

Dairy 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.

Developed in 1750 in the county of Ayr, Scotland, this breed is medium in size with average milk production. They are characterized by strongly-attached, well-shaped udders and are known for their extreme hardiness and good foraging ability. These cows may be red or mahogany and white.

This breed originated in Switzerland and is large in size with high milk production. Developed to graze the mountains, these cows were bred to produce high protein milk for cheese. They are known for their strength, ruggedness, and good feet and leg structure. Their color pattern is solid brown with a black nose, switch, and hooves.

This breed originated in the Netherlands. It is the largest breed in size, and the most popular. They are known for producing the highest volume of milk of all the breeds. They are black and white in color, but may be red and white.

They were developed on an island in the English Channel. They are the smallest cows in size, and produce milk that is the highest in fat and protein. A shade of fawn with or without white markings characterizes this breed.

This breed was developed on an island in the English Channel to produce high fat milk for making butter. This breed is known for its gentle nature, and yellow-tinted milk. Fawn and white markings characterize this breed.

This breed was developed from an English breed of cattle. Their breed association was formed in 1972. Intermediate in size and milk production, this breed is an efficient converter of feed into meat or milk, and has a high heat tolerance. These animals can be red, white, or roan in color.

Answers

Developed in 1750 in the county of Ayr, Scotland, this breed is medium in size with average milk production. They are characterized by strongly-attached, well-shaped udders and are known for their extreme hardiness and good foraging ability. These cows may be red or mahogany and white.

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HOLSTEIN

This breed originated in the Netherlands. It is the largest breed in size, and the most popular. They are known for producing the highest volume of milk of all the breeds. They are black and white in color, but may be red and white.

BROWN SWISS

This breed was developed on an island in the English Channel to produce high fat milk for making butter. This breed is known for its gentle nature, and yellow-tinted milk. Fawn and white markings characterize this breed.

JERSEY

They were developed on an island in the English Channel. They are the smallest cows in size, and produce milk that is the highest in fat and protein. A shade of fawn with or without white markings characterizes this breed.

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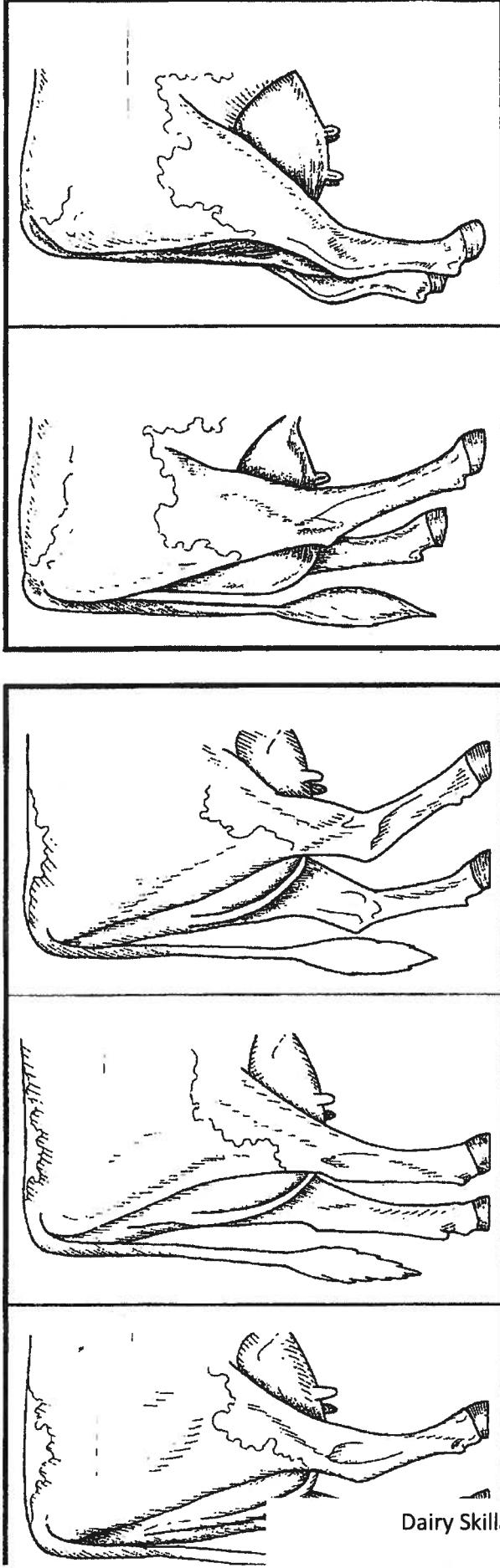
GUERNSEY

MILKING SHORTHORN

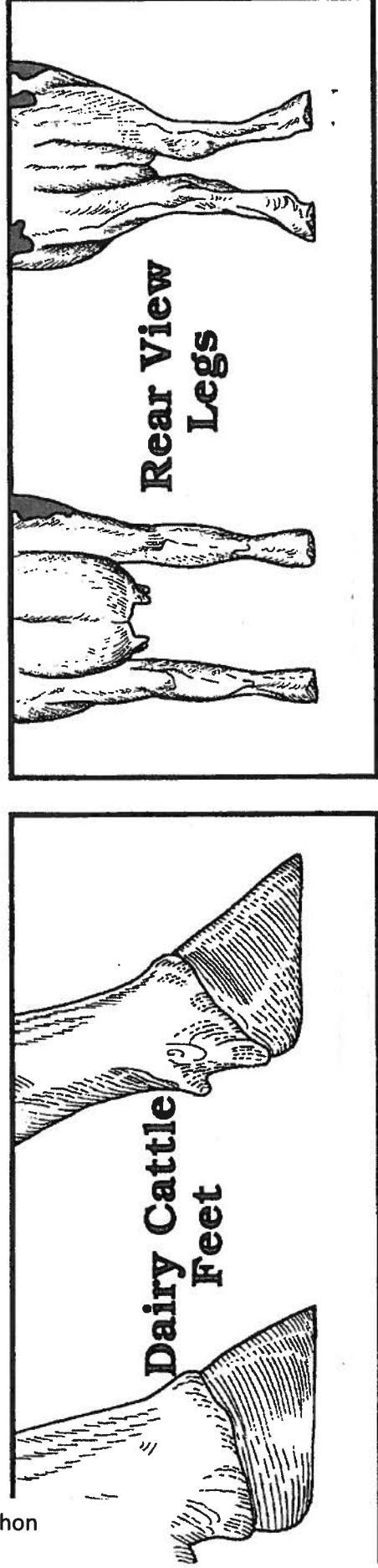
Dairy Cattle Feet and Leg Structures

Leg Placement

Thurl Placement



Dairy Skillathon



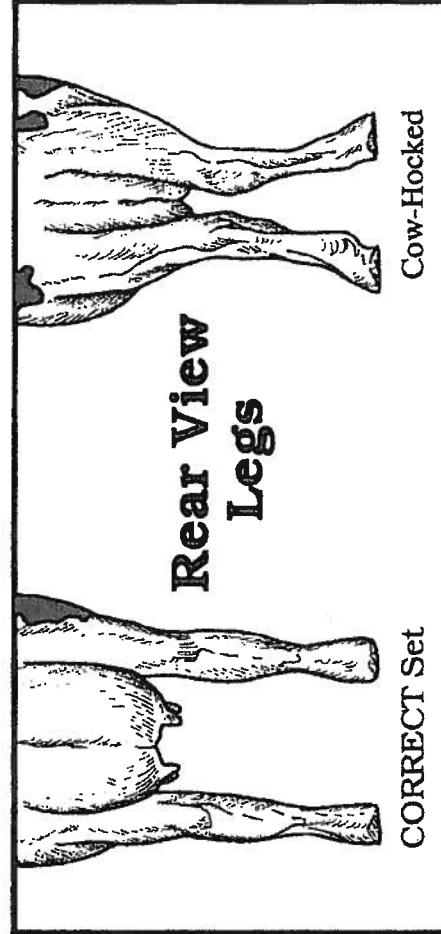
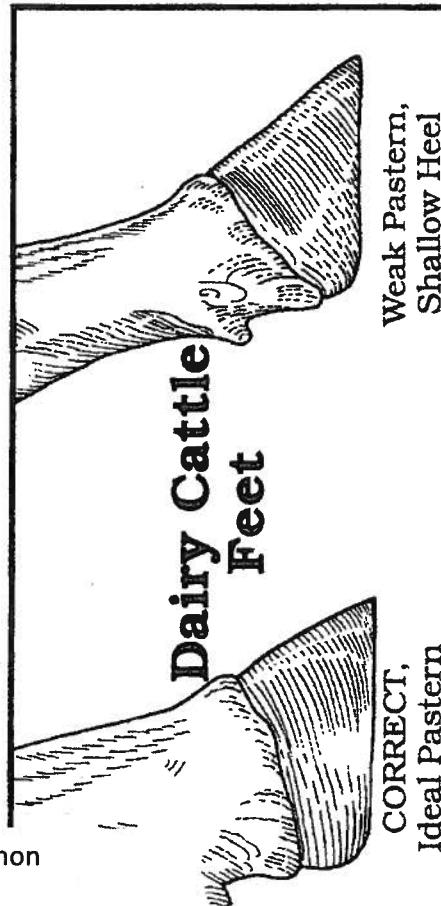
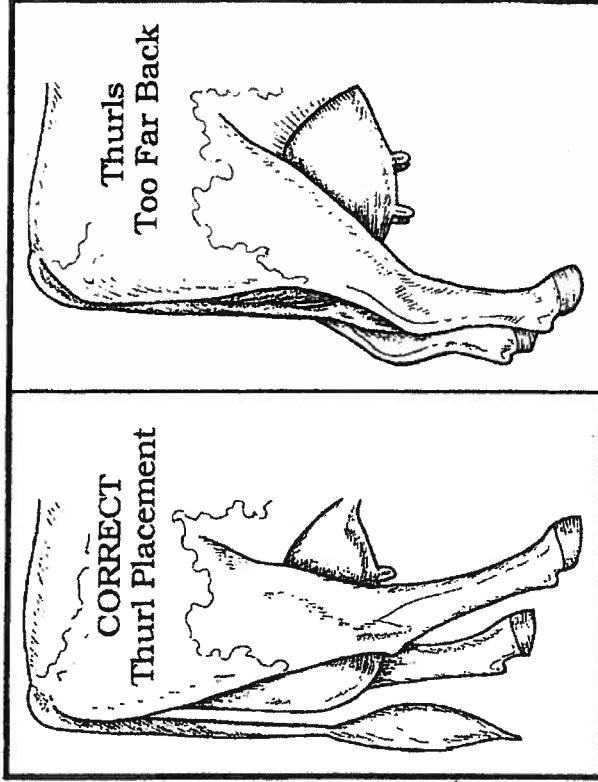
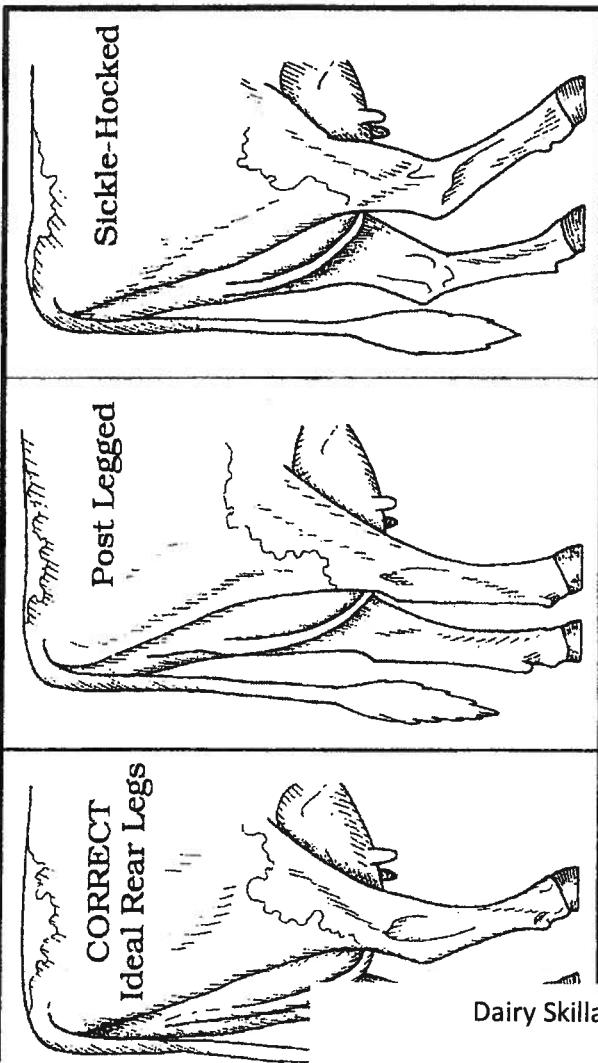
DAIRY
ARNING LABORATORY KIT

Quality Assurance and Animal Care: Youth Education Program
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Dairy Cattle Feet and Leg Structures

Leg Placement

Thurli Placement



Answers



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Female Reproductive Physiology Questions for Facilitator

At what location in the female reproductive tract is the egg united with the sperm (the site for fertilization)?

What is the normal length of the estrous cycle, in days?

Where in the female reproductive tract does the egg develop?

What is the normal duration, or length in hours of estrus, or "heat" in a heifer or cow?

The external opening to the female reproductive tract is known as what?

This part of the female reproductive tract between the vagina and the uterus is made up of three to four annular rings and a mucous plug is formed in it during pregnancy to prevent infection.
What is this called?

What is the average length of gestation, or pregnancy (in days), in female cattle?

What is the fluid-filled structure that forms on the ovary and contains the ovum (or egg) before it is released?

A product commonly known as "M.G.A." is often used in estrous synchronization programs.
What do these letters stand for?

If a cow gives birth to twins, and one is female, and the other male, the female is usually sterile.
What is the name for this heifer calf that will likely never give birth?

Dairy Skillathon



Answers

Female Reproductive Physiology Questions for Facilitator

At what location in the female reproductive tract is the egg united with the sperm (the site for fertilization)?

oviduct

What is the normal length of the estrous cycle, in days?

17 to 21 days.

Where in the female reproductive tract does the egg develop?

ovary

What is the normal duration, or length in hours of estrus, or "heat" in a heifer or cow?

14-20 hours

The external opening to the female reproductive tract is known as what?

vulva

This part of the female reproductive tract between the vagina and the uterus is made up of three to four annular rings and a mucous plug is formed in it during pregnancy to prevent infection. What is this called?

cervix

What is the average length of gestation, or pregnancy (in days), in female cattle?

283 days (accept 279 to 285 days)

What is the fluid-filled structure that forms on the ovary and contains the ovum (or egg) before it is released?

follicle

A product commonly known as "M.G.A." is often used in estrous synchronization programs. What do these letters stand for?

Melengesterol Acetate

If a cow gives birth to twins, and one is female, and the other male, the female is usually sterile. What is the name for this heifer calf that will likely never give birth?

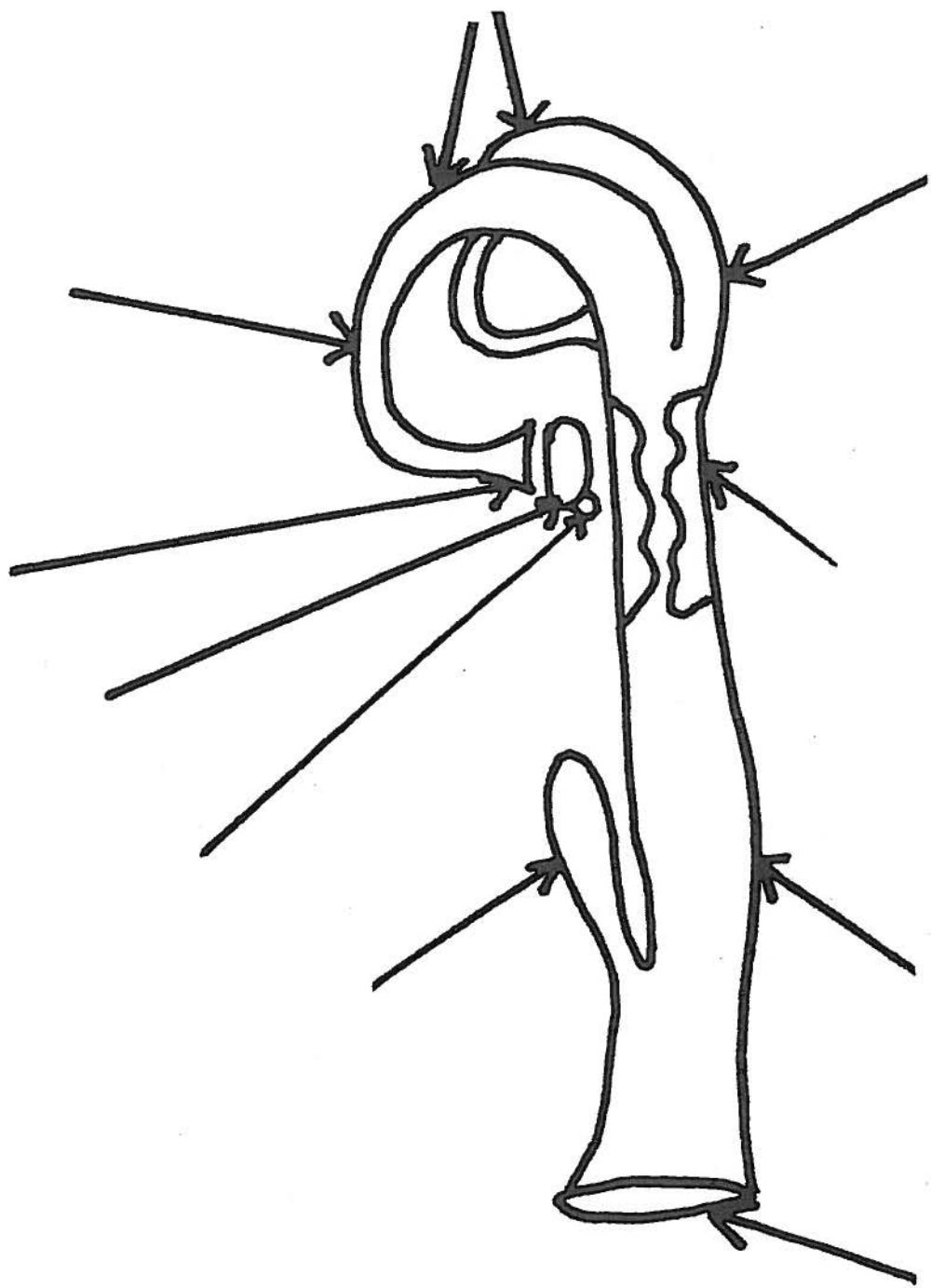
A "freemartin"

Dairy Skillathon

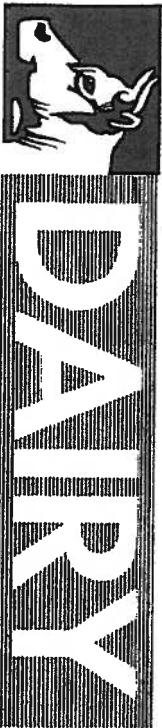
Dairy Reproduction



Female Reproductive Tract ID



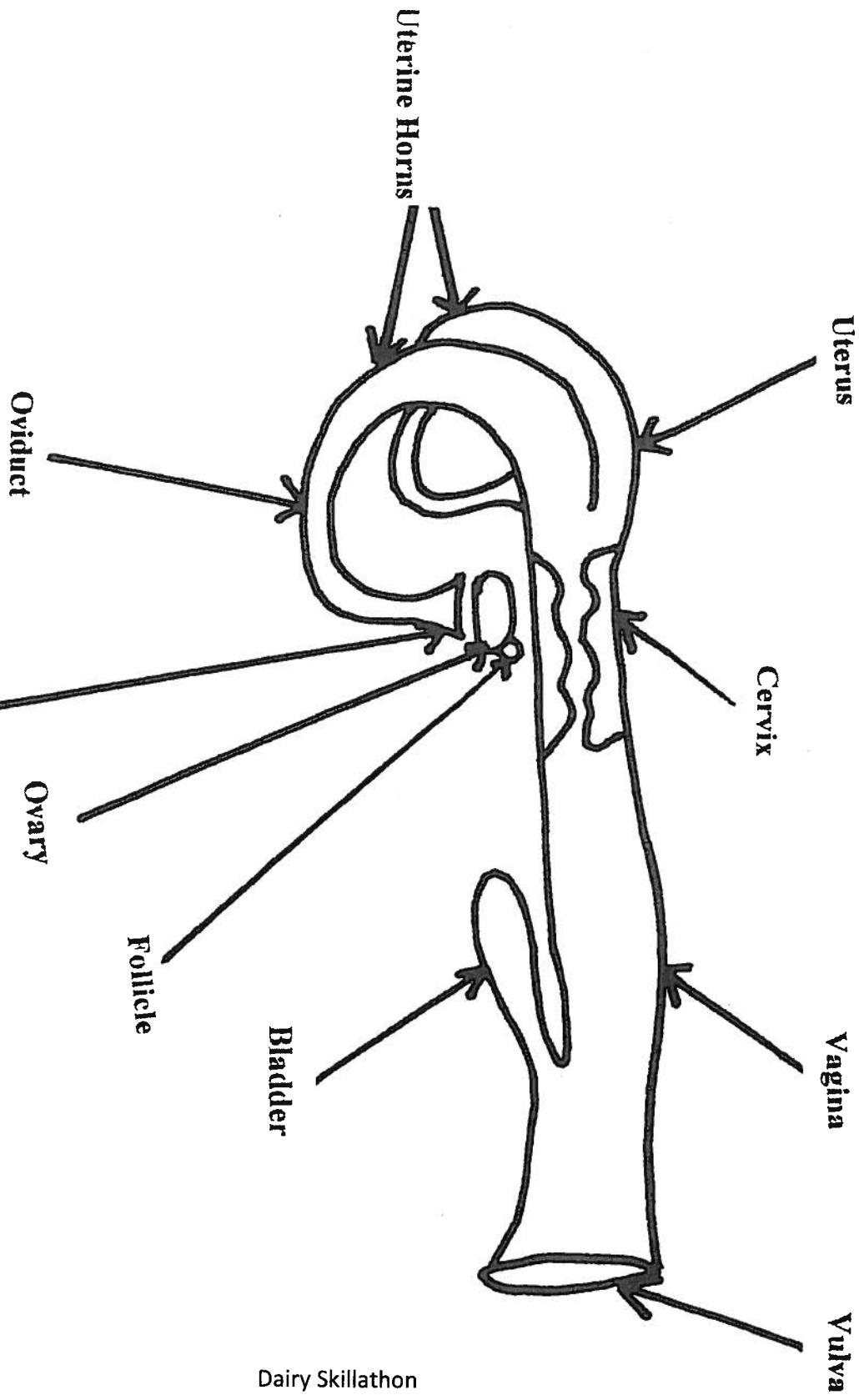
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Female Reproductive Tract ID



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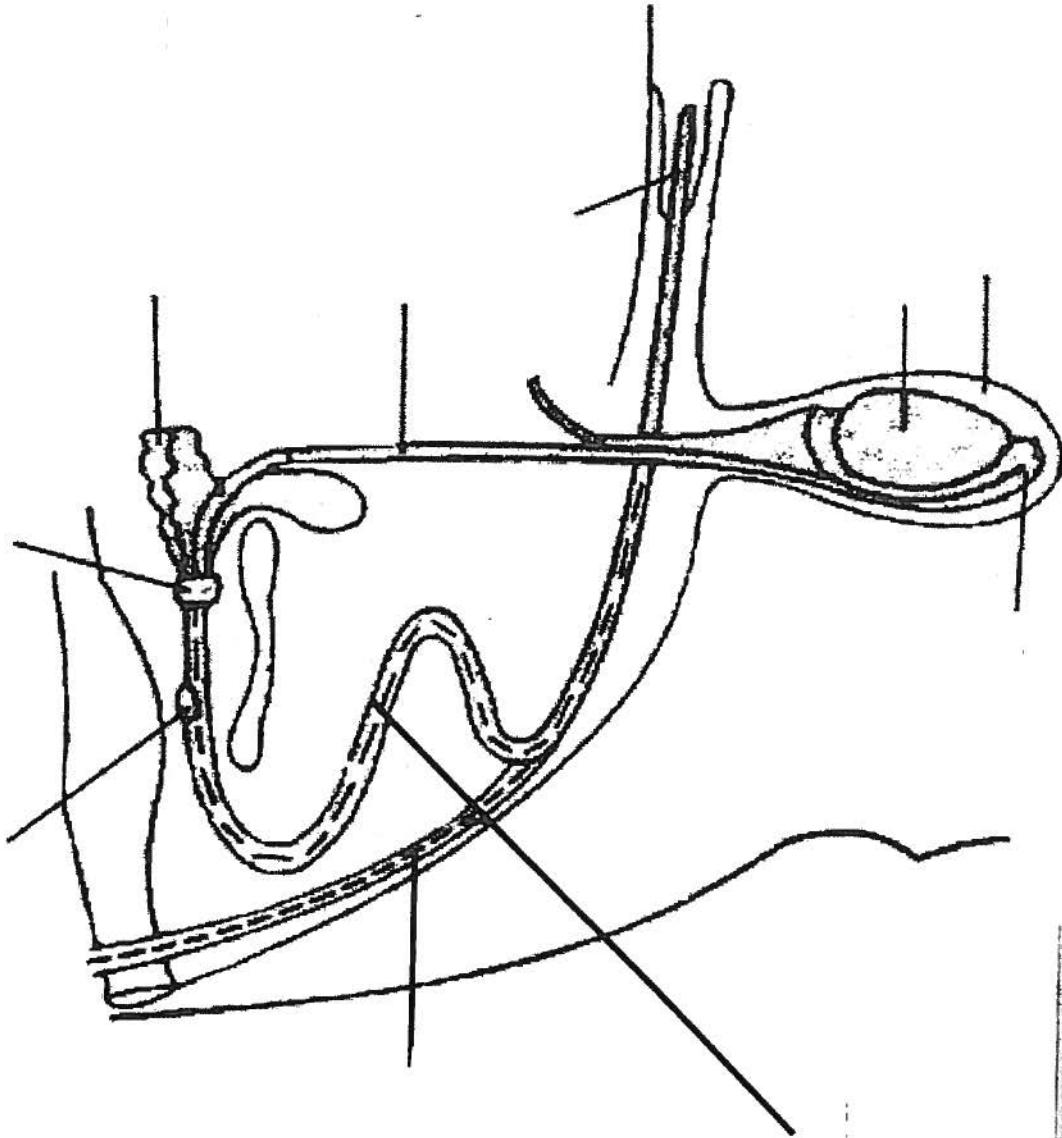
Answers



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MALE REPRODUCTIVE TRACT ID



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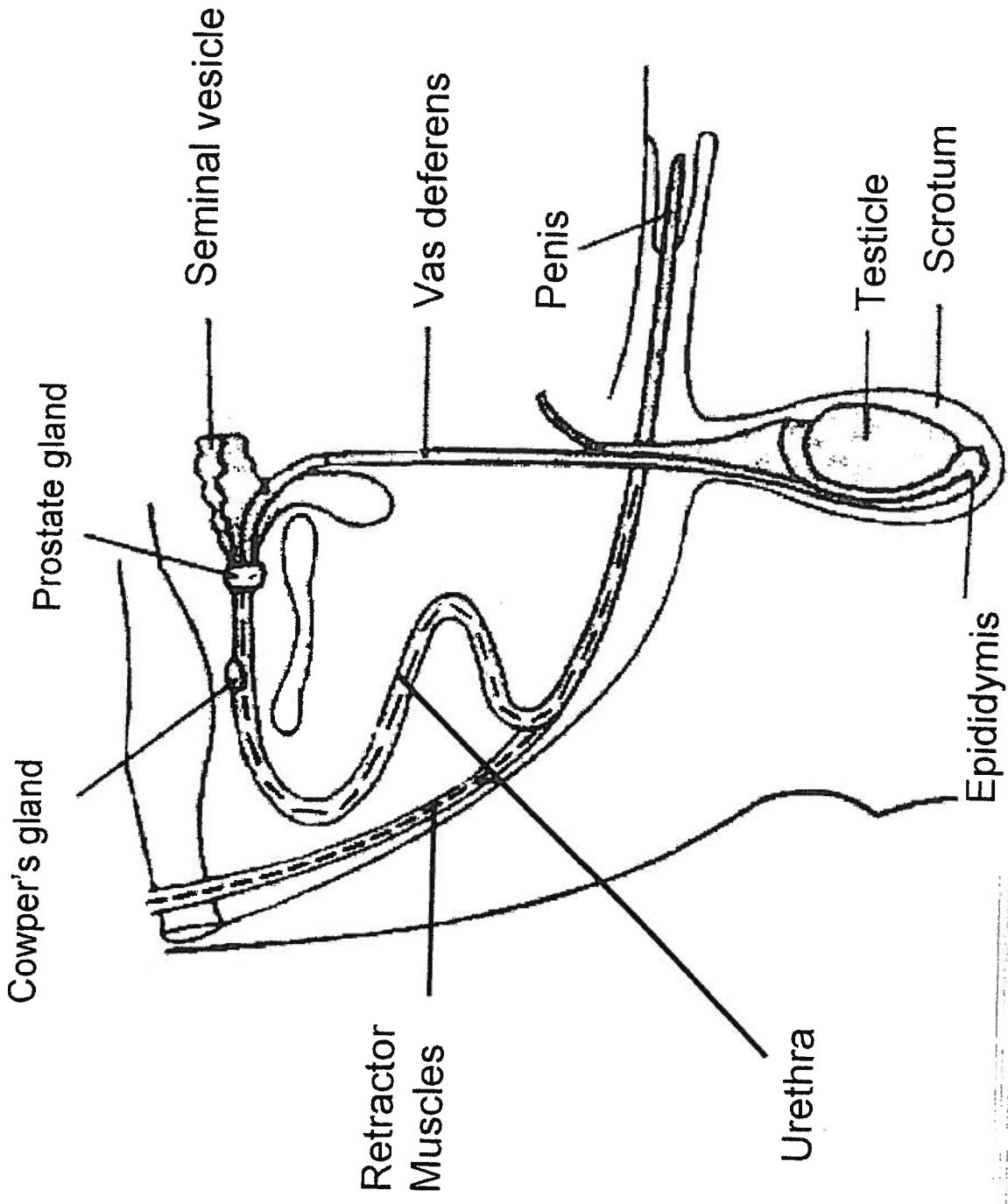


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MALE REPRODUCTIVE TRACT ID

Answers



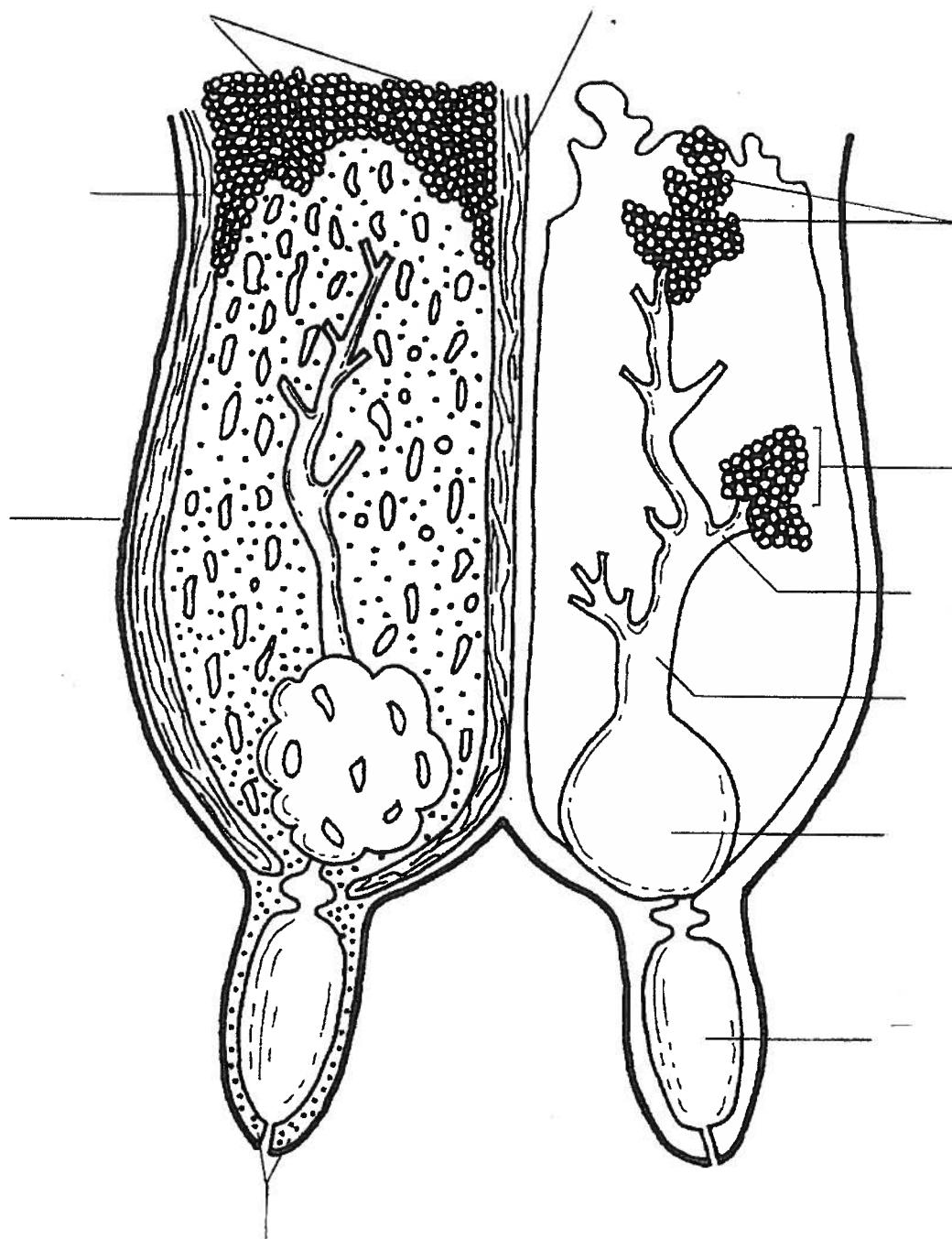
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Mammary Anatomy

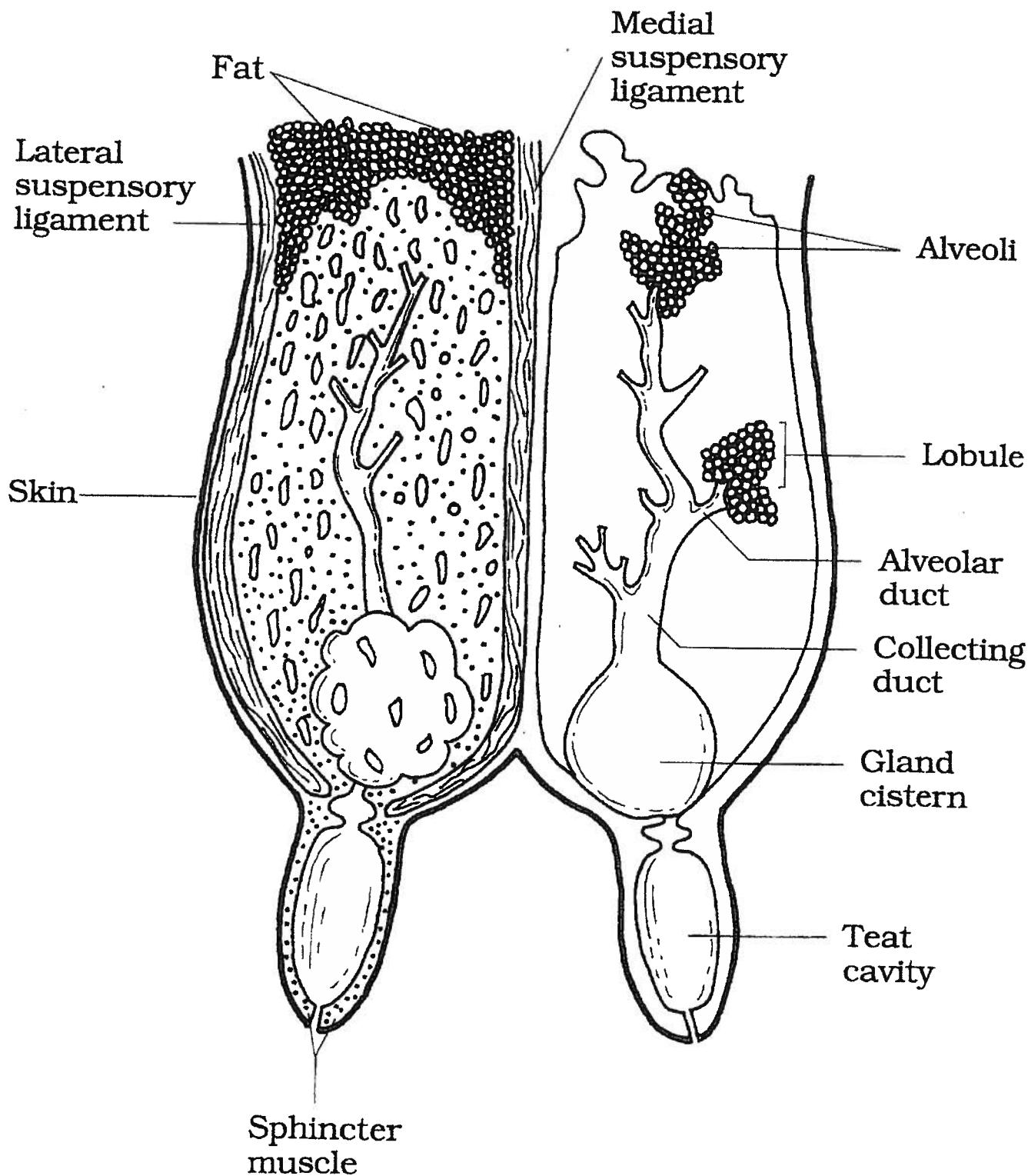


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Quality Assurance and Animal Care: Youth Education Program
Dairy Skillathon

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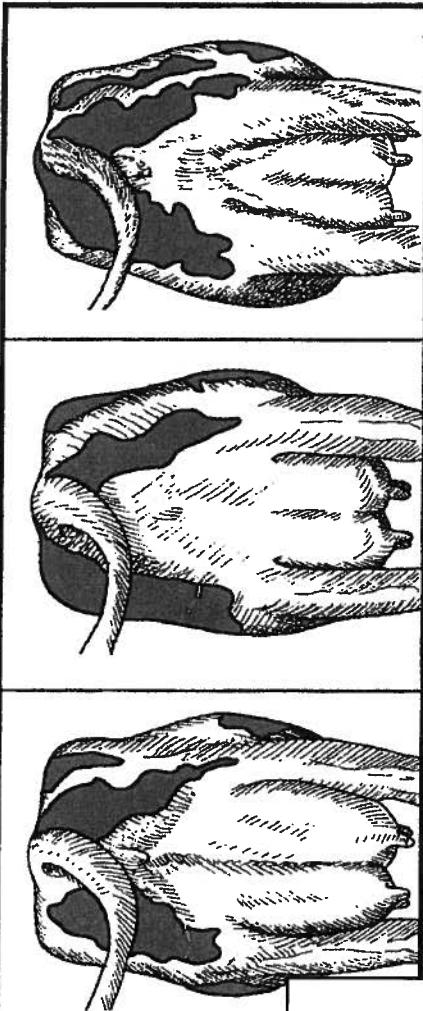
Mammary Anatomy



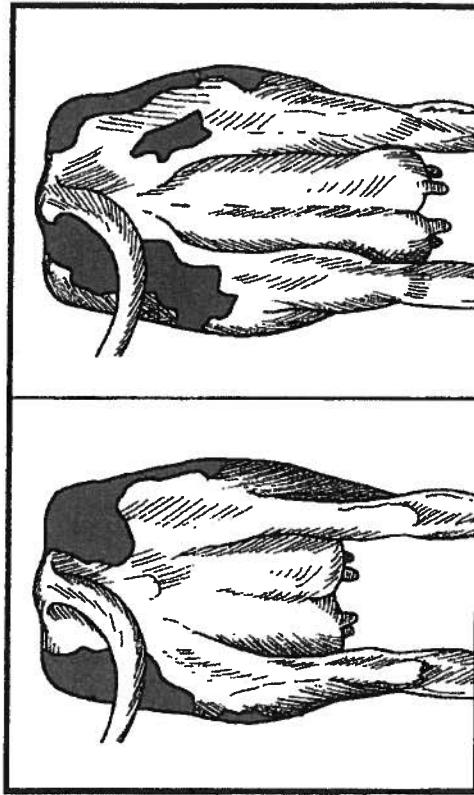
Dairy Cattle Mammary Structures (Rear View)

Part II

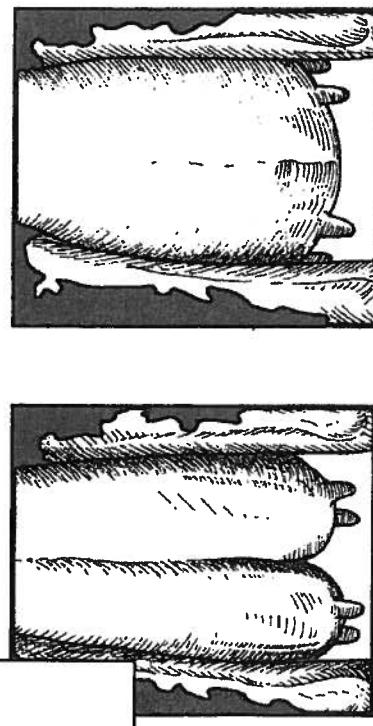
Rear Udder Attachment



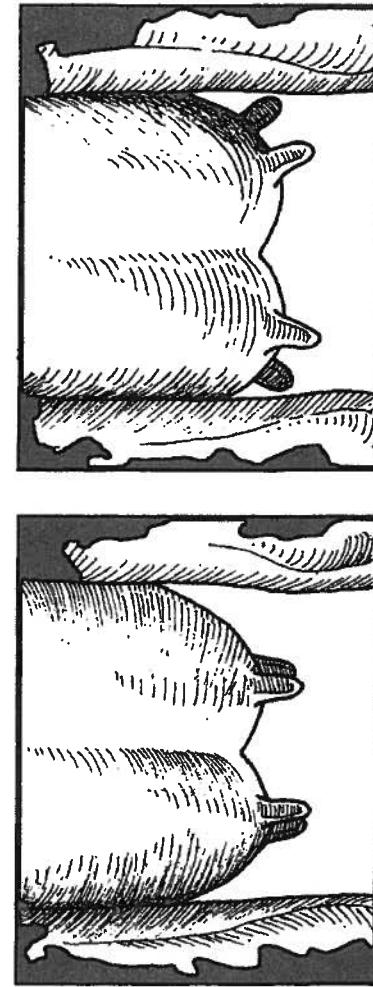
Udder Depth



Central Ligament



Teat Placement



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LEARNING LABORATORY KIT

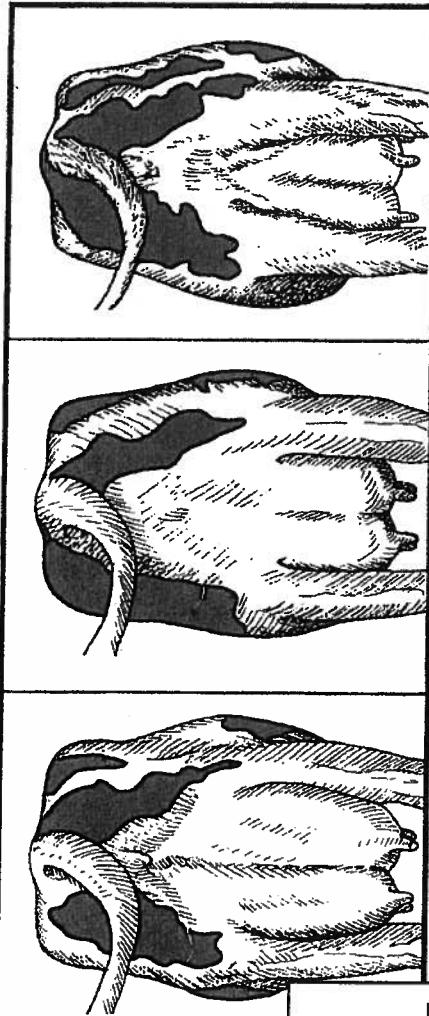


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Dairy Cattle Mammary Structures (Rear View)

Part II

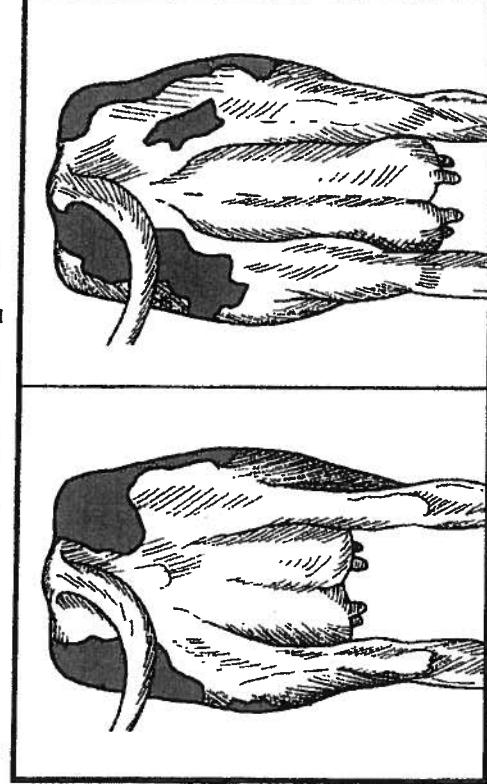
Rear Udder Attachment



IDEAL
High, Wide Udder

Low Udder

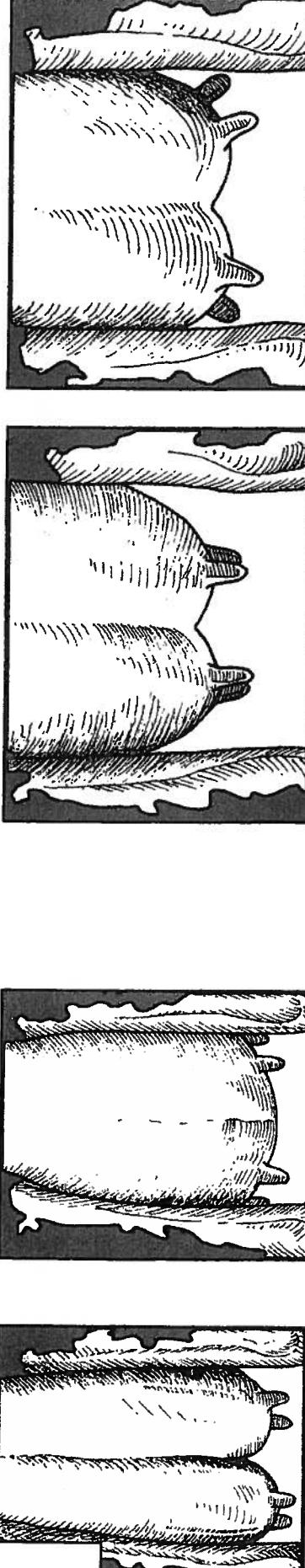
Pear-Shaped,
Narrow Udder



IDEAL, Shallow Udder

Deep Udder

Teat Placement



IDEAL, Strong

Broken Cleft

CORRECT

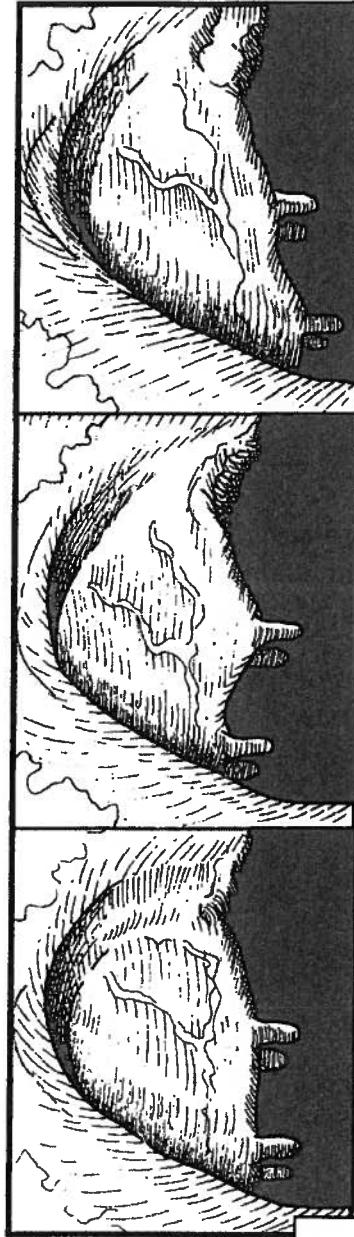


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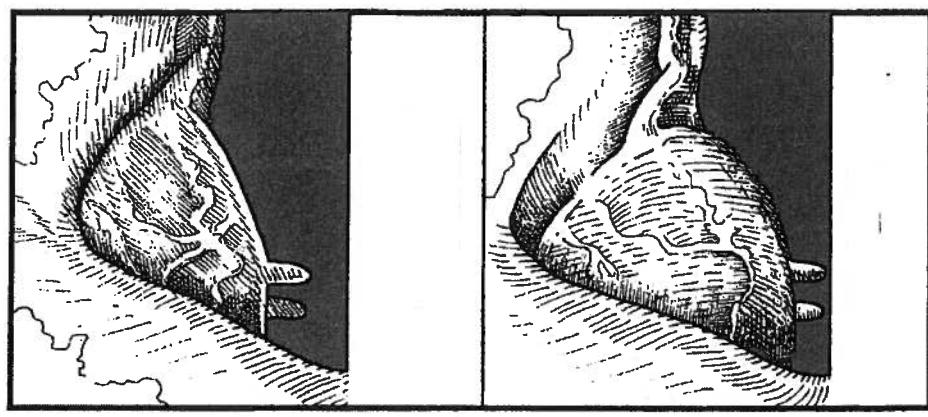
Dairy Cattle Mammary Structures (Side View)

Part I

Udder Floor



Udder Attachment



Teat Length



Dairy Skillathon

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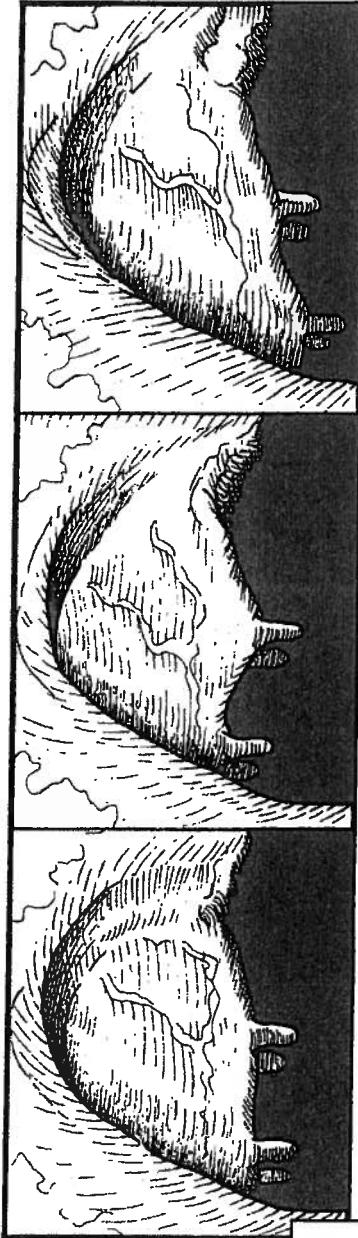


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Dairy Cattle Mammary Structures (Side View)

Part I

Udder Floor

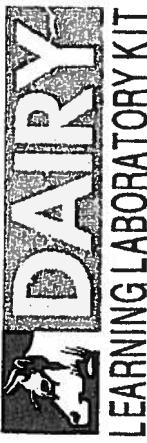


CORRECT Unbalanced Udder Floor
(Forward Tilt)

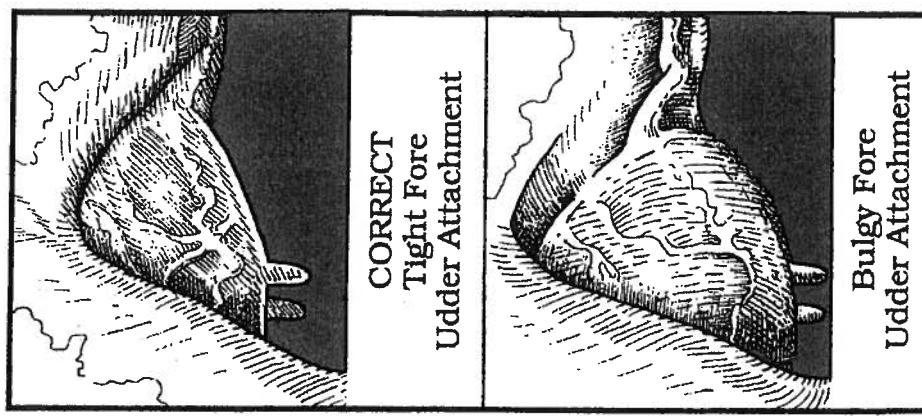
Teat Length



CORRECT Too Long



Udder Attachment



CORRECT
Tight Fore
Udder Attachment

Bulgy Fore
Udder Attachment

Answers

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Medication Insert

UDDERFUSE

(Hydrocillin Sodium)

For Intramammary Infusions

Active Ingredients: Udderfuse is an antibiotic which possesses a wide range of antimicrobial preparation activity against Gram-positive and Gram-negative organisms. It is derived biosynthetically from 6-aminopharmaceutic acid.

Each 10 ml disposable syringe contains 200 mg of hydrocillin activity in a stable oil gel.

Indications: *For Use in Lactating Cows Only*

For the Treatment of Bovine Mastitis

Udderfuse for intramammary infusion should be used at the first sign of inflammation, at the first indication of any alteration in the milk, or following culture of a susceptible pathogen from the milk.

Udderfuse for intramammary infusion has been shown to be efficacious in the treatment of mastitis in lactating cows caused by susceptible strains of *Streptococcus agalactiae* and *Staphylococcus aureus*.

Recommended Dosage: Infuse the entire contents of one 10 ml syringe into each infected quarter after the quarter has been completely milked out. Repeat once only in twelve hours for a maximum of two treatments.

Directions for Use: Milk out udder completely. Carefully scrub the teat end and orifice with 70% alcohol, using a separate swab for each teat. Allow to dry.

Insert syringe tip into the teat canal and expel the entire contents of one (1) syringe into each infected quarter. Gently withdraw the syringe and massage the quarter to distribute the suspension into the milk cistern. Do not milk out for twelve hours.

Caution: 1. Udderfuse should be administered with caution to subjects which have demonstrated some form of allergy, particularly to penicillin. Such reactions are rare. If they do occur, discontinue treatment and consult your veterinarian. 2. If definite improvement is not noted **48 hours** after last treatment, consult your veterinarian because causal organisms should be further investigated. 3. Do not insert contents of syringe if protective cap is broken or damaged. 4. Store at room temperature: 59° to 86° F; avoid excessive heat.

Warning: Milk that has been taken from animals during treatment and for 96 hours (8 milkings) after the last treatment must not be used for food. 2. Treated animals must not be slaughtered for food until 4 days after the last treatment. 3. Administration of more than prescribed dose may lead to residue in milk for more than 96 hours.

Supply: Udderfuse is available in 10 ml syringes, and cartons containing twelve syringes.



Answers

Medication Insert

Name of Drug

UDDERFUSE

(Hydrocillin Sodium)

Active Ingredients

For Intramammary Infusions

Active Ingredients: Udderfuse is an antibiotic which possesses a wide range of antimicrobial preparation activity against Gram-positive and Gram-negative organisms. It is derived biosynthetically from 6-aminopharmaceutic acid.

Approved

Uses

Species and
Animal Class

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Route of

Administration

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Cautions
and Warnings

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Storage

Requirements

Sizes
Available

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Withholding Times

Supply: Udderfuse is available in 10 ml syringes, and cartons containing twelve syringes.



Medication Label

UDDERFUSE

(hydrocillin sodium)

for Intramammary Infusion of LACTATING COWS ONLY

Each 10 ml syringe contains 200 mg of hydrocillin
active as hydrocillin sodium

Read Package Insert

Store at room temperature 59° to 86° F

Usual Dosage: One syringe per affected quarter each 12 hours for a maximum of 2 treatments

Warning:

- 1) Milk that has been taken from animals during treatment and for 96 hours (8 milkings) after the last treatment must not be used as food.
- 2) Treated animals must not be slaughtered for food until 4 days after the last treatment.
- 3) Administration of more than the prescribed dose may lead to residue of antibiotic in milk longer than 96 hours.



Net Contents: 10 ml

Distributed by

USA Animal Health, Inc.



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Medication Label

Name of Drug _____

UDDERFUSE

(hydrocillin sodium) _____ Active Ingredients

for Intramammary Infusion of LACTATING COWS ONLY

Each 10 ml syringe contains 200 mg of hydrocillin active as hydrocillin sodium

Read Package Insert

Storage _____ Store at room temperature 59° to 86° F

Usual Dosage: One syringe per affected quarter each 12 hours for a maximum of 2 treatments

Cautions and Warnings

Warning:

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Quantity of Contents

Net Contents: 10 ml _____

Distributed by

USA Animal Health, Inc. _____

Name of Distributor



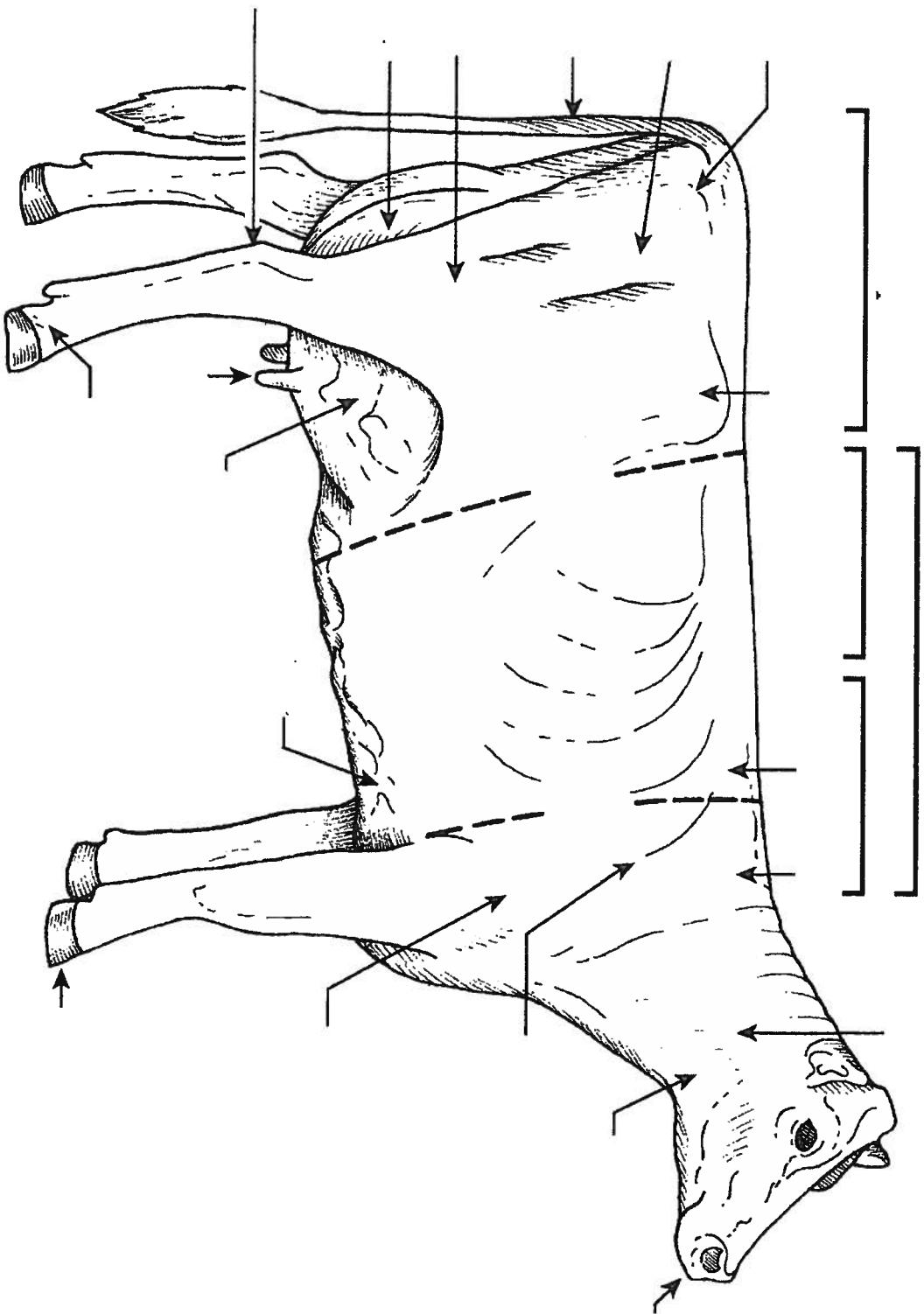
Dairy Skillathon



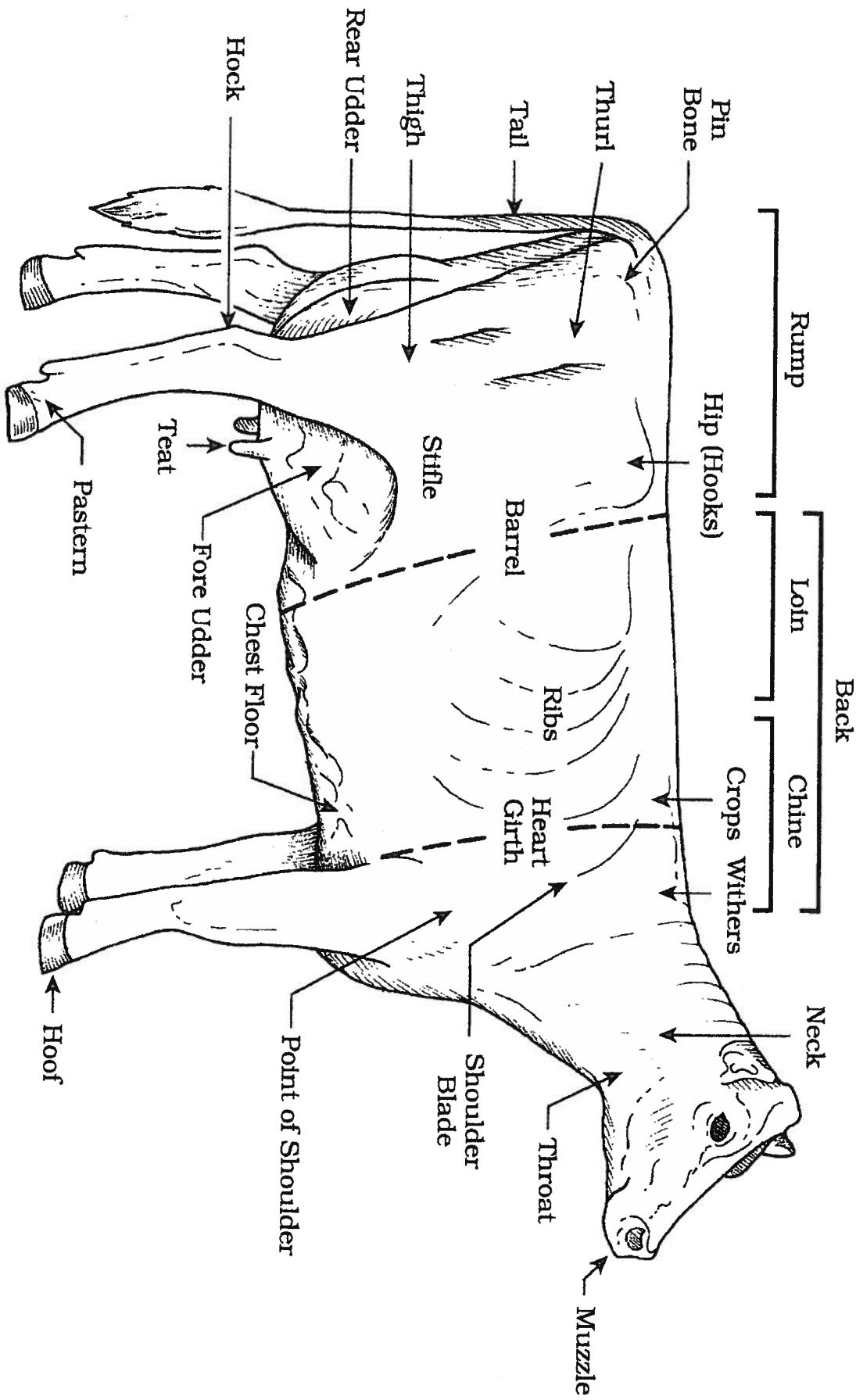
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Parts of a Dairy Cow



Parts of a Dairy Cow



Answers



Dairy
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