

## **2017 NYS District Novice 4-H Dairy Quiz Bowl Contest**

### **Novice Packet 1, Phase A**

1) What dairy breed makes up about 90% of the US cow population?

- Holstein

2) Which of the following is the most desirable acid produced during forage fermentation? A) Butyric acid, B) Lactic acid, C) Hydrochloric acid, D) Propionic acid

- B- Lactic acid

3) A group of cows is called what?

- A Herd

4) How many quarts are in a gallon of milk?

- 4 quarts

## Novice Packet 1, Phase B

1) Name the four compartments of the mature dairy cows' stomach.

- Reticulum
- Rumen
- Abomasum
- Omasum

2) What are three critical factors in colostrum management?

- Quantity
- Quality
- Timing
- Cleanliness

3) 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

4) Name the 6 major breeds of dairy cows.

- Ayrshire
- Brown Swiss
- Jersey
- Milking Shorthorn
- Holstein
- Guernsey

## Novice Packet 1, Phase C

- 1) What is the process of turning cream into butter called?
  - Churning
  
- 2) What is it called when a farmer removes a cow from the herd?
  - Culling
  
- 3) In relation to milk quality, what does the acronym SCC stand for?
  - Somatic cell count
  
- 4) What vitamin do cows obtain when they are exposed to sunlight?
  - Vitamin D
  
- 5) What is the term describing a sterile heifer born twin to a bull?
  - A freemartin
  
- 6) What is the smallest breed of dairy cows?
  - Jersey
  
- 7) What is the largest cost of producing milk on most dairies?
  - Feed
  
- 8) What is the number one cause of death in calves?
  - Scours
  
- 9) How many teeth does a mature dairy cow have?
  - 32

10) Milk is approximately what percent water?

- 87%

11) How many compartments are there in a cow's stomach?

- 4

12) What is the name of the first milk that is secreted within the first 2-3 days after calving?

- Colostrum

13) When showing a heifer, which leg should be placed farther back when setting her up?

- The rear leg nearest the judge

14) In regards to reproduction, what does the acronym AI stand for?

- Artificial Insemination

15) What is the name for the condition when a calf is born without horns or horn buttons?

- Polled

16) What is the name for the brush of hair at the end of a cow's tail?

- The switch

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Dairy Quiz Bowl Contest**

**Novice Packet 2, Phase A**

1) True or False: Protozoal Organisms are often treated with antibiotics?

- False

2) True or False: Calves need four times as much water intake as calf starter?

- True

3) True or False: It is possible for a dry cow to get mastitis?

- True

4) True or False: Alfalfa is a grass?

- False

## **Novice Packet 2, Phase B**

1) Name 2 methods of cattle identification.

- Photo
- Sketch
- Tattoo
- Ear Tag

2) Name 4 organ systems found in the cow's body.

- Circulatory
- Respiratory
- Nervous
- Digestive
- Reproductive
- Skeletal
- Muscular
- Endocrine
- Integumentary

3) Name 3 symptoms of clinical mastitis.

- Flakes
- Clots
- Hot quarter
- Stingy milk
- Watery milk
- Swollen quarter
- Presence of blood

4) Name 3 important factors to consider when choosing a dairy calf as a project animal.

- Age
- Breed
- Health
- Pedigree
- Conformation
- Cost/price
- Housing

## **Novice Packet 2, Phase C**

1) What portion of the feed is left after all of the water has been removed?

- Dry Matter

2) Which month of the year is known as “National Dairy Month”?

- June

3) What is the name for the condition in which a cow's teats point too far outwards?

- Strutting

4) What does the acronym TMR stand for in regards to dairy cattle nutrition?

- Total Mixed Ration

5) What is the name for an infection of a cow's uterus?

- Metritis

6) What federal class of milk is fluid milk marketed in?

- Class 1

7) How many animals are in a class for dairy judging?

- 4

8) What is the act of transitioning a calf off of milk called?

- Weaning

9) The acronym for the triangular sign found on the back of a hay wagon or silage wagon is SMV, what does SMV stand for?

- Slow Moving Vehicle

10) How often should a bulk tank be washed?

- Every time it is empty

11) What does the acronym USDA stand for?

- United States Department of Agriculture

12) Where did the Jersey Breed originate?

- Isle of Jersey

13) What amount of time should cows spend lying down each day?

- 8-16 hours

14) How many points are allotted to Dairy Strength on the PDCA Dairy Cow Unified Scorecard?

- 25

15) What is frozen semen stored in?

- Straw or French Straw

16) What is the primary sugar found in milk?

- Lactose

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**Novice Packet 3, Phase A**

1) Where in the cow does Hardware Disease occur?

- Reticulum

2) What is an infection of the udder called?

- Mastitis

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

- She is too fat

4) What is dystocia?

- Difficult calving

### **Novice Packet 3, Phase B**

1) Name 3 common materials used as bedding for dairy cattle.

- Sand
- Straw
- Shavings
- Sawdust
- Recycled manure solids
- Newspaper

2) List three ways silage can be stored.

- Bunker silo
- Trench Silo
- Upright/Tower silo
- Plastic/Ag bag
- Oxygen limiting silo

3) Name 3 parts of the milking machine

- Shell
- Inflation
- Air tubes
- Claw
- Milk tubes
- Pulsator

4) Name 2 metabolic diseases that may affect the dairy cow.

- Displaced abomasum (DA)
- Ketosis
- Laminitis
- Milk fever
- Retained placenta (RP)

### Novice Packet 3, Phase C

- 1) In degrees Fahrenheit, what is the temperature of liquid nitrogen, which is the substance used to store frozen semen?
  - -320 degrees Fahrenheit
  
- 2) On average, a dairy cow will drink how many gallons of water each day?
  - 30-50 gallons
  
- 3) A deficiency in either selenium or Vitamin E can lead to what disease?
  - White Muscle
  
- 4) When showing, what direction should you walk your animal around the ring?
  - Clockwise
  
- 5) When a cow swallows her food, and regurgitates it to chew it again, what is the food called?
  - Cud
  
- 6) When looking at a dairy animal's pedigree, what is the term used for an animal's father?
  - Sire
  
- 7) What compartment of a cow's stomach is called the honey comb?
  - Reticulum
  
- 8) On average, cows have a flight zone of how many feet?
  - 5 feet
  
- 9) Where in the body is calcium stored?
  - Bones or teeth

10) Frozen colostrum can be safely kept in storage for how long?

- 1 year

11) Why would you groove floors in a free stall?

- To prevent slipping

12) What is the name of the tool used to give a cow a pill or administer a magnet?

- Balling gun

13) Milk production is lowest during what season?

- Summer

14) The largest dairy cooperative in the United States is DFA, what does DFA stand for?

- Dairy Farmers of America

15) In what year was the milk bottle invented?

- 1884

16) What is another name for the Corpus Luteum?

- Yellow body

**2017 NYS District Novice 4-H  
Dairy Quiz Bowl Contest**

**Novice Packet 4, Phase A**

1) Which has more calories: an 8oz. glass of skim milk, or an 8oz. glass of fat free milk?

- They are the same

2) Where do heel flies lay their eggs on a dairy animal?

On the lower leg

3) True or False: Dairy cows are ruminants?

- True

4) Do dairy cows prefer hotter or cooler climates?

- Cooler

## **Novice Packet 4, Phase B**

1) Name 3 reasons why a dairy cow may get culled, or removed from the herd.

- Low milk production
- Mastitis
- Reproduction
- Udder
- Feet and legs
- Disease
- Injury
- Disposition
- Age
- Unhealthy

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

- Corn
- Alfalfa

3) What are the four classes of cheeses?

- Soft
- Semi-soft
- Hard
- Very hard

4) Name 3 factors that affect how much water a calf will drink.

- Growth/body size
- Air temperature
- Calf health
- Feed intake
- Weather

## Novice Packet 4, Phase C

- 1) What is the process of heating milk up and cooling it down to kill bacteria?
  - Pasteurization
  
- 2) When evaluating udder depth, this part of the cow is used as the reference point.
  - Hock
  
- 3) A footbath should be how many inches deep in order to work properly?
  - 10 inches
  
- 4) What is known as a record of ancestry?
  - Pedigree
  
- 5) When making cheese, what is the solid product after the whey has been removed called?
  - Curd(s)
  
- 6) What percentage of milk is composed of solids?
  - 13%
  
- 7) An excess of calcium fed during the dry period can result in what metabolic disorder at freshening?
  - Milk fever
  
- 8) How many hours of light does a cow experience if she is experiences long day lighting?
  - 16-18 hours
  
- 9) What is the name used to describe the general class of chemicals which are used for weed control?
  - Herbicides

10) What is the normal length of a cow's estrous cycle?

- 21 days (+/- 3 days)

11) In what country did the Brown Swiss breed originate in?

- Switzerland

12) What is the technical name for extra teats?

- Supernumerary teats

13) What is the name of the sweet feed additive that is commonly added to grains and rations to reduce dustiness and increase palatability?

- Molasses

14) What part of the cow is worth 40 points on the PDCA Dairy Cow Unified Scorecard?

- Udder

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

- 22 to 24 months

16) What is the general name for all animals that give birth to live young and suckle their offspring after birth?

- Mammals

**2017 NYS District Novice 4-H  
Dairy Quiz Bowl Contest**

**Novice Packet 5, Phase A**

1) What do we call it when a cow's rumen twists or floats out of place?

- Displaced abomasum (DA)

2) When describing a dairy cow, what is meant by the term "grade"?

- An animal not registered with any breed association

3) When deciding to breed a heifer, you should make your decision based on which of the following criteria: Age, feed intake or body size?

- Body size

4) Antibodies are an important part of an animal's immune system. What is the best source of antibodies for a newborn calf?

- Colostrum

## Novice Packet 5, Phase B

1) Name 3 pieces of information you can find on a cows registration paper?

- Name
- Sire
- Dam
- Date of birth
- Owner
- Breeder
- Grandsire
- Grand dam
- Sex
- Registration number

2) What are the 4 H's of 4-H?

- Head
- Heart
- Hands
- Health

3) Name 4 parts of the cow's digestive system.

- Mouth
- Esophagus
- Rumen
- Reticulum
- Omasum
- Abomasum
- Small Intestine
- Large Intestine
- Colon
- Rectum

4) Give the common name for the 3 different stages of a female dairy animal from birth to milk production.

Calf, Heifer, Cow

## Novice Packet 5, Phase C

- 1) How much does a gallon of milk weigh?
  - 8.6 lbs.
  
- 2) 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
  
- 3) What is the name of the skin disease that is caused by the Bovine Papilloma Virus?
  - Warts
  
- 4) What position do calves drink from a bottle the best?
  - Standing up
  
- 5) 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
  
- 6) After milking, what is the main reason to dip cow's teats?
  - Prevent or reduce the rate of new infections of mastitis
  
- 7) What is the name of the process in which the cow relaxes and releases the milk in the udder so it can be milked out?
  - Milk letdown
  
- 8) Lice are most troublesome during what season of the year?
  - Winter
  
- 9) At what temperature, should colostrum be when fed to calves?
  - 100 degrees Fahrenheit

10) What is the name of the medication that is put in all four of a cow's teats when she is dried off to help prevent mastitis?

- Dry cow treatment

11) Where on the cow's body would you find her dewclaws?

- Foot

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

- Between the toes

13) What happens to the nutrient value of high moisture corn with the growth of mold in it?

- Nutritive Value decreases (the feed is less palatable)

14) In cold weather, what nutrient needs to be more available to calves?

- Fat

15) What is the condition called when a cow's rumen is filled with gas?

- Bloat

16) What is the condition called when a cow has a body temperature of 103 degrees Fahrenheit or more?

- Fever

**2017 NYS District Novice 4-H  
Dairy Quiz Bowl Contest**

**Novice Packet 6, Phase A**

1) What is the term used on an animal's pedigree for that animal's mother?

- Dam

2) What is the name of a type of barn and stall in which the animal is free to come and go?

- Freestall

3) What is a castrated bull called?

- Steer

4) What term describes mating two purebred animals of different breeds?

- Crossbreed

## Novice Packet 6, Phase B

1) What are the two primary gases produced in the rumen during fermentation.

- Methane
- Carbon dioxide

2) Name 2 different types of milking parlors commonly used on dairies.

- Herringbone
- Perabone
- Parallel
- Rotary
- Side opening
- Flat barn

3) Name 3 ways to protect teat ends during the cold winter months.

- Clean, dry housing protected from the wind
- Well bedded stalls
- Winter teat dips
- Make sure milking systems work properly

4) Name 3 parts of a dairy cow's mammary system.

- Teats
- Rear Udder
- Fore udder
- Rear udder attachment
- Fore udder attachment
- Milk veins
- Milk wells
- Median suspensory support ligament

## **Novice Packet 6, Phase C**

- 1) What is the official state snack of New York?
  - Yogurt
  
- 2) What is known as the gold standard for bedding?
  - Sand
  
- 3) In days, what is the standard length of a dairy cow's lactation?
  - 305 days
  
- 4) 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 Acid
  
- 5) A plant that must be reseeded every year is called what?
  - Annual
  
- 6) In the United States, who is the largest dairy food processor and distributor?
  - Dean Foods
  
- 7) What part of the corn plant is corn meal made from?
  - The seed
  
- 8) What term do we use to describe an animal that only eats plants?
  - Herbivore
  
- 9) When talking about farm equipment, what does the acronym PTO stand for?
  - Power Take Off
  
- 10) On a cow's production record, what would 3x indicate?
  - She is milked 3 times a day

11) What is the technical name for calving or freshening?

- Parturition

12) Soybeans are usually added to a cow's diet to provide what nutrient?

- Protein

13) What two colors are a slow moving vehicle sign?

- Orange and red

14) What is another name for the subcutaneous abdominal veins in the dairy cow?

- Milk veins

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

- Milk

16) Who invented the pasteurization process?

- Louis Pasteur

**2017 NYS District Novice 4-H  
Dairy Quiz Bowl Contest**

**Novice Packet 7, Phase A**

1) What is the name of the time for a dairy cow when she is not producing milk?  
This time period is usually 45 to 60 days long?

- Dry period

2) Wearing disposable gloves and changing them throughout milking is a good practice to reduce or limit the spread of what common disease?

- Mastitis

3) How many quarters does a cow's udder have?

- 4

4) The demand for milk is highest during what season?

- Fall

## Novice Packet 7, Phase B

1) Name 5 different dairy products.

- Milk
- Ice cream,
- Yogurt
- Cheese
- Butter
- Cottage cheese
- Sour cream
- Cream cheese
- Frozen yogurt
- Nonfat dry milk

2) Name 3 signs that you would see or hear if a cow was in heat.

- Restlessness
- Bellowing
- Following and smelling other cows
- Mounting other cows
- Standing to be mounted
- Discharge of clear mucous from vulva
- Vulva red and swollen

3) A cows day consists of 5 primary activities, name three of them.

- Eating
- Resting/laying down
- Standing
- Milking
- Drinking

4) Spell the name of the dairy breed that is known for their golden tinted milk and can be described as fawn colored, and identify where the breed originated.

- G-U-E-R-N-S-E-Y and the Isle of Guernsey

## **Novice Packet 7, Phase C**

1) What hormone causes milk letdown?

- Oxytocin

2) What does the “Real Seal” indicate?

- The product it appears on is a genuine dairy product

3) What is the name for the structures that are used to house individual calves outside?

- Calf hutches

4) What dairy breed has the lowest rate of dystocia, or difficult calving's?

- Jersey

5) What disease does our animal have that is characterized by gray, crusty patches on the skin usually found on the head and shoulders?

-Ringworm

6) What is the name for milk that has not been pasteurized or processed?

- Raw

7) What color do you wear when showing a dairy cow?

- White

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

- Lignin

9) What does the acronym PDCA stand for?

- Purebred Dairy Cattle Association

10) Pinkeye is spread by what common pest?

- Face flies

11) In a pregnant cow, what organ carries the calf?

- Uterus

12) What are the building blocks of protein called?

- Amino Acid

13) A calf that is raised in a drafty or poorly ventilated environment is at higher risk of getting what common calf hood disease?

- Pneumonia

14) What does it mean if a dairy cow is “open”?

- She is not pregnant

15) In regards to milk quality and cow health, what does the acronym CMT stand for?

- California Mastitis Test

16) What is the name for a young female cow who has not calved yet and is not a calf?

- Heifer

**2017 NYS District Novice 4-H  
Dairy Quiz Bowl Contest**

**Novice Packet 8, Phase A**

1) Which of the following bedding choices is not organic? A) Sand B) Straw C) Shavings D) Sawdust

- A-Sand

2) When performing embryo transfer in dairy animals, what is the name given to the animal that has an embryo transferred into her from another cow?

- Recipient

3) What liquid flows through the milk veins?

- Blood

4) Which of the following choices is the first part of the calf that you would see during a normal calving? A) Head B) Rear hooves C) Front hooves D) Tail

- C- Front hooves

## Novice Packet 8, Phase B

1) Explain the difference between permanent and non-permanent identification for cows and provide one example of each.

- Permanent: remains the same overtime, does not change  
Tattoos, sketches or photographs
- Non-permanent: can be changed overtime  
Ear tags, neck chains, ankle bands

2) Give the 2 adjectives that are typically used to describe an ideal rear udder attachment.

- High
- Wide

3) Name 3 breeds of dairy cattle from the United Kingdom

- Ayrshire
- Jersey
- Guernsey
- Milking Shorthorn

4) Name 4 different pieces of information you would find on the nutrition label on a container of milk.

- Serving size
- Servings per container
- Ingredients
- Calories
- Fat content
- Cholesterol
- Sodium
- Carbs
- Protein
- Where processed
- Size of container

## Novice Packet 8, Phase C

1) What is the name of the place where milk is collected and stored on farm?

- Bulk tank

2) Which stomach compartment is the largest in a mature dairy cow?

- Rumen

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

- Chyme

4) What is another name for diarrhea in young calves?

- Scours

5) BCS is a method of evaluating an animal's weight on a 1-5 scale, what does BCS stand for?

- Body Condition Score

6) What is given to a cow to prevent hardware disease?

- Magnet

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

- Comfortable

8) What is the name of the farmer magazine that has the dairy cattle judging contest on the cover?

- Hoard's Dairyman

9) What is the name of the tube that connects the mouth to the stomach?

- Esophagus

10) What is the best source of nutrients available to a newborn calf?

- Milk

11) The World Dairy Expo is a famous cattle show. What city and state is the World Dairy Expo held in?

- Madison, Wisconsin

12) On a farm, what would a lagoon be used for?

- Manure storage

13) Which stomach compartment is known as the many plies and functions to absorb water?

- Omasum

14) What is the only part of the milking machine that touches the cow?

- Inflation (Teat cup liner)

15) When is national grilled cheese month?

- April

16) What is the number of recommended servings of dairy products per day for people?

- 3 servings

### Extra Questions-2017 NYS 4-H Novice Dairy Quiz Bowl

- 1) Holstein Association USA, Inc. - the headquarters for the Holstein breed are located in which city and state?
  - Brattleboro, Vermont
- 2) Gestation is the technical name for what?
  - Pregnancy
- 3) When referring to a calf or heifer raising program what does the acronym ADG stand for?
  - Average Daily gain
- 4) What is the name of the paper that accompanies a purebred animal and certifies his or her parentage?
  - Registration paper
- 5) When a large grazing area is broken up into smaller sections, what is the name given to the smaller sections?
  - Paddocks
- 6) Frozen semen is stored in the liquid form of what element?
  - Nitrogen
- 7) You should never use the same shovel for handling feed and manure. Why not?
  - To prevent contaminating feed
- 8) Which vitamin is routinely added to milk?
  - Vitamin D or Vitamin A
- 9) In relation to organizations and associations, what does the acronym ADA stand for?
  - American Dairy Association