

**2012 NY District Junior
Dairy Quiz Bowl Contest**

Junior Packet 1, Phase A

1. What is the loose skin of the underside of the neck?

Dewlap

2. Who funds the National Dairy Council?

Farmers

3. A fawn/white, very gentle cow with a high butterfat content is characteristics of:

Jersey

4. What is a dry cow?

A cow not producing milk

Junior Packet 1, Phase B

1. Name 4 types of milking parlors:

- Herringbone
- Rotary or carrousel
- Side-opening
- Walk through
- Polygon
- Trigon
- Stanchion
- Parallel

2. Name 4 parts of the dairy cow's reproductive tract.

- Cervix
- Ovaries
- Oviducts
- Uterus
- Vagina
- Vulva

3. Name two ways that a pathogen can gain entry into a calf's body.

- Mouth
- Navel
- Nose (VA Study Material)

4. Which part of the milking machine functions to alternate vacuum atmospheric pressure in the space between the teat cup shell and the liner?

- Pulsator

Junior Packet 1, Phase C

1. Name one of the restaurant chains the dairy check-off has partnered with to offer milk in plastic bottles.

McDonald's, Subway, Burger King, Sonic Drive-in or Wendy's

2. Which of the following is a good choice for bedding in free-stalls because it is not organic: straw, sawdust, sand?

Sand

3. What is the name of the cow side test that uses a four compartment paddle to test a sample of milk to identify cows with mastitis?

CMT Test

4. What is a vacuum pump?

An air pump that produces a vacuum in the system (to take milk out)

5. Milk may be contaminated by bacteria; therefore it is not recommended that humans consume raw milk. What is the name given to disease-causing agents?

Pathogens

6. What is the maximum legal limit of somatic cells (cells/ml) that saleable milks can contain?

750,000 cells/ml

7. In which compartment of the ruminant stomach is fermentation the primary digestive process?

Rumen (or reticulo-rumen)

8. What is the name of the opening that the digesta flows through as it enters the omasum?

Reticulo-omasal orifice

9. What causes black leg in cattle: a fungus, a bacterium, or a virus?

A bacterium

10. In what year was Hoard's Dairyman founded?

1885

11. In reference to milk, what does FCM stand for?

Fat corrected milk

12. Where did the Holstein cow originate?

Netherlands

13. Which of the six major dairy breeds originated in the United States?

None of the major dairy cow breeds originated in the United States

14. Which of the following describes ovulation; milk ejection, parturition, release of an egg from a follicle, or palpation?

Release of an egg from a follicle

15. What term is the period when the calf is developing in its mother's womb?

Gestation

16. What does "ppm" stand for on a feed ration report?

Parts per million

**2012 NY District Junior
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Junior Packet 2, Phase A

1. What is the name of the organ that produces milk?

Udder, alveoli, mammary gland

2. What is the best way to tell if a cow is in standing heat?

She allows other animals to mount her

3. What is the recommended month's of age when a dairy heifer has her first calf?

22 – 24 months (an answer in this range is acceptable)

4. What popular cheese is found on pizza?

Mozzarella

Junior Packet 2, Phase B

1. Name five pieces of information that can be found on an animal's registration paper?

- Name
- Registration number
- Ear Tag number
- Birthdate
- Sire
- Dam
- Owner
- Breeder
- Grand sires and Grand dams
- Gender
- Breed

2. Name 4 diseases in dairy cattle with a color in their name:

- Red Water
- Red Nose
- Black Leg
- Blue Tongue
- White Muscle
- Pink-eye
- White Heifer

3. Name 3 signs of milk fever?

- Goes down
- Rapid heart rate
- Dilated eyes
- Below normal body temperature
- Cold ears
- Not eating

4. Name two ways in which excess colostrum can be stored until needed.

- Add preservative acid
- Freeze
- Refrigerate

Junior Packet 2, Phase C

1. What is the name of the small projections that line the wall of the small intestine that function to absorb nutrients?

Villi

2. Why is deccox (decoquinate) often included in calf starter feed?

To control coccidiosis

3. What is the greatest, most disruptive disease ever to affect British agriculture?

Mad cow disease, Foot and Mouth disease

4. What is the name of the test, developed in the University of Wisconsin, that is used to measure milk fat (butterfat content in milk)?

Babcock test

5. Why is colostrum from older cows normally higher in antibody concentration than colostrum from first calf heifers?

Older cows have had more exposure to disease and have developed more antibodies

6. What is the on-farm tool used to indicate the antibody content of colostrum and is temperature sensitive?

Colostrometer

7. As the reproductive tract is traced forward, what follows the vagina?

Cervix

8. Which of the following is not part of the cow's digestive tract: reticulum, omasum, brisket, abomasum?

Brisket

9. In the reproductive system of a dairy cow, progesterone is the name of the hormone that is secreted by the structure often called a "yellow body". What is the proper name for this "yellow body"?

Corpus luteum

10. If the milk to rest pulsation rate is set at 55:45 on a milking machine, what percent of the time is the inflation open?

55%

11. In reference to digestion and metabolism, which one of the following best describes Beta hydroxybutyrate: a mastitis pathogen, an amino acid, a ketone body?

A Ketone Body

12. Which season of the year is consumer demand for dairy products are typically the lowest?

Summer

13. What is another term that describes the act of calving or giving birth?

Parturition, freshening

14. What is the name of the byproduct recovered when cheese is made?

Whey

15. Dry matter is the amount of feed left over after what is removed?

Water, moisture

16. Name one vitamin that is fat soluble.

Vitamin K, A, D, E

**2012 NY District Junior
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Junior Packet 3, Phase A

1. Where do you measure when using a weight tape?

Around the heart girth

2. What is done to the calf's navel after it is born?

It is dipped in iodine to prevent infection

3. What is it called when the egg is released?

Ovulation

4. In natural service, where is semen deposited?

Vagina

Junior Packet 3, Phase B

1. Name 3 elements commonly found in a dairy cow's ration.

Calcium
Magnesium
Potassium
Sodium

2. Name 3 methods of temporary identification

Ear Tag
Neck Chain
Tail tag
Brisket tag
Leg band
Paint Brand
Back tag

3. Write this down. How many pounds of protein are in one ton (2000 pounds) of dairy feed that contains 18% protein?

360 pounds

4. Give 3 reasons why over conditioning is undesirable in young dairy heifers.

Expensive
Reduces subsequent calving conditions
Overfeeding
Produce poor quality colostrum

Junior Packet 3, Phase C

1. What do the initials U.S.D.A stand for?

United State Department of Agriculture

2. What is the first milk produced after calving that contains immunoglobins?

Colostrum

3. In a mature dairy cow, what is the largest stomach compartment?

Rumen

4. Hot weather stresses cows and can drop production by 30 percent. What feed vitamin can be helpful in heat stress?

Vitamin B₆

5. In dairy cattle judging, what are you referring to when you describe this part as having a higher and wider attachment?

Rear udder

6. What range is used in the linear classification scale for each trait?

1-50

7. Typical milking unit inflations should be replaced after approximately how many milkings?

1100 to 1200

8. Name the skin disease that is caused by the Bovine Papilloma virus.

Warts

9. Where in the small intestine do secretions from the pancreas, liver, and intestine enter?

Duodenum

10. Grade A Milk used for fluid consumption is classified as what class?

Class 1

11. What does "days to first service" refer to on a DHIA record?

The number of days from calving until first breeding date

12. What is the term for the process, in the presence of light, plants convert carbon dioxide and other elements into simple carbohydrates and oxygen?

Photosynthesis

13. What is the term for "undulant fever" when it occurs in dairy cows?

Brucellosis (or Bang's disease)

14. What does the acronym TQM stand for?

Total Quality Management

15. Gross energy is defined as what?

The total energy content of feed

16. How many servings of low fat or fat free dairy products are recommended each day for a healthy diet?

3 servings

**2012 NY District Junior
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Junior Packet 4, Phase A

1. What breed of cattle can be roan, red, white or red and white?

Milking Shorthorn

2. An excess of calcium fed during the dry period can result in what metabolic disorder at freshening?

Milk Fever

3. During hot weather, what can happen to a cow's feed intake and milk production?

Both decline or decrease

4. Name one of the two stomach compartments that are not yet developed in a newborn calf?

Rumen and Reticulum

Junior Packet 4, Phase B

1. What are 5 reasons for culling a dairy cow from the herd?

- Low production
- Mastitis
- Reproduction
- Udder Quality
- Poor feet and legs
- Disease
- Injury
- Temperament
- Mobility
- High Somatic Cell Count

2. What are 3 considerations for achieving adequate, effective cleaning of milking systems.

- Time
- Temperature
- Concentration of cleaning solution
- Covers entire system

3. What 2 types of cells are known as gametes?

- Eggs and sperm

4. Which one of the following ranges is closest to the total ration crude protein requirement for early lactation cows; 6 to 8%, 10 to 12%, 16 to 18%, 30 to 32%?

- 16 to 18%

Junior Packet 4, Phase C

1. What provides the calf with passive immunity?

Immunoglobins or antibodies (colostrum), IgG

2. What is the name of the first part of the small intestine that is connected to the abomasum?

Duodenum

3. What is best described as a fermentative disorder of the rumen involving the ruminal pH falling below 5.5?

Acidosis

4. In regards to global warming, what do the initials GGE stand for?

Greenhouse Gas Emissions

5. When you set up a lactating dairy cow in the show ring, the rear leg nearest to the judge should be placed where?

Farther forward than the other rear leg

6. What type of diet is often fed to close-up dry cows to help prevent milk fever?

Anionic diet

7. What can you feed to a scouring calf that shows mild symptoms of dehydration?

Electrolytes

8. Who is the U.S. Secretary of Agriculture?

Tom Vilsack

9. Why is Poloxalene often added to the ration of cows that are grazing alfalfa and clover?

To prevent bloat

10. What substance can cause toxic levels in the lower section of the corn plant stalk after prolonged period of drought?

Nitrate

11. How much beef check-off money do dairy producers pay for any animal sold?

1 dollar

12. What structure connects muscle to bone?

Tendon

13. What is the average gestation period (in days) for dairy cow?

276 - 292 days (any answer within this range is acceptable)

14. What organ of the cow's body is responsible for approximately 25 percent of all metabolic activity?

Liver

15. A female calf born twin to a bull is called what?

Freemartin

16. You take a sample of milk from your bulk tank and test it using the Delvotest or the Penzyme test. What are you testing the milk for?

Antibiotics

**2012 NY District Junior
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Junior Packet 5, Phase A

1. What does ET stand in dairy animals?

Embryo Transfer

2. Which hormone blocks milk let down?

Adrenaline or Epinephrine

3. Which month is national dairy month?

June

4. What class of milk is used for yogurt?

Class II

Junior Packet 5, Phase B

1. Name 3 metabolic diseases.

Ketosis
Retained Placenta
Displaced Abomasum
Milk fever
Grass Tetany

2. Name 3 of the organ systems found in the body:

Circulatory
Respiratory
Integumentary
Nervous
Digestive
Endocrine
Reproductive
Skeletal
Muscular

3. Name 3 legumes used for grazing or hay.

Alfalfa
Clover
Lespedeza
Vetch
Soybeans
Peanuts
Peas
Birds-foot trefoil

4. Name three types of silos

Concrete Stave
Poured Concrete
Bunker
Trench
Bag
Oxygen-limiting
Upright

Junior Packet 5, Phase C

1. In reference to the national dairy industry, what does ADSA stand for?

American Dairy Science Association

2. Which one of the following compartments of the ruminant stomach functions in a similar manner as the human stomach?

Abomasum

3. What is the proper name for "milk fever"?

Parturient paresis/ Hypocalcemia

4. Dairy cattle are most comfortable within which of the following temperature ranges, 30-35 Degrees F, 50 to 55 degrees F, and 70 to 75 degrees F?

50 to 55 degrees F

5. Where was the first commercial butter factory built in the United States?

New York

6. Which one of the following is the reason that we should give a dairy heifer a special magnet that will stay in her reticulum; to help prevent ketosis, to help prevent metritis, to help prevent "hardware disease"?

To help prevent "hardware disease"

7. What is another name for a calf's mother?

Dam

8. What compartment of the ruminant stomach has a honeycomb lining?

Reticulum

9. CLA found in milk has been shown to have anti-cancerous activity and also have a role in decreasing body fat. What does CLA stand for?

Conjugated Linoleic Acid

10. Which one of the following must be adequate in the dairy cow to prevent grass tetany: salt, selenium, lysine, magnesium?

Magnesium

11. What is metritis?

A uterus infection

12. On average, cows have a flight zone of how many feet?

5 feet

13. What two amino acids are considered to be first limiting or co-limiting for milk protein synthesis?

Methionine and lysine

14. What is the primary protein found in milk?

Casein

15. What do we prevent when we dip the newborn calf's navel in 7% iodine solution?

Navel-ill, Joint-ill, or Navel Infection

16. The average dairy cow drinks how many gallons of water a day?

30 to 50 gallons

**2012 NY District Junior
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Junior Packet 6, Phase A

1. What category on the PDCA Dairy Cow Unified Scorecard is worth the most amount of points?

Udder

2. If you have a feed bunk manager score of 0, what does that mean?

Cows are underfed or no feed in the bunk

3. What is the term commonly used to refer to one-hundred pounds of milk?

Hundredweight (or cwt)

4. Which of the following is not part of the cow's digestive system: rumen, small intestine, esophagus, or pasterns?

Pasterns

Junior Packet 6, Phase B

1. Name five types of bedding typically used for dairy cattle.

- Straw
- Sand
- Recycled manure solids
- Newspaper
- Sawdust
- Shavings
- Old hay
- Wood chips
- Almond hulls
- Feed by-products

2. Name three of the major causes of calf scours.

- Inadequate colostrum
- Poor quality colostrum
- Poor quality milk replacer
- Unsanitary calving conditions
- Overfeeding
- Overcrowding
- Inadequate ventilation

3. State two reasons why a farmer would choose to hire a custom heifer raiser.

- Decreased labor requirement
- Increased milking herd management
- Increased facility capacity for milking cows
- Herd expansion without capital investment with use of existing facilities
- Increased feed inventory for milking cows
- Potential for better replacement heifers

4. Name two of the major nutrients found in feedstuffs.

- Energy
- Protein
- Minerals
- Vitamins
- Water

Junior Packet 6, Phase C

1. Ringworm is a contagious disease caused by what type of organism?
Fungus
2. What is the proper site on the cow to administer intramuscular or IM injections?
Neck
3. What is the most common health issue among lactating dairy cows?
Mastitis
4. What breed of dairy cattle originated in Switzerland?
Brown Swiss
5. In the dairy cow, where would you find the Islet of Langerhans?
In the Pancreas
6. In what city and state is the World Dairy Expo held?
Madison, Wisconsin
7. How many ounces are in one serving of milk?
8 ounces
8. What animal feeding system uses grass paddocks, reels, electric fences, water, and rest periods for the paddocks?
Rotational grazing
9. A dairy animal's family tree or record of ancestry is called what?
Pedigree
10. What is "morbidity rate" in dairy calf management?
The number of sick calves in a certain period of time
11. What does the term "dry treating" refer to?
Infusion of antibiotics into the udder at the time of drying off

12. How many classes are featured each year in the Hoard's Dairyman Dairy Judging Contest?

Five

13. What is the common name used for keratoconjunctivitis?

Pink eye

14. The clusters of milk secreting cells in the udder of a dairy cow are called what?

Alveoli

15. What is the term for the milk that is left in the udder after a normal milking?

Residual milk

16. What is the portion of feed called that remains after water has been removed from the feed by drying it in an oven?

Dry matter

**2012 NY District Junior
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Junior Packet 7, Phase A

1. Of the following, long stemmed hay, cottonseed meal, or hominy, which one is a good source of fiber for a dairy cow's ration?

Long stemmed hay

2. What is the term for a large, complex protein material that reproduces only inside a host cell and can cause disease?

Virus

3. What is the term for when the abomasum twists out of normal position?

Displaced Abomasum or DA

4. What is the name of the section of a cow's back located between the chine and the rump?

Loin

Junior Packet 7, Phase B

1. List the three primary nutrients found in fertilizer.

Nitrogen (N)
Phosphorus (P)
Potassium (K)

2. Please name two non-domestic animals that could cause a rabies infection in cattle.

Bat
Bobcat
Coyote
Fox
Raccoon
Skunk

3. Name the three main udder supports for a dairy animal.

Median suspensory ligament
Lateral suspensory ligament
Skin

4. Name two methods of dehorning calves.

Paste (caustic potash)
Electric burner
Butane burner
Cut or gouge

Junior Packet 7, Phase C

1. When training employees you want to review several SOP's. What do the initials SOP stand for?

Standard Operating Procedures

2. The CME is where block and barrel cheese, butter futures, and Class III and Class IV milk futures are traded. What do the initials CME stand for?

Chicago Mercantile Exchange

3. What process did Dr. Louis Pasteur develop to extensively destroy bacteria in milk?

Pasteurization

4. What are extra teats called on a heifer?

Supernumerary teats

5. How many pounds of whole milk does it take to make a gallon of ice cream?

12 pounds

6. On the average, how much time does a dairy animal spend ruminating or cud chewing?

7 to 10 hours

7. Why is wide swath hay cutting a good crop management practice?

Allows hay to dry faster so that it can be made in a day

8. Which class of dairy products includes fluid cream products, yogurt, and manufactured products?

Class II

9. Which disease stopped the importation of cattle from Europe in 1905?

Hoof and mouth disease

10. What state leads the nation in milk production?

California

11. What month is National Grilled Cheese Month?

April

12. As of 2010, the Dietary Guidelines for Americans has changed. Now we are to follow an illustration of the five food groups arranged in the form of a place setting. What is this illustration called?

MyPlate

13. What is the term for the pregnancy period?

Gestation

14. Which direction do you lead a dairy animal in the show ring – clockwise or counterclockwise?

Clockwise

15. What test is conducted on bulk tank milk samples to screen for brucellosis?

“Ring” test

16. Feeding an excess of what is the principal cause of over conditioning in heifers?

Energy, Carbohydrates, or Fats

**2012 NY District Junior
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Junior Packet 8, Phase A

1. What is a breach birth?

When the calf is delivered with its butt first

2. Your Veterinarian says that a cow is in the first trimester. What does that mean; the first three months of lactation, the first part of the dry period, or the first three months of pregnancy?

The first three months of pregnancy

3. Bovine Somatotropin is used to: release a retained placenta, increase rumen pH, increase milk yields, or increase blood calcium?

Increase milk yields

4. What has more impact on the amount of cheese you can make from a pound of milk – fat or protein?

Protein

Junior Packet 8, Phase B

1. Give three examples of a farm's assets.

- Cows
- Land
- Equipment
- Tractors
- Buildings
- Cash
- Feed
- Lumber
- Stocks and Bonds
- Co-op Equity
- Employees

2. Name two methods for reducing heat stress in cattle.

- Shade
- Ventilation
- Sprinklers
- Fans
- Free-choice water

3. Name one of the two main gases found in the cow's rumen.

- Carbon dioxide
- Methane

4. Name two signs of pinkeye.

- White spot in center of the eye
- Blindness
- Very pink/red eye
- Eye drainage (can be white or clear)
- Cows tend to stay in the shade, as sunlight causes pain and squinting
- Crusty, cloudy eye
- Swollen eye

Junior Packet 8, Phase C

1. What part of the cow does founder affect?
The feet/lower leg
2. When looking at a pedigree, which parent is considered paternal?
Sire, or bull
3. What is the normal birth presentation of a calf?
Front feet first and head between the feet
4. Which mineral is needed by the thyroid gland and is identified by an I?
Iodine
5. Which breed of dairy cattle has on average the longest gestation length?
Brown Swiss
6. In calves, which part of the stomach can hairballs develop in?
Rumen
7. This dried dairy food is a by-product of the manufacturing of sugar from sugar beets. Name the dairy feed described here.
Dried beet pulp
8. Which ruminant stomach compartment is known as the manyplies?
Omasum
9. What are you estimating when you measure a cow's heart girth?
Her weight
10. Which part of the plant normally has a higher percent of protein: the stem, roots, or leaves?
Leaves

11. What part of the cell is DNA found in?

Nucleus

12. Does coccidiosis affect the reproductive, digestive, or skeletal system?

Digestive

13. What body system is affected by osteoporosis?

Skeletal system

14. What does the word carcinogenic mean?

Cancer causing

15. In which of the following places does fertilization take place when AI is used: vagina, uterine horn, uterus, or oviduct?

Oviduct

16. Is colostrum generally higher or lower than milk in protein, total solids, and fat?

Higher

**2012 NY District Junior
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Extra Questions

1. What does the term polled mean, when registering a dairy animal?
Born without horn buttons or horns
2. In reference to dairy cattle, what does BVD stand for?
Bovine Viral Diarrhea
3. Why do dairy farmers place a KAMAR detector on the rump of dairy cows?
To help detect heat or estrus
4. A gallon of milk weighs how many pounds?
8.6 pounds
5. What trace mineral, when deficient, is associated with white muscle disease in calves?
Selenium
6. How many glasses of milk does the average cow produce per day?
90 glasses
7. What organization is in charge of evaluating genetic traits of U.S. Dairy cattle?
Animal Improvement Program Laboratory
8. What does PTA stand for in the sire summary?
Predicted Transmitting Ability
9. On feed ration reports, what is the abbreviation for protein that is degraded in the rumen?
RDP (Rumen degradable protein)
10. In regards to animal identification, what do the initials NAIS stand for?
National Animal Identification System
11. What diverts the milk into the abomasums when a calf nurses?
The esophageal groove

12. If a farmer asks you to disinfect your boots before you step onto their farm, what management practice is he or she enforcing?

Bio-security

13. How many grams of fat are in one cup of whole milk?

8 grams

14. How many pounds of whole milk does it take to make one pound of cheese?

10 pounds

15. What is the name of the enzyme used to coagulate protein when making cheese?

Rennin

16. What symbol assures the customer that the product they are purchasing is a genuine dairy product?

The "real seal"

17. What enzyme is needed in the human body to digest lactose?

Lactase

18. A high number of what in milk is generally an indicator of an infection in the udder?

Somatic cells

19. What is the milk-mineral deposit on milk handling equipment called?

Milk stone

20. What is the common term for abnormal labor or difficult births?

Dystocia