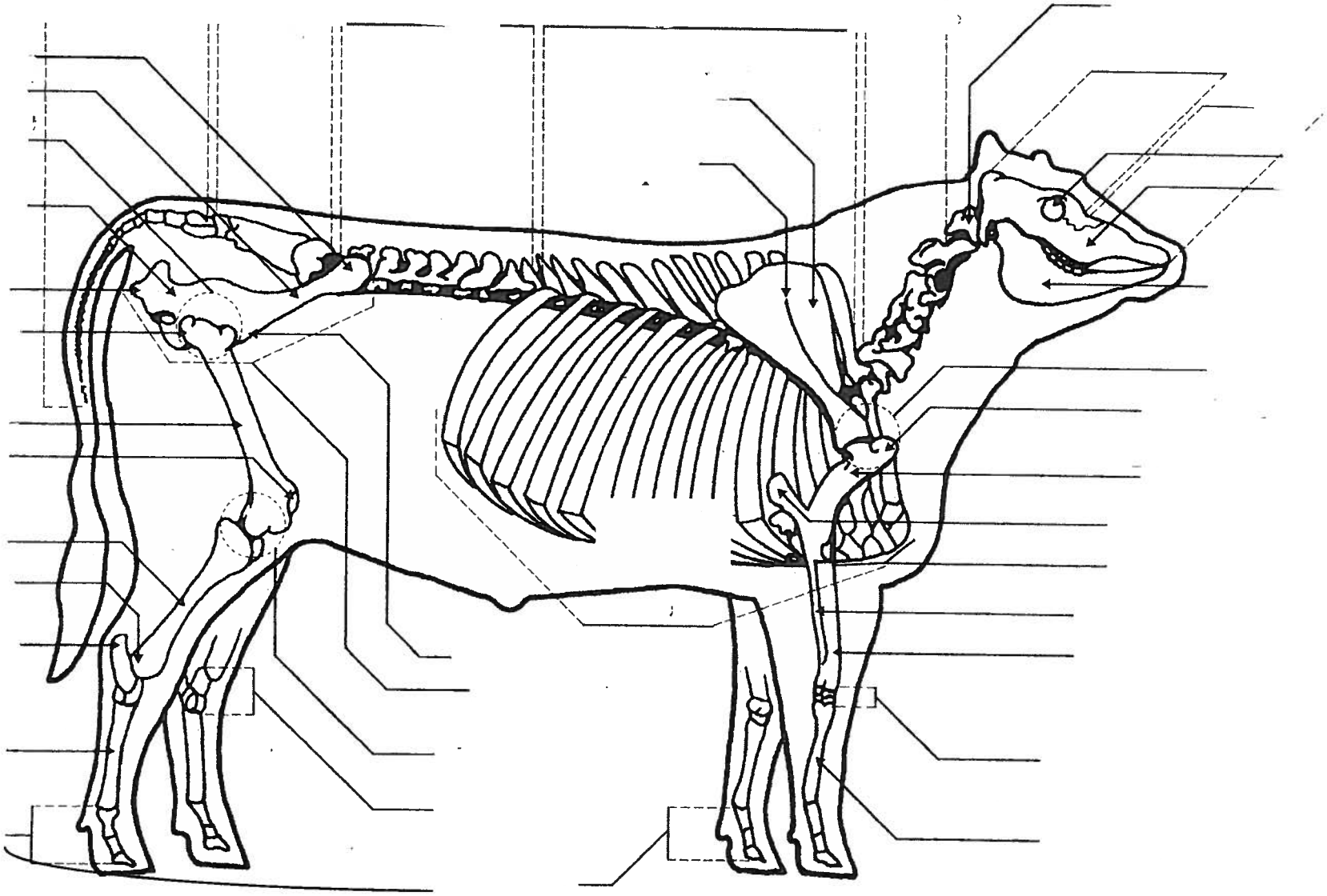
Beef Skill-a-thon Study Guide

This packet contains study material for the annual skill-a-thon contest. Every member taking a livestock project is encouraged to look over this material. Not every skill-a-thon station is represented in this packet. Members are also encouraged to use other resources to study (ie. Online resources and livestock resource books). These packets are the members' to keep; they do not need returned to the Extension Office.

Feed samples are available upon request. (These will need returned to the Extension Office).

As always, if you have any questions please call the Extension Office at 419-354-9050.

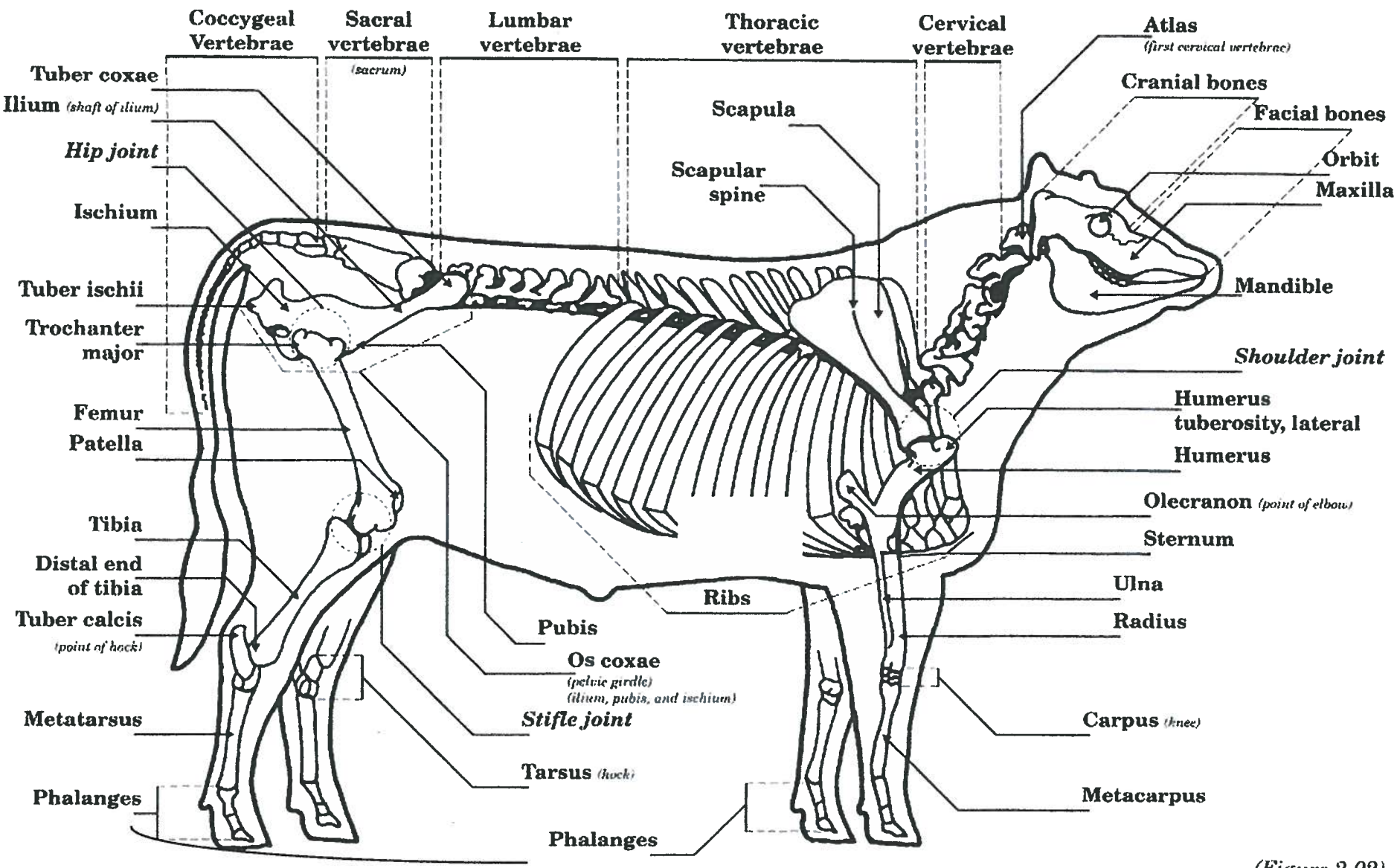
Bovine Skeletal Diagram



(Figure 2.02)

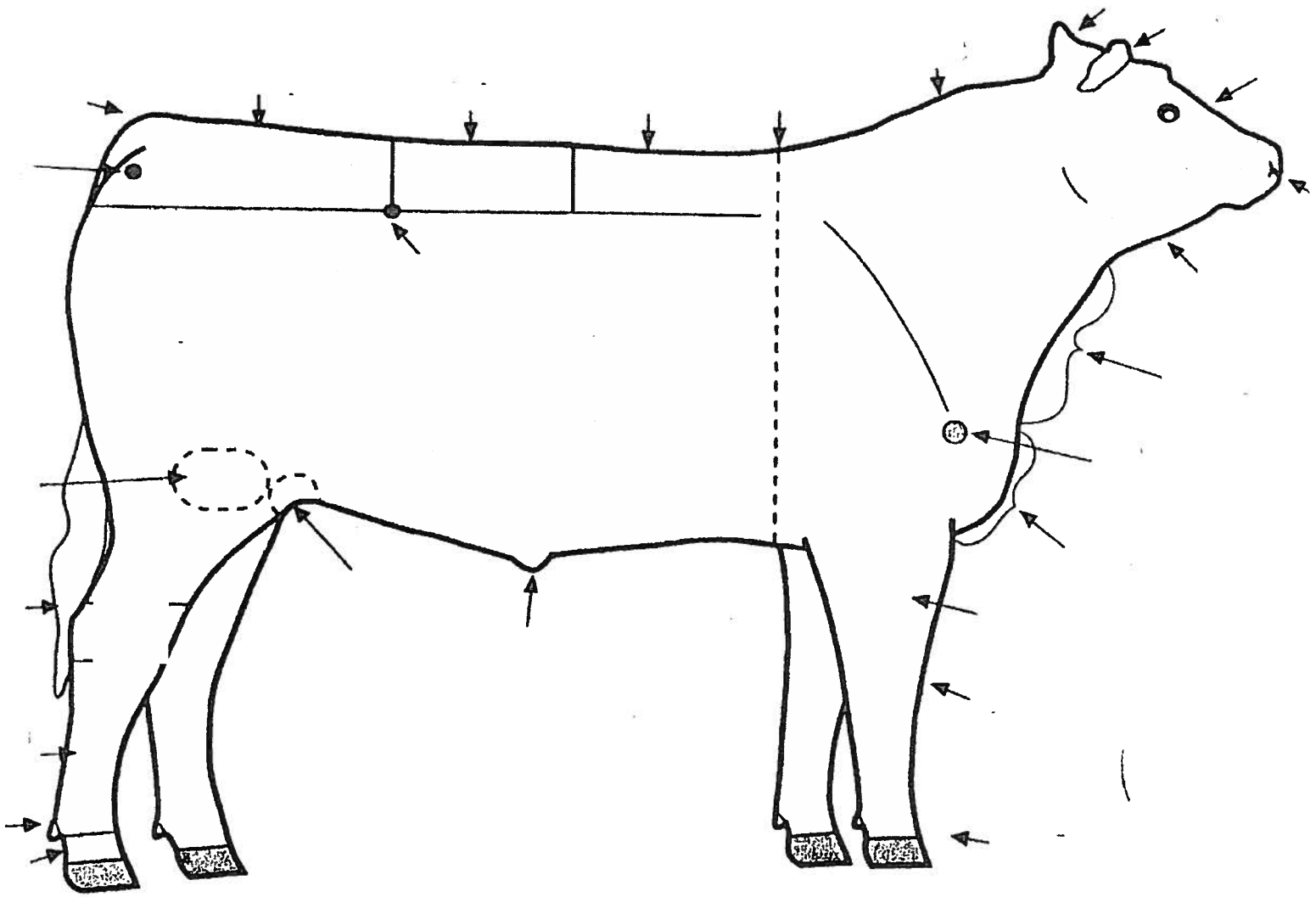
Bovine Skeletal Diagram

Answers



(Figure 2.02)

Parts of a Beef Animal



Beef Skillathon

BEEF LEARNING LABORATORY KIT

Quality Assurance and Animal Care: Youth Education Program
This material is based upon work supported by Extension Service,
United States Department of Agriculture, under special project number 93-EFSQ-4096.
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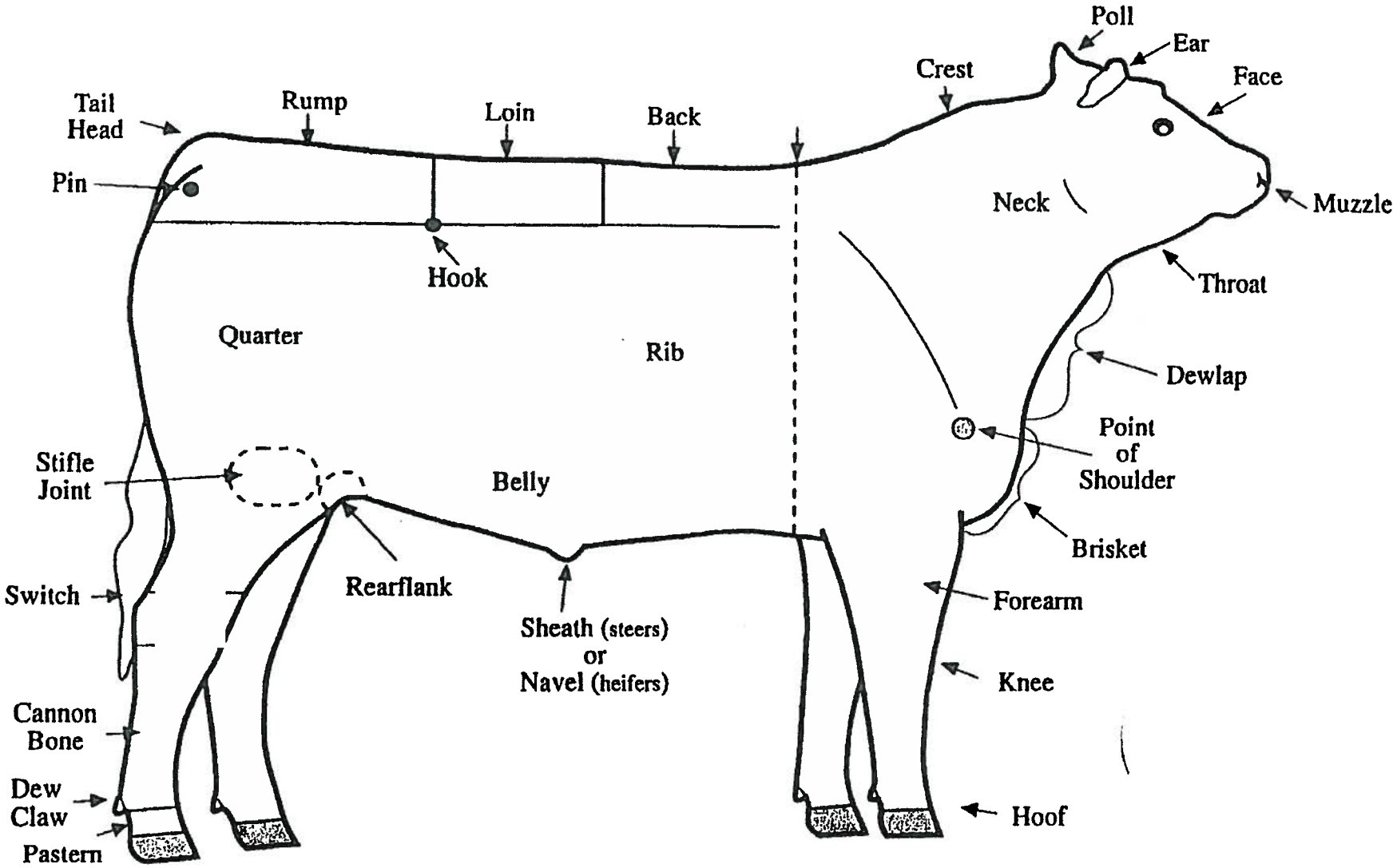
Product distribution through the Ohio Agricultural Education Curriculum Materials Service

Parts of a Beef Animal

Answers



Beef Skillathon

BEEF LEARNING LABORATORY KIT

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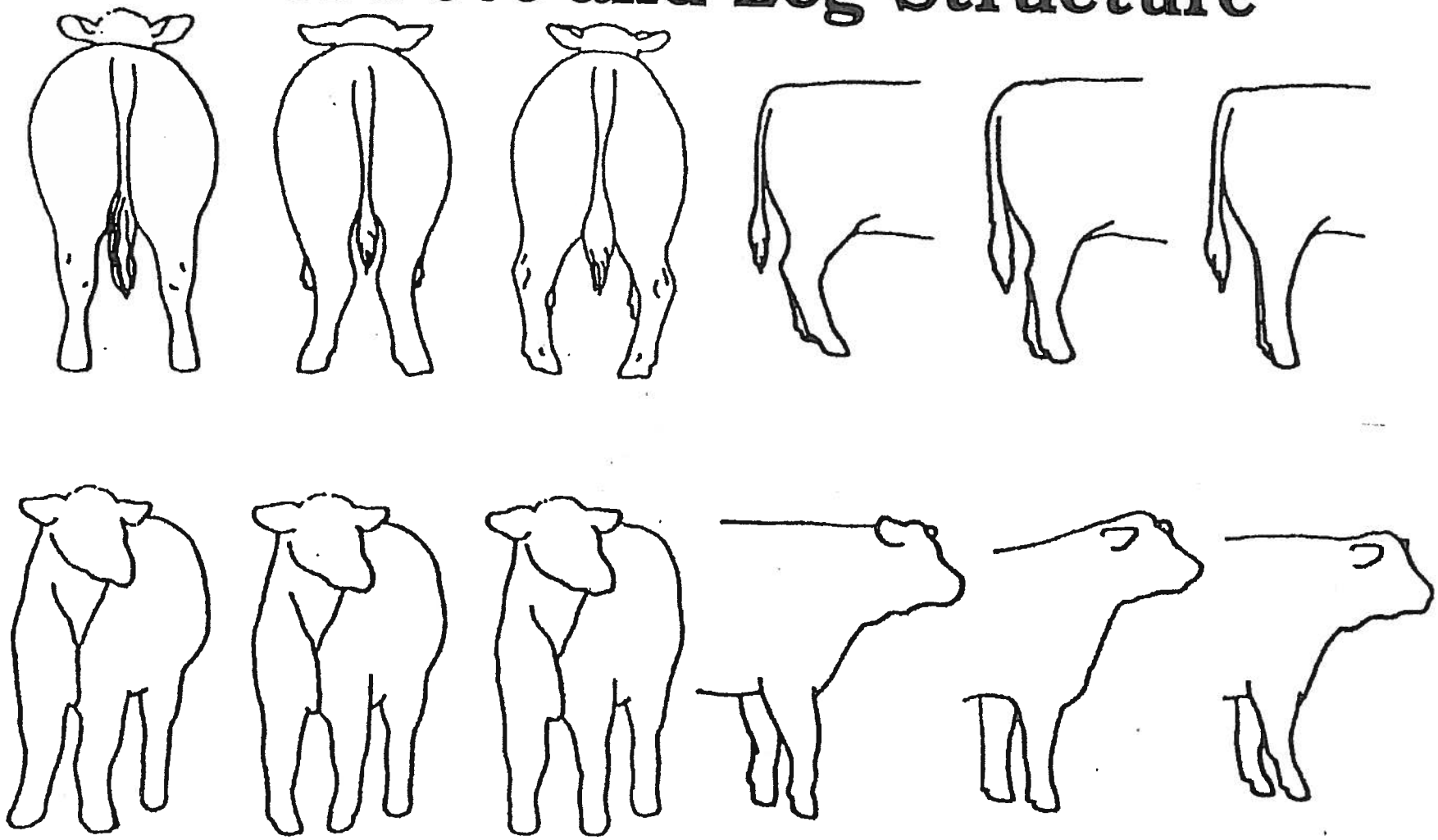
Beef Feet and Leg Structure



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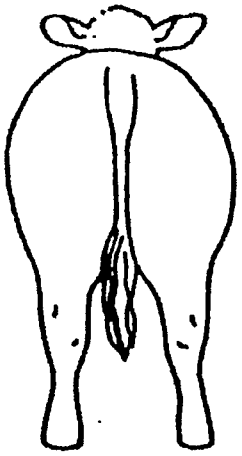
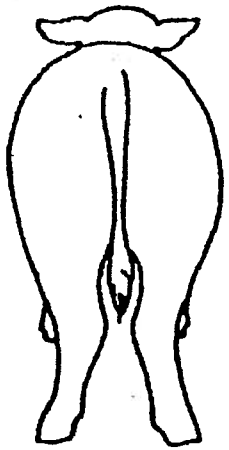
Beef Feet and Leg Structure

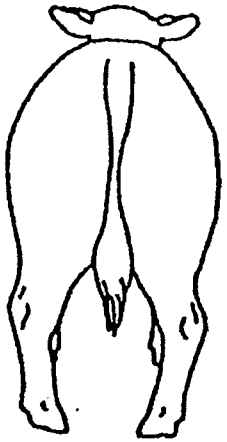
Answers



CORRECT



COW HOCKED
OR SPLAYFOOTED

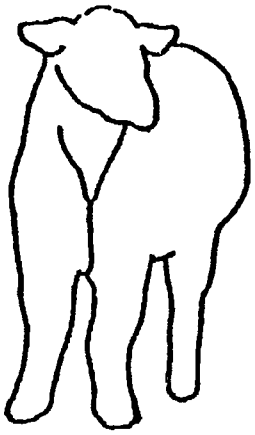


BOWLEGGED OR
PIGEON TOED

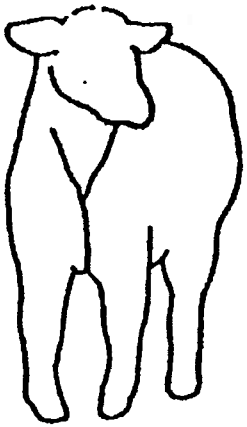
SICKLE
HOCKED

CORRECT

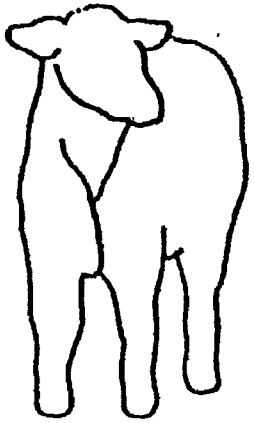
POSTLEGGED



KNOCK KNEED
OR SPLAYFOOTED



BOWLEGGED OR
PIGEON TOED



CORRECT

BUCK KNEED

CORRECT

CALF KNEED

BEEF LEARNING LABORATORY KIT

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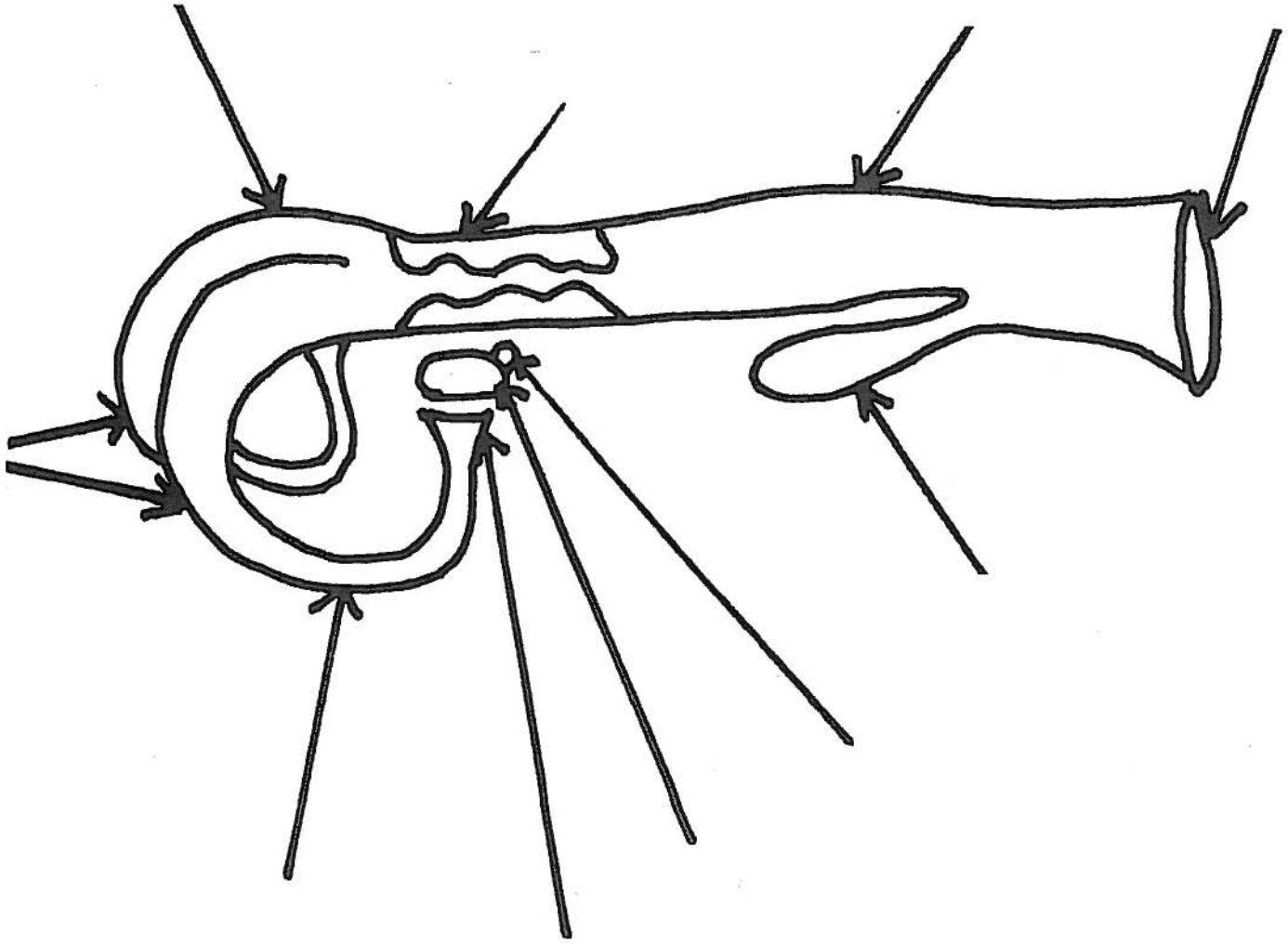
Female Reproductive Tract ID



F

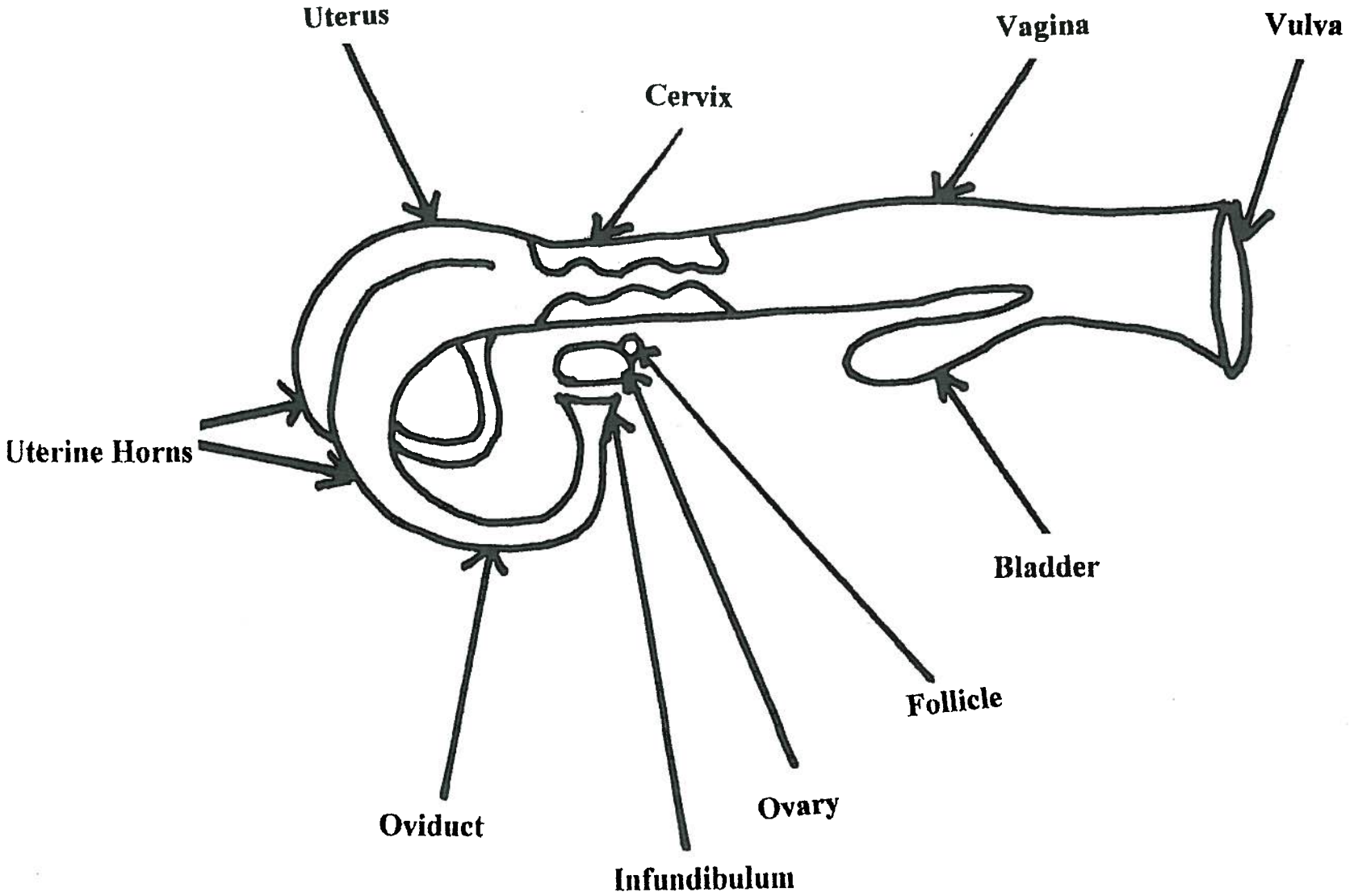
Beef Skillathon

BEEF
LEARNING LABORATORY KIT

This material developed with a grant funded by the Ohio 4-H Foundation

Female Reproductive Tract ID

Answers



Beef Skillathon

BEEF
LEARNING LABORATORY KIT

This material developed with a grant funded by the Ohio 4-H Foundation

This breed originated in Germany. They are solid cream to reddish yellow in color. These animals are known as a general-purpose breed with good milking ability.

This breed was brought to the United States from England in 1783. These animals can be red, white, or roan in color. They are noted for their good disposition and mothering and milking abilities.

This breed was developed in the United States from the Hereford breed. Except for the polled trait, these animals exhibit the same characteristics as the Hereford breed.

This breed was developed on the King Ranch in Texas. These animals are 5/8 Shorthorn and 3/8 Brahman. They are known for their growth rate, long life, and hardiness.

This breed was developed in England and brought to the United States in 1817. These animals have red bodies with white faces. They are known for their foraging ability, vigor, hardiness, and quiet disposition.

This breed originated in west-central France. They are solid to golden red in color with lighter circles around the eyes and muzzle. When slaughtered at an early age, these animals yield a high percentage of lean meat with a minimum amount of fat.

This breed was imported into the United States from Switzerland, France, and Germany. These animals have red to dark red, spotted bodies with white to light straw faces. They are noted for their fast growth and milking ability.

This breed originated from Spanish Andalusian cattle. These animals have long horns and several different color patterns. They are known for their longevity, hardiness, strong survival instincts, and resistance to disease and parasites.

This breed was developed in the southwestern United States by crossing Zebu cattle from India with British breeds. The color of these animals varies from light gray or red to almost black. It is known for its ability to withstand heat and insects.

This breed was developed in Italy. These animals are white with black skin pigmentation. They are large: a mature bull can weigh up to 4,000 pounds and stand 6 feet tall. They are noted for their working, mothering, and beef-producing abilities.

This breed originated in Scotland. These animals are polled with a black, smooth coat. They are known for their carcass quality, and milking, mothering, and reproductive abilities.

This breed was developed in France and imported into the United States from Mexico in 1936. These animals are large and white. They are noted for their fast growth and lean meat.

Beef Skillathon

Answers

This breed originated in Germany. They are solid cream to reddish yellow in color. These animals are known as a general-purpose breed with good milking ability.

Gelbvieh

This breed was developed in the United States from the Hereford breed. Except for the polled trait, these animals exhibit the same characteristics as the Hereford breed.

Polled Hereford

This breed was developed in England and brought to the United States in 1817. These animals have red bodies with white faces. They are known for their foraging ability, vigor, hardiness, and quiet disposition.

Hereford

This breed was imported into the United States from Switzerland, France, and Germany. These animals have red to dark red, spotted bodies with white to light straw faces. They are noted for their fast growth and milking ability.

Simmental

This breed was developed in the southwestern United States by crossing Zebu cattle from India with British breeds. The color of these animals varies from light gray or red to almost black. It is known for its ability to withstand heat and insects.

Brahman

This breed originated in Scotland. These animals are polled with a black, smooth coat. They are known for their carcass quality, and milking, mothering, and reproductive abilities.

Angus

This breed was brought to the United States from England in 1783. These animals can be red, white, or roan in color. They are noted for their good disposition and mothering and milking abilities.

Shorthorn

This breed was developed on the King Ranch in Texas. These animals are 5/8 Shorthorn and 3/8 Brahman. They are known for their growth rate, long life, and hardiness.

Santa Gertrudis

This breed originated in west-central France. They are solid to golden red in color with lighter circles around the eyes and muzzle. When slaughtered at an early age, these animals yield a high percentage of lean meat with a minimum amount of fat.

Limousin

This breed originated from Spanish Andalusian cattle. These animals have long horns and several different color patterns. They are known for their longevity, hardiness, strong survival instincts, and resistance to disease and parasites.

Texas Longhorn

This breed was developed in Italy. These animals are white with black skin pigmentation. They are large: a mature bull can weigh up to 4,000 pounds and stand 6 feet tall. They are noted for their working, mothering, and beef-producing abilities.

Chianina

This breed was developed in France and imported into the United States from Mexico in 1936. These animals are large and white. They are noted for their fast growth and lean meat.

Charolais

Medication Insert

OMNIBIOTIC

(Hydrocillin in Aqueous Suspension)

For use in Beef Cattle, Lactating and Non-Lactating Dairy Cattle, Swine and Sheep

Read Entire Brochure Carefully Before Using This Product

For Intramuscular Use Only

Active Ingredients: Omnibiotic is an effective antimicrobial preparation containing hydrocillin hydrochloride. Each ml of this suspension contains 200,000 units of hydrocillin hydrochloride in an aqueous base.

Indications: Cattle - bronchitis, foot rot, leptospirosis, mastitis, metritis, pneumonia, wound infections. **Swine** - erysipelas, pneumonia. **Sheep** - foot rot, pneumonia, mastitis: and other infections in these species caused by or associated with hydrocillin-susceptible organisms.

Recommended Daily Dosage

The usual dose is 2 ml per 100 lb of body weight given once daily. Maximum dose is 15 ml/day.

Body Weight	*Dosage*
100 lb	2 ml
300 lb	6 ml
500 lb	10 ml
750 lb or more	15 ml

Continue treatment for 1 to 2 days after symptoms disappear.

Caution: 1. Omnibiotic should be injected deep within the fleshy muscle of the neck or thigh. Do not inject this material in the hip or rump, subcutaneously, into a blood vessel, or near a major nerve because it may cause tissue damage. 2. If improvement does not occur within 48 hours, the diagnosis should be reconsidered and appropriate treatment initiated. 3. Treated animals should be closely observed for at least 30 minutes. Should a reaction occur, discontinue treatment and immediately administer epinephrine and antihistamines. 4. Omnibiotic must be stored between 2° and 8° C (36° to 46° F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

Warning: Milk that has been taken from animals during treatment and for 48 hours (4 milkings) after the last treatment must not be used for food. The use of this drug must be discontinued for 30 days before treated animals are slaughtered for food.

How Supplied: Omnibiotic is available in vials of 100 ml.

Answers

Medication Insert

Name of Drug

OMNIBIOTIC

(Hydrocillin in Aqueous Suspension) — *Active Ingredients*

For use in Beef Cattle, Lactating and Non-Lactating Dairy Cattle, Swine and Sheep — *Species and Animal Class*

Read Entire Brochure Carefully Before Using This Product

For Intramuscular Use Only

Active Ingredients: Omnibiotic is an effective antimicrobial preparation containing hydrocillin hydrochloride. Each ml of this suspension contains 200,000 units of hydrocillin hydrochloride in an aqueous base.

Approved Uses

Indications: Cattle - bronchitis, foot rot, leptospirosis, mastitis, metritis, pneumonia, wound infections. **Swine** - erysipelas, pneumonia. **Sheep** - foot rot, pneumonia, mastitis: and other infections in these species caused by or associated with hydrocillin-susceptible organisms.

Recommended Daily Dosage

The usual dose is 2 ml per 100 lb of body weight given once daily. Maximum dose is 15 ml/day.

Dosage

Body Weight	*Dosage*
100 lb	2 ml
300 lb	6 ml
500 lb	10 ml
750 lb or more	15 ml

Continue treatment for 1 to 2 days after symptoms disappear.

Route of Administration

Cautions and Warnings

Caution: 1. Omnibiotic should be injected deep within the fleshy muscle of the neck or thigh. Do not inject this material in the hip or rump, subcutaneously, into a blood vessel, or near a major nerve because it may cause tissue damage. 2. If improvement does not occur within 48 hours, the diagnosis should be reconsidered and appropriate treatment initiated. 3. Treated animals should be closely observed for at least 30 minutes. Should a reaction occur, discontinue treatment and immediately administer epinephrine and antihistamines. 4. Omnibiotic must be stored between 2° and 8° C (36° to 46° F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

Storage Requirements

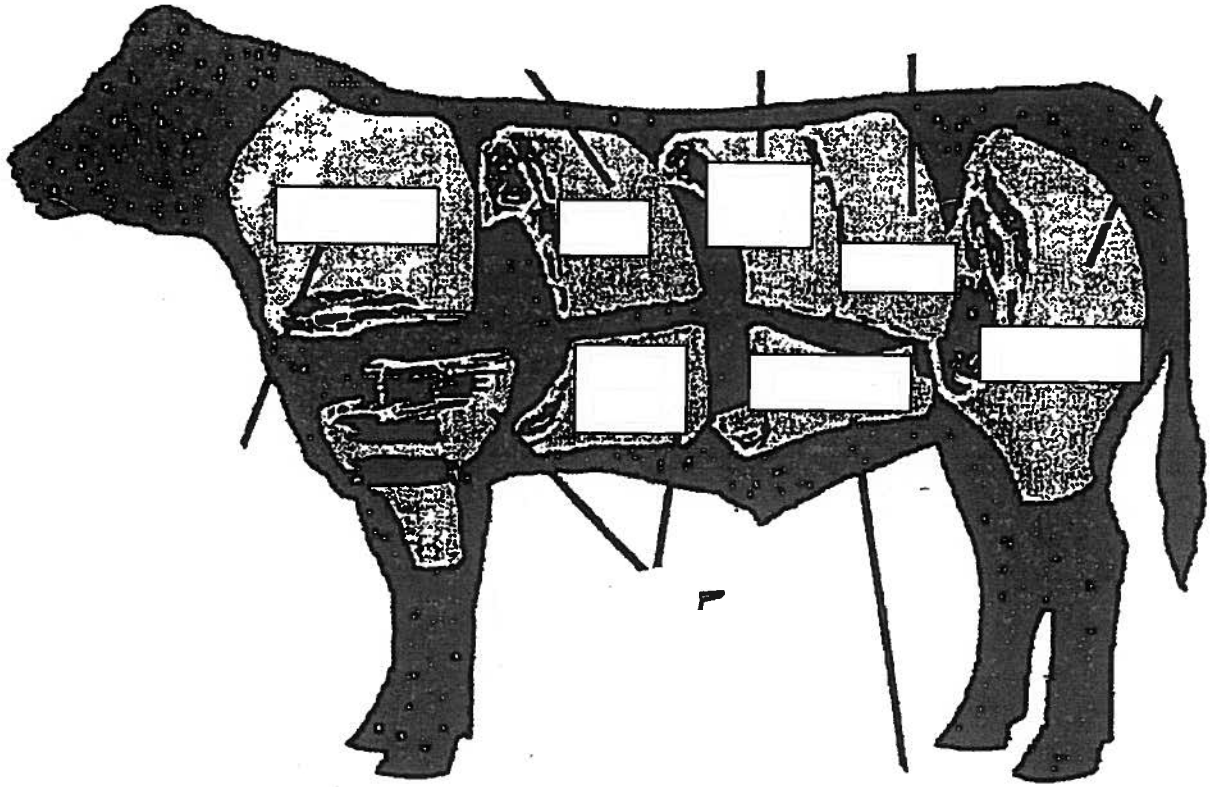
Withholding Times

Warning: Milk that has been taken from animals during treatment and for 48 hours (4 milkings) after the last treatment must not be used for food. The use of this drug must be discontinued for 30 days before treated animals are slaughtered for food.

Sizes Available

How Supplied: Omnibiotic is available in vials of 100 ml.

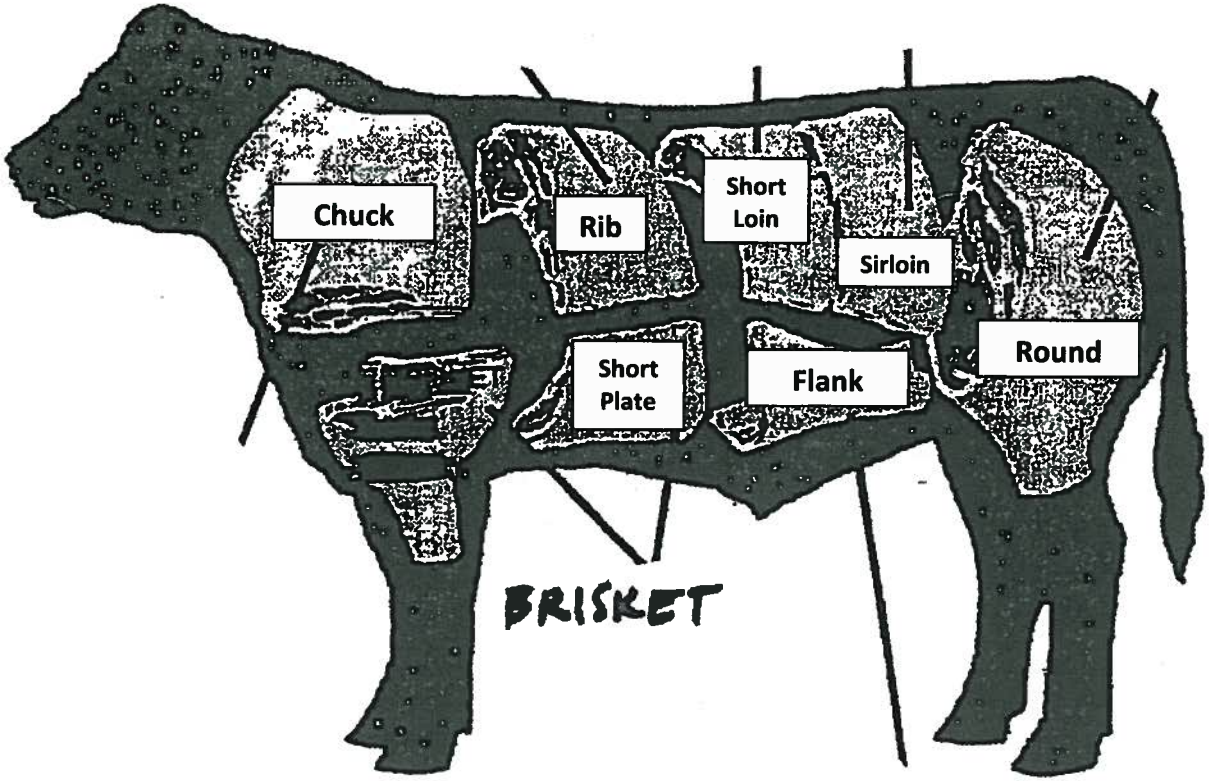
Wholesale Cuts of a Beef Animal



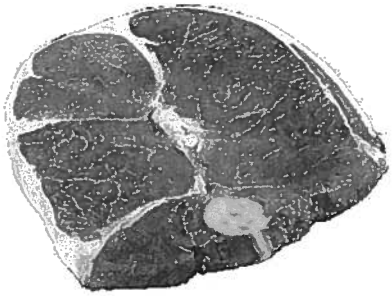
Beef Skillathon

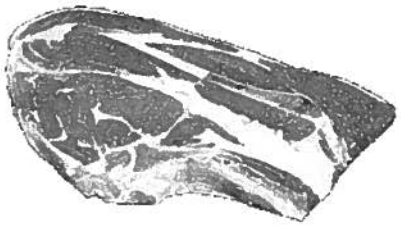
Answers

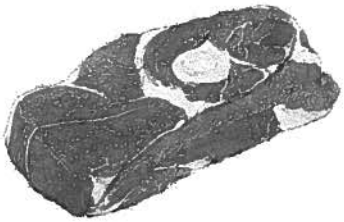
Wholesale Cuts of a Beef Animal

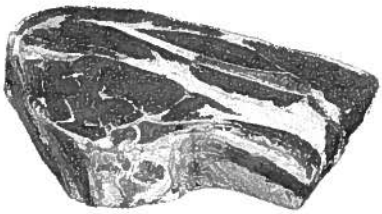


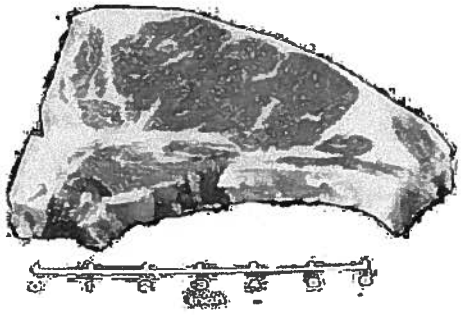
Beef Skillathon

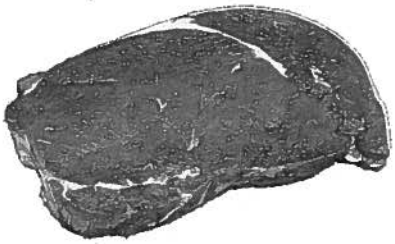


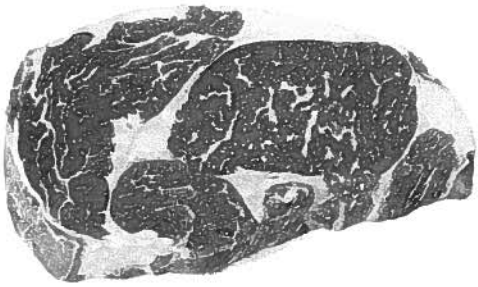




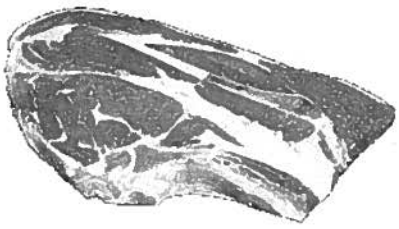




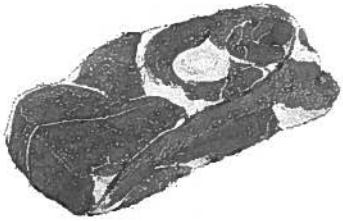




Round Steak

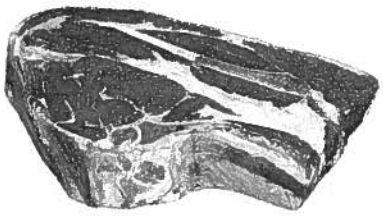


Tenderloin Roast

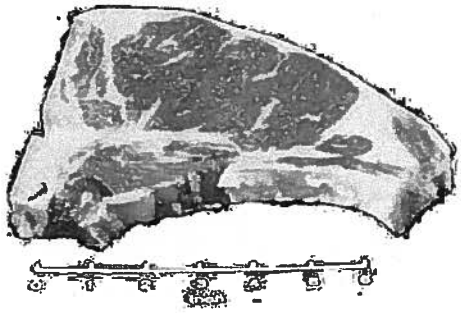


Arm Pot Roast

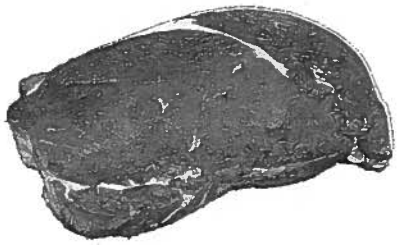
Rib Roast



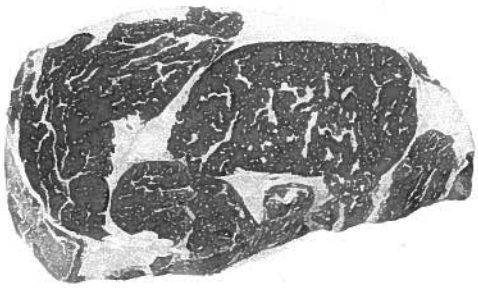
Blade Roast



T-Bone Steak



Sirloin Steak



Rib Steak

MGA HEIFER SUPPLEMENT MEDICATED

SUPPLEMENT FOR GROWING/FINISHING BEEF HEIFERS

FOR INCREASED RATE OF WEIGHT GAIN, IMPROVED FEED EFFICIENCY AND SUPPRESSION OF ESTRUS (HEAT) IN HEIFERS FED FOR SLAUGHTER.

ACTIVE DRUG INGREDIENT

MELENGESTROL ACETATE 0.00022%
(EQUIVALENT TO 1.0 MG/LB.)

GUARANTEED ANALYSIS

CRUDE PROTEIN	MIN 10.00%
CRUDE FAT	MIN 2.00%
CRUDE FIBER	MAX 25.00%
CALCIUM	MIN 5.50%
CALCIUM	MAX 6.50%
SALT	MIN 4.50%
SALT	MAX 5.50%
POTASSIUM	MIN 0.60%
SELENIUM	MIN 13.00 PPM
VITAMIN A	MIN 100,000.0 IU/LB

INGREDIENTS

PROCESSED GRAIN BY-PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SLAT, POTASSIUM SULFATE, MAGNESIUM SULFATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE FERROUS SULFATE.

FEEDING DIRECTIONS

Each pound of supplement will provide 1.0 mg. of melengestrol acetate. Thoroughly mix and feed at the rate of 0.5 pound per head per day to provide 0.5 mg. of melengestrol acetate per head per day. Feed continuously throughout period heifers are being grown and finished for slaughter. This supplement should be fed in controlled amounts with roughage and other feed ingredients.

NOTE

NOT EFFECTIVE FOR SPAYED HEIFERS AND STEERS.

MANUFACTURED BY:
SKILLATHON FEED

NEW WEIGHT 50 POUNDS (22.7 KILOGRAMS)
OR AS SHOWN ON SHIPPING DOCUMENT

HOW TO READ A FEED TAG

MGA HEIFER SUPPLEMENT
FEED TAG QUESTIONS

1. What is the main ingredient in this feed?
2. What is the active drug ingredient in this ration?
3. For how many days prior to slaughter should this feed be removed?
4. What is the crude fat level of this diet?
5. What is the crude protein level for this diet?

Answers

MGA HEIFER SUPPLEMENT MEDICATED

SUPPLEMENT FOR GROWING/FINISHING BEEF HEIFERS

FOR INCREASED RATE OF WEIGHT GAIN, IMPROVED FEED EFFICIENCY AND SUPPRESSION OF ESTRUS (HEAT) IN HEIFERS FED FOR SLAUGHTER.

ACTIVE DRUG INGREDIENT

MELENGESTROL ACETATE 0.00022%
(EQUIVALENT TO 1.0 MG/LB.)

GUARANTEED ANALYSIS

CRUDE PROTEIN	MIN 10.00%
CRUDE FAT	MIN 2.00%
CRUDE FIBER	MAX 25.00%
CALCIUM	MIN 5.50%
CALCIUM	MAX 6.50%
SALT	MIN 4.50%
SALT	MAX 5.50%
POTASSIUM	MIN 0.60%
SELENIUM	MIN 13.00 PPM
VITAMIN A	MIN 100,000.0 IU/LB

INGREDIENTS

PROCESSED GRAIN BY-PRODUCTS, ROUGHAGE PRODUCTS, GROUND LIMESTONE, SLAT, POTASSIUM SULFATE, MAGNESIUM SULFATE, SODIUM SELENITE, VITAMIN A ACETATE, VITAMIN D-3 SUPPLEMENT, VITAMIN E SUPPLEMENT, ZINC SULFATE, ZINC OXIDE, COPPER SULFATE, MANGANOUS OXIDE, CALCIUM IODATE, COBALT CARBONATE FERROUS SULFATE.

FEEDING DIRECTIONS

Each pound of supplement will provide 1.0 mg. of melengestrol acetate. Thoroughly mix and feed at the rate of 0.5 pound per head per day to provide 0.5 mg. of melengestrol acetate per head per day. Feed continuously throughout period heifers are being grown and finished for slaughter. This supplement should be fed in controlled amounts with roughage and other feed ingredients.

NOTE

NOT EFFECTIVE FOR SPAYED HEIFERS AND STEERS.

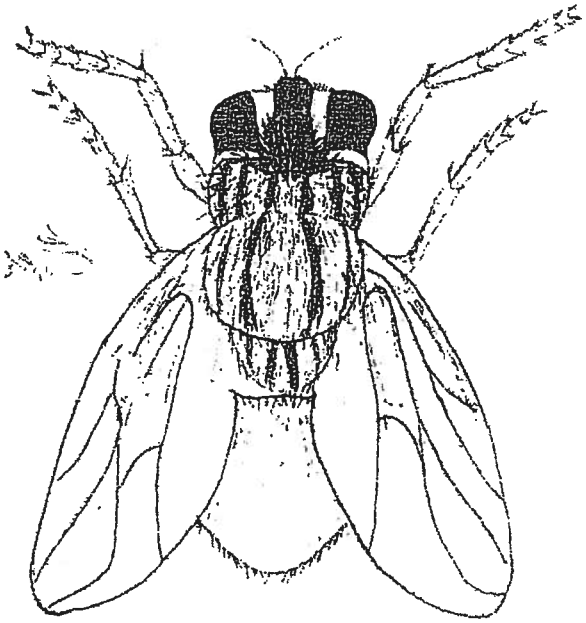
MANUFACTURED BY:
SKILLATHON FEED

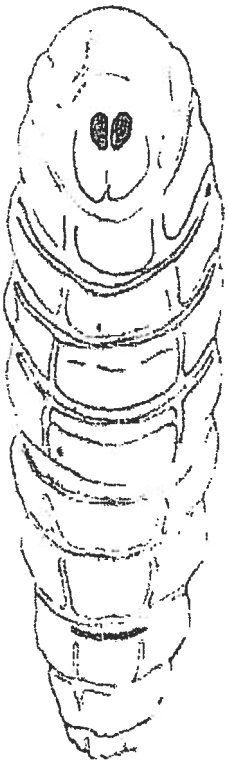
NEW WEIGHT 50 POUNDS (22.7 KILOGRAMS)
OR AS SHOWN ON SHIPPING DOCUMENT

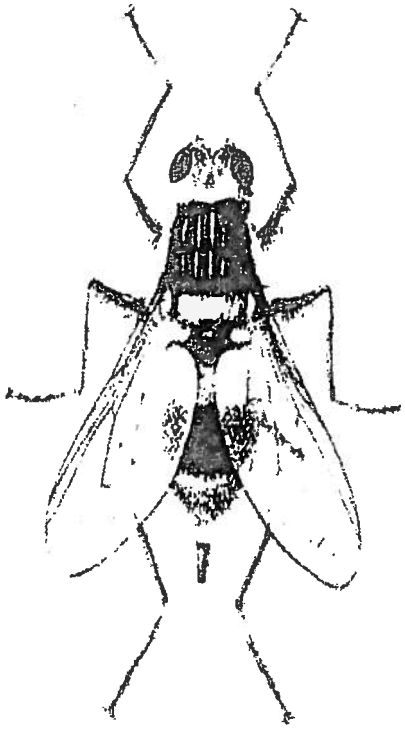
HOW TO READ A FEED TAG

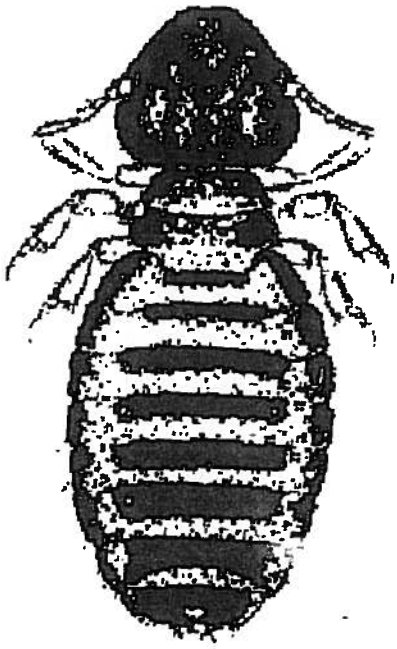
MGA HEIFER SUPPLEMENT FEED TAG QUESTIONS

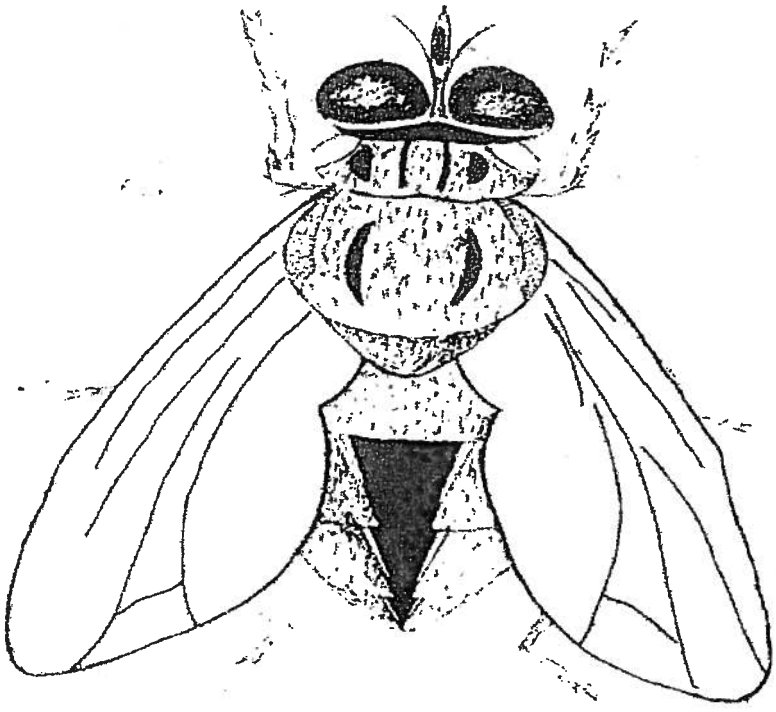
1. What is the main ingredient in this feed? Processed Grain by-products
2. What is the active drug ingredient in this ration? Melengestrol acetate
3. For how many days prior to slaughter should this feed be removed? none required
4. What is the crude fat level of this diet? 2%
5. What is the crude protein level for this diet? 10%





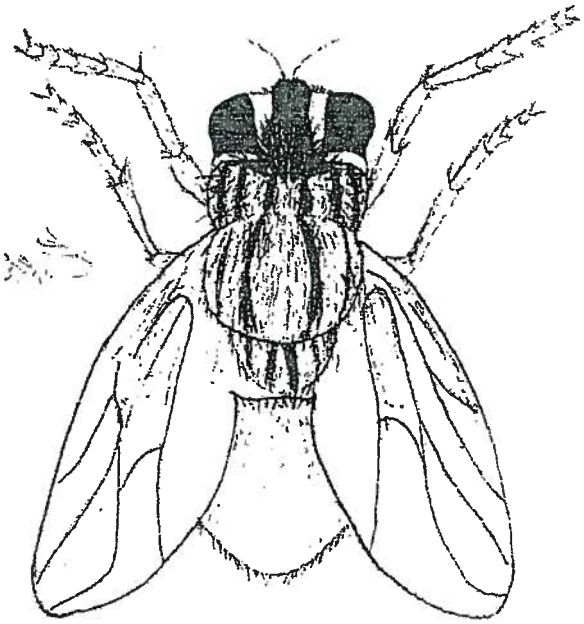




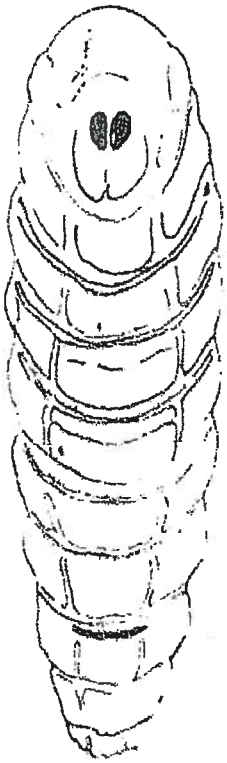


Beef Skillathon

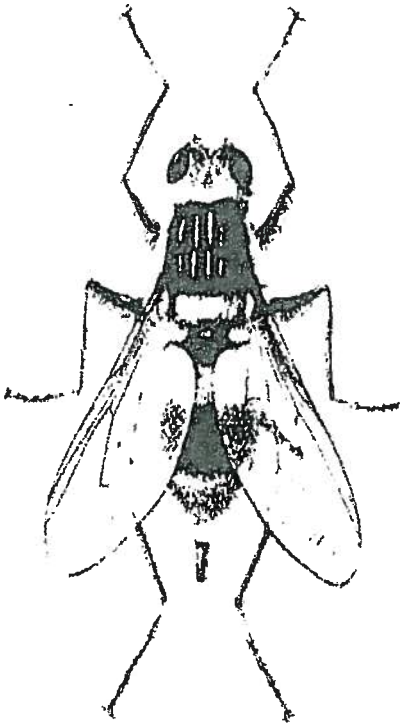
Answers



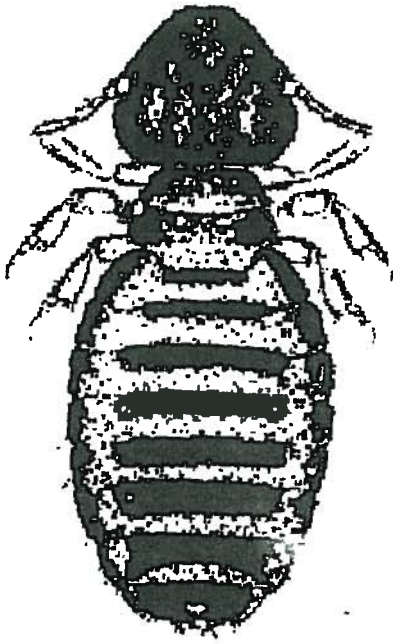
Face Fly



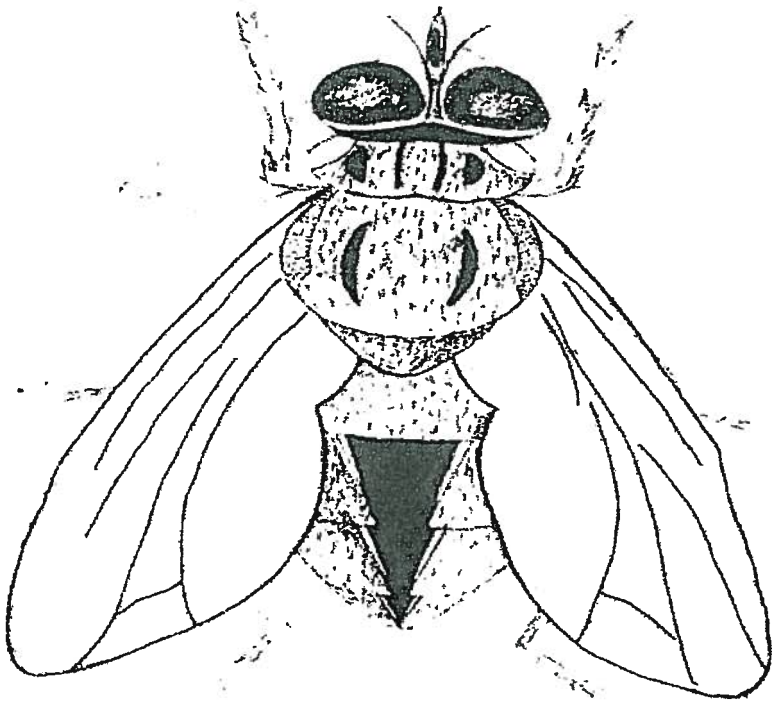
Cattle Grub



Heel Fly



Cattle Biting Louse



Horn Fly

TREATMENT OF PARASITES

FOR CONTROL OF FACE FLIES AND HELP IN THE CONTROL OF HORN FLIES. THIS TREATMENT LASTS FROM TWO TO FIVE MONTHS AND REQUIRES MINIMUM LABOR, BUT IT IS EXPENSIVE. THERE IS MINIMAL STRESS TO CATTLE.

FOR CONTROL OF HORN, FACE, HORSE AND DEER FLIES. THESE REQUIRE CHECKING AND REFILLING EVERY TWO WEEKS. MINIMUM LABOR IS REQUIRED AND TREATMENT IS INEXPENSIVE WITH MINIMAL STRESS ON CATTLE. THEY MUST BE LOCATED WHERE CATTLE WALK.

FOR CONTROL OF HORN AND FACE FLIES. THESE REQUIRE CHECKING EVERY ONE OR TWO WEEKS. REFILL WITH LIQUID INSECTICIDE WHEN NEEDED. THEY MUST BE LOCATED WHERE CATTLE WALK.

FOR CONTROL OF HORN, FACE, STABLE, HORSE AND DEER FLIES, GRUBS AND LOUSE. ITS EFFECTIVENESS MAY LAST THREE WEEKS, UNLESS WASHED AWAY BY THE RAIN. HIGH LABOR REQUIRED.

FOR CONTROL OF HORN, FACE, HOUSE, AND STABLE FLIES BY KILLING THE LARVAE IN THE MANURE. THEY SHOULD BE AVAILABLE TO CATTLE THROUGHOUT THE FLY SEASON. THEY REQUIRE MINIMUM LABOR AND HAVE MINIMUM STRESS ON CATTLE. THEY DO NOT PROVIDE CONTROL OF ADULT FLIES.

FOR CONTROL OF GRUBS AND LICE ONLY.

Answers

TREATMENT OF PARASITES

FOR CONTROL OF FACE FLIES AND HELP IN THE CONTROL OF HORN FLIES. THIS TREATMENT LASTS FROM TWO TO FIVE MONTHS AND REQUIRES MINIMUM LABOR, BUT IT IS EXPENSIVE. THERE IS MINIMAL STRESS TO CATTLE.

Ear Tags and Ear Tape

FOR CONTROL OF HORN, FACE, HORSE AND DEER FLIES. THESE REQUIRE CHECKING AND REFILLING EVERY TWO WEEKS. MINIMUM LABOR IS REQUIRED AND TREATMENT IS INEXPENSIVE WITH MINIMAL STRESS ON CATTLE. THEY MUST BE LOCATED WHERE CATTLE WALK.

Dust Bags

FOR CONTROL OF HORN AND FACE FLIES. THESE REQUIRE CHECKING EVERY ONE OR TWO WEEKS. REFILL WITH LIQUID INSECTICIDE WHEN NEEDED. THEY MUST BE LOCATED WHERE CATTLE WALK.

Back Rubbers

FOR CONTROL OF HORN, FACE, STABLE, HORSE AND DEER FLIES, GRUBS AND LOUSE. ITS EFFECTIVENESS MAY LAST THREE WEEKS, UNLESS WASHED AWAY BY THE RAIN. HIGH LABOR REQUIRED.

Sprays or Dips

FOR CONTROL OF HORN, FACE, HOUSE, AND STABLE FLIES BY KILLING THE LARVAE IN THE MANURE. THEY SHOULD BE AVAILABLE TO CATTLE THROUGHOUT THE FLY SEASON. THEY REQUIRE MINIMUM LABOR AND HAVE MINIMUM STRESS ON CATTLE. THEY DO NOT PROVIDE CONTROL OF ADULT FLIES.

Oral Larvacides

FOR CONTROL OF GRUBS AND LICE ONLY.

Injectables

Junior Beef Terms

Conformation	The general shape or structure of a beef animal's build
Cud	The ball of feed that cattle regurgitate from the rumen and chew. This process helps to digest the feed
Parasites	Organisms that live off other organisms
Withdrawal Time	Time between when an animal is taken off a drug and when there is no drug residue left in the animals system
Ruminant	An animal that has four stomach compartments
Antibiotics	Substances that can kill bacteria. Used to fight diseases caused by bacteria
Ear-Tag	Method of identification by which a numbered, lettered, or colored tag is placed in the ear
Retail Cut	Cuts of beef in sizes that are sold to the consumer
Purebred	An animal whose parents are of the same breed and are recorded with the breeds registry

Senior Beef Terms

Sickle Hocked	When viewing the rear legs from the side, the hock has too much angle or set. This causes the animal to stand too far underneath itself.
Roughage	Course or bulky feeds such as corn silage or hay that are high in fiber.
Placenta	The membrane in which the calf develops and through which it receives nourishment.
Embryo	A term for the fertilized egg during the early part of the pregnancy.
Standing Heat	The window of time during estrus (heat) when a female is receptive to mating.
Finish	Amount of fat cover on an animal.
Supplement	A feed ingredient added to the ration or provided to the cattle free choice.
Bloat	Abnormal condition in ruminants due to accumulation of gasses.
Carcass	The muscle, bone, and fat associated with the slaughter of an animal; left after removal of the head, hide, and internal organs.

Beef Terms

- Roughage — Course or bulky feeds such as corn silage or hay that are high in fiber.
- 283 days — The length of a pregnancy.
- Bloat — Abnormal condition in ruminants due to accumulation of gasses.
- Semen — Sperm mixed with the fluids from the accessory glands of the male.
- Ovary — The female organ that produces eggs. There are two in the reproductive tract.
- Placenta — The membrane in which the calf develops and through which it receives nourishment.
- Carcass — The muscle, bone, and fat associated with the slaughter of an animal; left after removal of the head, hide, and internal organs.
- Dam — The mother of a calf.
- Immunity — When the body builds up a resistance from a disease organism.
- Embryo — A term for the fertilized egg during the early part of the pregnancy.
- Finish — Amount of fat cover on an animal.
- Gestation — The period of time from when the cow is bred until she calves.
- Hormone — A body-regulating chemical secreted by a gland into the blood stream.
- Conformation — The general shape or structure of a beef animal's build.
- Parasite — Organisms that live off another organism.
- Standing Heat — The window of time during estrus (heat) when a female is receptive to mating.
- Wean — To take the calf from its mother. Typically between 6 and 8 months of age.

- Sickle Hocked — When viewing the rear legs from the side, the hock has too much angle or set. This causes the animal to stand too far underneath itself.
- Forages — Plants used as feed for livestock
- Fertilization — When the egg from the female and the sperm from the bull join and begin to form a calf embryo.
- Exotic Breed — A breed of cattle which originated on the continent of Europe.
- Cervix — The neck of the uterus.
- Cud — The ball of feed that cattle regurgitate from the rumen and chew. This process helps to digest the feed.
- Supplement — A feed ingredient added to the ration or provided to the cattle free choice.
- Purebred — An animal whose parents are from the same breed.