

2021 NYS Regional 4-H Beginner Dairy Bowl Contest

Beginner Packet 1, Phase A

1) What is the term for the period that a cow is in milk?

Lactation

2) What does the acronym SCC stand for regarding milk quality?

Somatic Cell Count

3) What is a group of cows called?

A herd

4) In reproduction, what do the letters A.I. stand for?

Artificial Insemination

Beginner Packet 1, Phase B

1) Name two methods commonly used to identify dairy animals.

Ear tag

Tattoo

Freeze branding

2) Name three parts of a dairy cow's mammary system.

Teats

Rear Udder

Fore Udder

Milk Veins

Rear Udder Attachment

Fore Udder Attachment

Milk Wells

Median Suspensory Ligament

3) Name the six major breeds of dairy cattle.

Brown Swiss

Jersey

Holstein

Milking Shorthorn

Guernsey

Ayrshire

4) Name the four stomach compartments of a cow.

Rumen

Reticulum

Omasum

Abomasum

Beginner Packet 1, Phase C

1) *What is used to freeze and store semen?*

Liquid nitrogen

2) *What parent determines the sex of a calf?*

Sire or bull

3) What does a breach birth mean?

A calf that is delivered backwards

4) *Which direction do you lead dairy animals in the show ring?*

Clockwise

5) What is the common term for dystocia?

Difficulty calving

6) What is the food called that a cow regurgitates and re-chews?

Cud

7) *What is the name for a Doctor of Animals?*

Veterinarian

8) What is an infection of the udder called?

Mastitis

9) Where is the World Dairy Expo held each year?

Madison, WI

10) In months, what is the ideal age for a heifer to have her first calf?

22 – 24 months

11) What is a term for a sterile heifer born twin to a bull?

Freemartin

12) *What is the term for taking a calf off milk as the main source of nutrition?*

Weaning

13) What does it mean if a calf is born polled?

Born without horns

14) What is the scientific name for cattle?

Bovine

15) Regarding nutrition, what do the letters TMR stand for?

Total mixed ration

16) The storage unit used to hold milk on the farm is called what?

Bulk tank

Beginner Packet 1, Bonus Questions

1) Name three things that a judge looks for in a fitting and showmanship class.

- Animal's condition
- Cleanliness
- Clipping
- Grooming
- Appearance of exhibitor
- Leading the animal
- Posing the animal
- Showing the animal to the best advantage
- Poise, alertness & attitude of the showman

2) Name three heat detectors aids used to help identify cows that are difficult to catch in heat.

- Chalk markers
- Tail paint
- Kamar detectors
- Pedometers
- Rump mounted patches
- Solution monitors

3) Name three options for storage of excess colostrum.

- Freezing
- Refrigerate
- Ferment
- Add preservation acid

4) Name three types of silage storage systems.

- Upright silos
- Harvestore units
- Bunk silos

Trench silos

Bags (baggers)

Wrappers (single wrapped bags)

Beginner Packet 2, Phase A

1) True or False: The udder is worth 40 points on the PDCA Dairy Unified Scorecard.

True

2) True or False: Babcock invented the pasteurization process.

False (Correct Answer: Louis Pasteur)

3) True or False: A cow has 48 teeth.

False (Correct Answer: 32 teeth)

4) True or False: Ringworm affects the skin of a dairy cow?

True

Beginner Packet 2, Phase B

1) Name five different types of dairy products.

Sour cream

Yogurt

Butter

Cream cheese

Ice cream

Fluid milk

Cheese (multiple varieties acceptable)

Powdered Milk

Buttermilk

2) Name three different types of non-permanent cow identifications.

Neck straps

Ear tags

Ankle straps

Crayons

External electronic devices

Brisket tags

3) Name three ways to give a cow an injection.

Under the skin (subcutaneous)

Into the muscle (intramuscular)

In the vein (intravenous)

4) Spell the dairy breed G-U-E-R-N-S-E-Y.

Beginner Packet 2, Phase C

- 1) What is another name for the reticulum?
Honeycomb
- 2) *What is the selling of an unwanted or sick animal?*
Culling
- 3) *What is the meat from a young calf called?*
Veal
- 4) *What season are lice most prevalent?*
Winter
- 5) What dairy breed makes up the largest proportion of the US cow population?
Holstein
- 6) How many quarts are in gallon of milk?
4 quarts
- 7) What is the largest cost of producing milk on most dairies?
Feed
- 8) Where would you find declaws on a dairy cow's body?
Foot
- 9) What is the number one cause of death in calves?
Scours
- 10) What is the name for the brush of hair at the end of a cow's tail?
The switch
- 11) Pinkeye is spread by what common pest?
Face fly
- 12) What is the primary sugar found in milk?
Lactose
- 13) What does it mean when a cow has 'freshened'?
She has just given birth
- 14) How many riders are allowed on a tractor?
One person per seat in the cab
- 15) Churning is the process that turns milk into what?

Butter

16) Grains usually come from which part of the plant?

Seeds

Beginner Packet 2, Bonus Questions

1) What are three signs that a cow is in heat?

Restlessness

Bellowing

Following/smelling another cow

Mounting other cows

Standing to be mounted

Roughed up tail head and pins

Discharge of clear mucous from the vulva

Vulva becomes red and swollen

2) What are the three colors that a Milking Shorthorn can be?

Red

White

Roan

3) Name three metabolic diseases that may affect a dairy cow.

Displaces abomasum

Subacute and acute rumen Acidosis

Ketosis

Laminitis

Milk fever

Retained placenta

4) Name three symptoms of a cow with clinical mastitis.

Flakes

Clots

Hot quarter

Stringy milk

Watery milk

Swollen quarter

Presence of blood

Beginner Packet 3, Phase A

- 1) True or False: The term 'blind spot' refers to a cow's personal space.
False (Correct Answer: Flight zone)
- 2) True or False: If a cow is said to be cystic, she has difficulty becoming pregnant.
True
- 3) True or False: The condition where excess fluid collects in the udder is called mucus.
False (Correct Answer: Udder Edema)
- 4) True or False: The most effective way to prevent rabies in cattle is through vaccination.
True

Beginner Packet 3, Phase B

1) What are two types of parasites that can affect an animal?

External and Internal

2) Name four external parts of a dairy cow's head.

Poll

Eyes

Muzzle

Ears

Jaw

Forehead

Nostril

3) What are three critical factors in colostrum management?

Quantity, Quality, Timing, Cleanliness

4) Name four signs or symptoms a dairy calf might be sick.

Rough or dry hair coat

Runny nose

Red or dry nose/mouth area

Dull and sunken eyes

Off color, dry, hard, runny manure

Droopy ears

Lethargic

Fever or below normal temperature

Lack of appetite

Cough

Beginner Packet 3, Phase C

- 1) What vitamin do cows obtain when they are exposed to sunlight?
Vitamin D
- 2) How much water does the average dairy cow drink daily?
30-50 gallons
- 3) At a cattle show, what color clothing is best and preferred for a showmanship class?
White
- 4) What month is National Grilled Cheese Month?
April
- 5) Milk is approximately what percent water?
87%
- 6) What is the name for the membranes of pregnancy that pass out of the cow after she gives birth to a calf?
Afterbirth or Placenta
- 7) Regarding milk quality, what do the letters CMT stand for?
California Mastitis Test
- 8) What is the most popular cheese on pizza?
Mozzarella
- 9) What does pasteurization do to the milk?
Heats the milk to a specific temperature which kills the microorganisms that may cause disease or cause milk to spoil
- 10) Why wouldn't you use the same shovel for handling both feed and manure?
To prevent contaminating the feed
- 11) What is the name for an infection of a cow's uterus?
Metritis
- 12) What is the word for a sale where animals are sold to the highest bidder?
An auction
- 13) What mineral is found in the largest quantity in milk?
Calcium
- 14) What term describes mating two purebred animals of different breeds?

Cross breeding

15)What is the normal delivery position when a calf is born?

Front feet first and then the head

16)How many quarters are in a cow's udder?

4 quarters

Beginner Packet 3, Bonus Questions

1) Name three mastitis related costs.

Reduced milk production

Discarded milk

Early cow replacement costs (premature culling)

Reduced cow sale value

Drugs/medicine

Veterinarian

Labor

2) Give the common name for the three different stages of a female dairy animal from birth through milk production.

Calf, Heifer, Cow

3) Name three signs that the cow is ready to have her calf.

Full udder

Restlessness

Enlarged vulva

Mucus discharge

Relaxation of ligaments at tail head

4) Name three reasons why every milking quarter is treated at dry off.

Higher concentration of antibiotics (than lactating products)

Antibiotics remain longer

No discarding of saleable milk

(prevention) Lower risk of mastitis in oncoming lactation

Beginner Packet 4, Phase A

1) What is the fluid by-product of cheese making?

Whey

2) In what stomach compartment does hardware disease occur?

Reticulum

3) If a farmer describes his cow as 'over conditioned', what does he mean?

She is too fat (obese)

4) When looking at a dairy animal's pedigree, what is the term used for an animal's father?

Sire

Beginner Packet 4, Phase B

1) Name three common materials used as bedding for dairy cattle.

Sand

Straw

Shavings

Sawdust

Recycled manure solids

Newspaper

Corn stalks (baled corn stalks)

2) Name four organ systems found in the cow's body.

Circulatory

Respiratory

Nervous

Digestive

Reproductive

Skeletal

Muscular

Endocrine

Integumentary

3) Name the two main crops that are grown to feed cows in the United States.

Corn & Alfalfa

4) What do the 4 H's of 4-H stand for?

Head

Heart

Hands

Health

Beginner Packet 4, Phase C

- 1) What position do calves drink from a bottle best?
Standing up
- 2) Where did the Brown Swiss breed originate?
Switzerland
- 3) What is the tube in an animal that connects the mouth to the stomach?
Esophagus
- 4) BCS is a method of evaluating an animal's weight on a 1-5 scale, what does BCS stand for?
Body Condition Score
- 5) After milking, what is the main reason to dip cow's teats?
Prevent or reduce the rate of new infections of mastitis
- 6) What stomach compartment is known as the 'manyplies' and functions to absorb water?
Omasum
- 7) What is the name of the hormone that allows a cow to 'let her milk down' or to start milk flow?
Oxytocin
- 8) What is the name for the small finger like projections in the small intestine?
Villi
- 9) A newborn calf's navel must be dipped with what percent iodine?
7%
- 10) What does it mean if a feed is palatable to a dairy cow?
The animal likes the taste and will eat it
- 11) In a newborn calf, what stomach compartment takes up the most space?
Abomasum
- 12) What is the condition called when a cow's rumen is filled with gas?
Bloat
- 13) How many months is a cow pregnant?
9 months
- 14) In what year did the first cows arrive at the Jamestown Colony?

1611

15)What breed of dairy cattle is known for its milk having a golden color?

Guernsey

16)Regarding nutrition, what do the initials ADF stand for?

Acid-Detergent Fiber, cellulose, and lignin

Beginner Packet 4, Bonus Questions

1) Name three causes of scours in calves.

Bacteria absorption not prevented due to:

Inadequate colostrum

Poor quality colostrum

Unsanitary calving conditions

Overfeeding

Poor quality milk replacer

Overcrowding

Inadequate ventilation

2) Name three of the three types of organisms that live in the rumen and digest feed.

Bacteria

Fungi

Protozoa

3) A cows day consists of five primary activities, name three of them.

Eating

Resting/laying down

Standing

Milking

Drinking

4) Name three colors that a Holstein cow can be.

Red

White

Black

Beginner Packet 5, Phase A

1) What does the "Real Seal" indicate?

The product it appears on is a genuine dairy product

2) What is the name for milk that has not been processed?

Raw Milk

3) What is the indigestible portion of a plant called?

Lignin

Roughage

4) What does the acronym PDCA stand for?

Purebred Dairy Cattle Association

Beginner Packet 5, Phase B

1) Name three non-domestic animals that can cause an infection of rabies in cattle.

Bat

Bobcat

Coyote

Fox

Raccoon

Skunk

2) Name two ways you can prevent pinkeye.

Fly control

Vaccination

Clipping pastures to prevent seed-head development

3) Name two types of organisms that can cause pneumonia.

Bacteria

Molds

Parasites

Viruses

Yeasts

4) Give two adjectives that are typically used to describe an ideal rear udder attachment.

High and wide

Beginner Packet 5, Phase C

1) What are the building blocks of protein called?

Amino Acids

2) What does it mean if a dairy cow is 'open'?

She is not pregnant

3) What red liquid flows through the cow's milk vein?

Blood

4) What is the name of the digested feed material found in the small intestine?

Chyme

5) If a cow is laying down and chewing her cud, these are good signs that she is what?

Comfortable

6) What would a lagoon be used for on a farm?

Manure storage

7) What is the recommended number of servings of dairy products per day for the average adult?

3 servings

8) What is the name of the paper that accompanies a purebred animal and certifies his or her parentage?

Pedigree

9) Where did the Jersey breed originate?

Isle of Jersey

10) The time that a cow is pregnant and not producing milk is 45-60 days long. What is this time period called?

Dry period

11) Nature's "most nearly perfect food" is what?

Milk

12) What can be placed into the reticulum of a cow to prevent hardware disease?

Magnet

13) When clipping a calf for the show, what direction do you clip compared to hair growth?

Opposite hair growth

14) *How many knees does a cow have?*

Two knees

15) What are plants called that are seeded each year and whose growth are completed in one crop year?

Annuals

16) What units are vitamins measured in?

International units

Beginner Packet 5, Bonus Questions

1) Name three ways to cool cows on hot summer days.

Shade

Access to water

Air exchange (fans)

Sprinklers

Air movement

2) Name three methods to reduce soil erosion.

Contour cropping

Cover crop

Grass waterways

Reduced tillage

Soil seeding

Strip cropping

Terracing

Wind breaks

3) Name three systems of calf housing.

Calf hutch

Pens on the floor

Counter slope system

Elevated stalls

Cold calf housing system

4) Name three factors that affect a dairy cow's environment.

Climate

Herd size

Season of the year

Housing type

Management of cows and the facility

Frequency and duration of confinement housing

Beginner Packet 6, Phase A

1) True or False: You only have to dip the cow's teats sometimes after milking her.

False (Correct Answer: You should always post dip a cow)

2) True or False: Colostrum can be stored frozen for up to ten years and still be high quality.

False (Correct Answer: Frozen colostrum may be safely stored for 1 year)

3) True or False: The Holstein breed originated in the Netherlands and Germany.

True

4) True or False: Average Daily Gain or ADG is a significant factor in monitoring growth rates in dairy heifers.

True

Beginner Packet 6, Phase B

1) Name two advantages of calf hutches.

They are easily moved

They provide better ventilation

They prevent disease from spreading from one calf to another (bio security)

Affordability

2) Chobani is an American dairy processing company that has specialized in Greek yogurt. Chobani has two processing plants which are located in what two American states?

New York

Idaho

3) Name the two primary gases that are produced in the rumen.

Methane & Carbon dioxide

4) Name four flavors of ice cream.

Vanilla

Chocolate

Strawberry

Raspberry

Mint Chip

(Any others at judge's discretion)

Beginner Packet 6, Phase C

- 1) What two colors are on a slow-moving vehicle sign?
Orange and red
- 2) Soybeans are usually added to a cow's diet to provide what nutrient?
Protein
- 3) What is the technical name for the act of calving or freshening?
Parturition
- 4) On a cow's production record, what would 3x indicate?
She is milked 3 times a day
- 5) VFA's are a product of carbohydrate fermentation and act as an important source of energy for the cow. What does the acronym VFA stand for?
Volatile Fatty Acids
- 6) What is known as the gold standard for bedding?
Sand
- 7) What term do we use to describe an animal that only eats plants?
Herbivore
- 8) What part of the body does mastitis causing bacteria enter the cow's udder?
The teat canal
- 9) How often should your bulk tank be washed and sanitized?
Every time it is emptied
- 10) Where did the Milking Shorthorn originate?
England
- 11) What is the highest that a Holstein cow has ever been classified?
97 points
- 12) What is the term for large round bales of silage that are wrapped in plastic?
Baleage
- 13) A major source of energy for the dairy cow are fats and what else?
Carbohydrates
- 14) Regarding milk management, what do the letter BTSCC stand for?
Bulk Tank Somatic Cell Count
- 15) Where is the median suspensory ligament found on a dairy cow?

Udder

16)What is the name for the part of the milking system that causes the alternate vacuum pressure between the teat cup shell and liner?

Pulsator

Beginner Packet 6, Bonus Questions

1) Name three sources of on-farm contamination of milk?

Air (dust)

Dirt (outside the cow)

Feed

Interior of udder

Antibiotics

Equipment

Insects

Water

2) Name three common off flavors in milk.

Acid

Bitter

Cooked

Feed

Fermented

Foreign

Fruity

Lacks freshness

Oxidized

Rancid

Salty

Sour

3) Name three of the five digestive system function in a dairy cow.

Food intake

Storage

Digestion

Absorption

Elimination of waste

4) Name three qualities that Brown Swiss cattle are known for.

High protein to fat ratio

Longevity

Sound feet and legs

Having few health problems

Beginner Packet 7, Phase A

1) True or False: Homogenization is the process of breaking up fat globules in milk.

True

2) True or False: A sour flavor in milk occurs when there are very small numbers of bacteria present in the milk.

False (Correct Answer: When there are large numbers of bacteria present)

3) True or False: The process where the uterus returns to its normal size is called Corpus Luteum.

False (Correct Answer: Involution)

4) True or False: A pedigree is a record of a cow's ancestry, like a family tree.

True

Beginner Packet 7, Phase B

1) Name two diseases with a color in their name.

Black leg

Blue tongue

Pinkeye

Red nose

Red water

White heifer disease

White muscle disease

2) Macro minerals are required in large quantities for dairy cows and are often fed in a cow's ration. Name two macro minerals.

Calcium

Magnesium

Potassium

Sulfur

Chlorine

Phosphorus

Sodium

3) Name two of the three volatile fatty acids produced in the rumen.

Acetic acid (acetate)

Butyric acid (butyrate)

Propionic acid (propionate)

4) Name two methods of dehorning.

Paste

Cutting or Gouging

Electric iron

Butane iron

Beginner Packet 7, Phase C

- 1) What does a pH of 4 indicate?
Acidic condition
- 2) What is the term for extra teats?
Supernumerary
- 3) Regarding nutrition, what do the letters CF stand for?
Crude Fiber
- 4) What is the name for plants that have a life cycle of more than two years?
Perennials
- 5) What substance in a cow's mouth acts as a natural buffer?
Saliva
- 6) What is dehydration?
Lack of water
- 7) When doing an embryo transfer, the cow that the embryos come from is called what?
Donor
- 8) What month is National Dairy Month?
June
- 9) What does an animal do with excess energy from its diet?
Stores it as fat
- 10) What happens to a cow's milk production as her somatic cell count increases?
Production decreases
- 11) In what stomach compartment does fermentation take place?
Rumen
- 12) What is a castrated bull called?
Steer
- 13) What is the term used on an animal's pedigree that refers to the mother?
Dam
- 14) What is the condition called when a cow has a body temperature of 103 degrees Fahrenheit or more?
Fever

15) If a cow has interdigital foot infection, where is it specifically located?

Between the toes

16) For dairy cows, what foodstuff is relatively high in fiber content and is made up of the leaves and stems of plants?

Roughage or forage

Beginner Packet 7, Bonus Questions

- 1)** Microminerals are minerals that are required in small amounts in a dairy cow's ration. Name three microminerals.

Cobalt

Iodine

Manganese

Zinc

Copper

Iron

Selenium

Chromium

- 2)** Name three traits that are evaluated as part of Frame on the PDCA scorecard.

Rump

Front end

Back/loin

Stature

Breed characteristics

- 3)** Name three of the three ways that a pathogen can gain entry into a newborn calf's body.

Nose

Mouth

navel

- 4)** Name three fat-soluble vitamins.

Vitamin A

Vitamin D

Vitamin E

Vitamin K

Beginner Packet 8, Phase A

1) True or False: Colostrum should be fed to a calf a 50°F.

False (Correct Answer: 100°F)

2) True or False: It is possible for a dry cow to get mastitis.

True

3) True or False: The technical name for warts is Bovine Papilloma Virus.

True

4) True or False: A gallon of milk weighs 20 pounds.

False (Correct Answer: 8.6 pounds)

Beginner Packet 8, Phase B

- 1) Name three important factors to consider when choosing a dairy calf as a project animal.

Age, breed, health, pedigree, conformation, cost/price, housing

- 2) Name three factors that can affect the quality of hay.

The kind of hay

Fertilizers

Age of maturity when it is cut and harvested

How well it is dried after cutting and before harvesting

Storage

Handling

- 3) Name four pieces of information that you would find on the nutrition label of a gallon of milk.

Serving size

Servings per container

Ingredients

Calories

Fat content

Sodium

Cholesterol

Carbs

Protein

Where it was processed

Size of container

- 4) Name two dairy products made from Class I milk.

Whole milk

Low fat milk

Skim milk

Flavored milk drinks

Buttermilk

Milk shakes

Ice cream mixes

Beginner Packet 8, Phase C

1) What substance is often added to dairy cattle feed to improve taste and reduce dustiness?

Molasses

2) How many chambers are in a cow's heart?

4

3) MUN shows how well nitrogen and fermentable carbohydrates are balanced in the ration. What do the letters MUN stand for?

Milk Urea Nitrogen

4) How many pounds of whole milk does it take to make a pound of cheese?

10 pounds

5) What does mastication mean?

The act of chewing

6) What breed of dairy cattle is the smallest?

Jersey

7) What is the legal limit for somatic cells in milk?

750,000 cells/ml

8) What is located between the dewclaw and the hoof of a dairy cow?

Pastern

9) What is another name for eructation?

Belching

10) How long does it normally take for feed to pass through the digestive tract of a ruminant?

4 days

11) What is the highest grade of butter sold in the U.S.?

U.S. Grade AA

12) Regarding animal welfare what does the acronym PETA stand for?

People for the Ethical Treatment of Animals

13) Which bodily system of the animal is affected by shipping fever?

Respiratory

14) What is the term used to refer to the height of a calf or cow at the withers and hips?

Stature

15) Barns that have fans on one end for the purpose of drawing air across the cows from the opposite end are described as what type of ventilation?

Tunnel ventilation

16) What is the name of the most valuable acid produced during the ensiling of feed?

Lactic acid

Beginner Packet 8, Bonus Questions

1) Name three functions of saliva.

Moisten food

Lubricate food

Act as a buffer

Provide fluid base for nutrients

Provide environment for bacterial growth

2) Name three pieces of information you would find on your animal's registration paper.

Name

Sire

Dam

Date of Birth

Owner

Breeder

Grandsire

Granddam

Sex

Reg. Number

3) Name three of the four classification categories of cheese.

Soft

Semi-soft

Hard

Very hard

4) Name three reasons why cattle should be dehorned?

Prevent injury to other animals

Prevent injury to other people

Space: animals with horns require more space to eat, etc.

Horned animals will have difficulty fitting heads into headlocks

Beginner – Extra Toss-up Questions

- 1) Where do heel flies lay their eggs on a dairy animal?
On the lower legs
- 2) In what part of the cow's digestive system do fiber digesting microbes live?
Rumen
- 3) In inches, what is the PDCA maximum allowable limit for topline hair in the show ring?
1 inch
- 4) High concentrations of what hormone are necessary to maintain pregnancy?
Progesterone
- 5) What did Dr. Harvey Thatcher invent?
The milk bottle
- 6) What is the loose skin of the underside of the neck called?
Dewlap
- 7) Snaplage is produced from what plant?
Corn
- 8) Who is the current United States Secretary of Agriculture?
Tom Vilsack
- 9) What percentage of milk is digestible?
96-98%
- 10) What vitamin in milk helps maintain normal vision and kin?
Vitamin A
- 11) What does a pH of 8 indicate?
Alkaline
- 12) On average, cows have a flight zone of how many feet?
5 feet
- 13) In days, what is the standard length of a dairy cow's lactation?
305 days
- 14) What is meant by the term grade dairy cow?
An animal not registered with any breed association
- 15) What fast food chain uses the most milk in the U.S.?

McDonald's