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
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
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
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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
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
1) Name 3 pieces of information you can find on a cow's 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
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
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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 cow’s 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
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