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2020 Senior Dairy Quiz Bowl Questions

Round 01

Phase B 5 Questions Correct answers are worth 10 points each.

Only the team being asked the questions is to be in the room. Each team will be asked these 5 questions. Answers are to be given by a team captain, but assistance may come from any team member. A question may be repeated only once. Answers must be started within 20 seconds. Partial credit may be given at the discretion of the judges. After one team has been questioned, the other team will enter the contest room and be asked the same 5 questions.

1. When evaluating conditions and I for manure runoff, there are 6 high risk manure spreading conditions that should be considered before you spread. Name 4 of them.

ANS: Weather, wet ground, slope, buildings nearby, water sources; field geology; type of manure; application method; field conditions; location of drain tiles ditches

2. Give 3 clinical signs of mycotoxins in dairy cattle.

ANS: Lower milk production; manure is loose and variable; butterfat is low; somatic cell counts are increased; fertility is decreased

3. Name 3 disadvantages of twinning in dairy cattle.

ANS: Reduced milk production during lactation; calving difficulties are more frequent; abortion rates are higher; twins are often weak at birth; potential for a freemartin heifer; increased health problems for the cow

4. Name 3 management practices a producer can utilize in their calf program during the cold winter weather to reduce stress and aid the calf in maintaining body temperature.

ANS: Feed more milk or milk replacer; feed more often; feed higher fat content milk or milk replacer; bed with straw; use calf jackets; have a place to warm and dry newborn calves

5. Name 4 reasons why a dairy animal can be disqualified from being in the show ring.

ANS: Blind quarter; freemartin; permanent lameness; tampering to conceal faults; total blindness

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Phase C 20 Questions Correct answers are worth 15 points each.

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- 1. Which chromosome, in Holsteins, has been found to be linked to calving difficulties?**

ANS: Chromosome 18

- 2. Corn distiller's grain is high in what amino acid that is essential for milk production?**

ANS: Methionine

- 3. What is the name of the mycotoxin that causes the most concern because it is carcinogenic and has the possibility of contaminating the human food supply?**

ANS: Aflatoxin

- 4. In dairy cows, as blood estrogen peaks, it triggers the release of GnRH from which gland?**

ANS: Hypothalamus

- 5. Retained placenta's in cows and white muscle disease in calves has been associated with deficiency in which mineral?**

ANS: Selenium

- 6. What do we call the net income after operating expenses?**

ANS: Return on equity or Return on investment

- 7. Who received the first patent for condensed milk?**

ANS: Gail Borden

- 8. What milk class includes fluid cream products, yogurt, and manufactured products?**

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ANS: Class II

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9. How much crude protein should calf starter contain?

ANS: 18-22%

10. What is the waxy substance produced by cells lining the teat canal that serves as a plug between milkings and aids in reducing penetration by microorganisms?

ANS: Keratin

11. What is the hormone released by the pineal gland in response to longer day length?

ANS: melatonin

12. What does the acronym VWP stand for?

ANS: Voluntary waiting period

13. How much electric current is generally considered significant enough to affect the behavior and production of cows?

ANS: 0.5 Volts

14. On a Holstein pedigree, what does BLAD stand for?

ANS: Bovine leukocyte adhesion deficiency

15. In the USDA food pyramid guidelines, how many servings of dairy products per day are recommended for people?

ANS: 3

16. Milk coagulation is caused by the presence of which enzyme?

ANS: Rennin

17. Every 5 years, the U.S. Congress passes a bundle of legislation that sets national policy for agriculture, nutrition, conservation and forestry. What is the name of this bill?

ANS: The Farm Bill

18. When calculating somatic cell counts in milk, what type of cells are being counted?

ANS: white blood cells

19. What is the term for when a male animal whose testes remain in the body cavity and do not descend into the scrotum?

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ANS: Cryptorchidism

20. **When reading a seed bag tag, what do the letters VNS stand for?**

ANS: Varieties Not Stated

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Bonus questions may be earned in the toss-up round. To receive a bonus question, 3 different team members must correctly answer the toss-up questions. Bonus questions are not passed to the other team, nor are points deducted for an incomplete or incorrect answer to the question. Bonus question will be asked whenever 3 team members have answered toss-up questions correctly with the count kept individually for both teams within a match. Eligibility for bonus questions does not carry over to another match. The answers must come from the team captain but assistance can come from the other team members. Only the number or answers required by the bonus question will be accepted. Example: If the bonus has a four-part answer - the first four answers given by the team will be accepted. Answers to a bonus question must start within 20 seconds and be completed within 60 seconds.

1. **What type of fly is associated with grubs or warbles in cattle?**

ANS: Heel fly

2. **What is the recommended temperature for washing the bulk tank, milk lines, and other milking equipment?**

ANS: 160 degrees F

3. **What is the name of the bacteria that live on the root nodule of legumes and fix atmospheric nitrogen of the plants?**

ANS: Rhizobium

4. **20 pounds of milk should yield about how many pounds of hard cheese?**

ANS: 2 pounds

5. **Cows infected with the organism that causes Johne's disease often will begin shedding the organism at what age?**

ANS: 2 years

6. **Allowing corn silage to ensile for 3 to 5 months before feeding has been shown to improve the digestibility of what carbohydrate by 10 to 15%?**

ANS: Starch

7. **Within how many hours after baling should baleage be wrapped?**

ANS: 12 hours

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2020 Senior Dairy Quiz Bowl Questions Round 02

Phase B5 Questions Correct answers are worth 10 points each.

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1. Name 3 things that happen when silage or haylage is put into the silo too wet.

ANS: Lose nutrients; seep fluids (water); improper fermentation; produce undesirable fatty acids (butyric acid); lower palatability; lose energy value; clostridium growth; produce amines

2. In the dairy industry, name 4 animal welfare issues being faced by dairy producers.

ANS: Tail docking; dehorning practices; confinement housing; lameness; down cow handling; vaccinations; hormones use; injections; calf hutches; separating newborn calf from its mother

3. Mastitis is one of the costliest diseases in dairy cattle and for the dairy producer. Name 4 mastitis related costs on a farm.

ANS: Reduced milk production; increased cull rate; lost milk premiums; discarded milk; veterinarian expenses; reduced cow sale values; drugs cost for treatment

4. Name the 2 main types of fiber found in a dairy cow's ration.

ANS: NDF (neutral detergent fiber); ADF (acid detergent fiber);

5. Name 4 signs of estrus in a dairy cow.

ANS: standing to be mounted; mounting other cows; following and smelling other cows; bellowing; restlessness; red and swollen vulva; clear mucus discharge from vulva

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Phase C20 Questions Correct answers are worth 15 points each.

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- 1. ADSA is an international organization of educators, scientist and industry representatives who are committed to advancing the dairy industry. What does ADSA stand for?**

ANS: American Dairy Science Association

- 2. Carotene is a precursor of what vitamin?**

ANS: Vitamin A

- 3. What is another name for ketosis?**

ANS: Acetonemia

- 4. Bypass protein refers to the part of feed protein that, in the cow's rumen, is:**

ANS: undegraded

- 5. If the "effective fiber" level of a ration is too low, what happens to the milk fat test?**

ANS: it decreases

- 6. What is the recommended length of a dry period for a cow?**

ANS: 60 days Range-(40-60)

- 7. Which of the following is the name of the part of a cow's back that lies between the wither and the loin?**

ANS: Chine

- 8. The disease Cryptosporidiosis ("crypto") in calves is caused by a protozoan parasite. Which section of the digestive system does "crypto" primarily affect?**

ANS: small intestine

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9. On average, each pound of additional dry matter intake results in how many pounds of additional milk?

ANS: 2.5

10. Liquid nitrogen has a temperature of minus 320 degrees F. On the dairy farm, where are we certain to find liquid nitrogen?

ANS: in the semen storage tank

11. During which of the following age ranges are dairy calves usually weaned?

ANS: 6-8 weeks (42-56 days)

12. What are the genes called that occupy corresponding loci in homologous chromosome but affect the same character in different ways?

ANS: alleles

13. To maintain profit margins, a dairy farmer should be monitoring and making decisions based on the herd's IOFC. What do the initials IOFC stand for?

ANS: Income over feed costs

14. Who invented the centrifugal cream separator for milk?

ANS: Dr. DeLaval

15. Beef producers pay a one dollar per head checkoff for each beef animal sold at market. How much do dairy producers pay for each cull dairy cow that is sent to market?

ANS: one dollar

16. During which one of the following times of the year is the consumer demand for dairy products typically the lowest?

ANS: summer

17. What muscle keeps the teat end closed and helps prevent organisms from entering the udder

ANS: sphincter muscle

18. What is the term for a substance that, when introduced into the body, brings about an immune response by a specific antibody?

ANS: Antigen

19. Poloxalene is used to prevent what condition in grazing cattle?

ANS: bloat

20. What group of hormones, produced in the uterus, causes regression of the corpus luteum, and contractions of the uterus?

ANS: Prostaglandins

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- 1. DUMPS is an inherited condition which results in embryonic death. In which breed is it found?**

ANS: Holstein

- 2. In reference to milk composition, what does CLA stand for?**

ANS: Conjugated Linoleic Acid

- 3. What is the maximum somatic cell count (cells/ ml) allowed in milk that is sold in the U.S?**

ANS: 750,000

- 4. What is the main function of the omasum?**

ANS: remove water. squeeze fluid out of the digesta

- 5. Tarsal hygroma is the medical name for what common cow ailment?**

ANS: swollen hock

- 6. What is the name of the large blood vein visible in the neck that the veterinarian can use to draw blood from or put in fluid?**

ANS: jugular vein

- 7. What tool can be used on the farm to measure the quality of colostrum?**

ANS: Colostrometer, brix refractometer, refractometer

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2020 Senior Dairy Quiz Bowl Questions Round 03

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- 1. Name 3 calf hood vaccinations that should be considered in calf and heifer management.**

ANS: IBR; BVD; Brucellosis; Clostridia; Malignant edema; Scours; Blackleg; Leptospirosis; P13; Rabies

- 2. Name 4 factors to consider before including a by-product feed into a ration.**

ANS: Nutrient composition; cost; availability; palatability; storage; consistency; ability to feed

- 3. Name 4 methods or field management practices farmers would use to reduce soil erosion.**

ANS: Wind breaks; cover crop; strip cropping; contour cropping; terracing; grass waterways; reduced tillage; soil seeding; no tillage; crop rotation

- 4. Some dairy farms are using cloth towels instead of paper towels for prepping teats for milking. When using cloth towels in udder preparation, name 3 guidelines that should be followed.**

ANS: use a separate towel for each cow; wash towels in warm water; do not let damp towels sit between uses because of yeast or mold contamination; dry towels immediately after washing or add bleach when washing; size and absorbency of towel; replace towels when material is worn out.

- 5. Inbreeding can decrease mature equivalent milk production by 60 to 80 pounds per lactation for each percent increase in inbreeding. Give 3 consequences of inbreeding.**

ANS: decreased general vigor; decreased production; decreased reproductive performance; increased calf mortality; increasing similarity between animals; mature size is smaller; more recessive genes exposed; slower growth rate

Phase C20 Questions Correct answers are worth 15 points each.

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1. Which test is conducted by injecting a small amount of an antibody into the caudal fold of the tail?

ANS: Tuberculosis test

2. How much feeding space should be provided for recently weaned heifers?

ANS: 18 inches

3. What is the process called where the uterus returns to normal size after calving?

ANS: Involution

4. What is the limiting nutrient in manure applications under CNMP regulations?

ANS: Phosphorous

5. What type of mastitis exhibits no detectible change in the udder itself and no observable abnormality of the milk?

ANS: subclinical

6. How much does a bushel of soybeans weight?

ANS: 60 pounds

7. What is the part of the milking system that causes the alternate vacuum pressure between the teat cup shell and liner?

ANS: pulsator

8. When measuring a dairy farm's competitiveness and business management, an important tool for evaluating the productivity of workers and cattle is measured by what?

ANS: Pounds of milk sold per worker

9. What is the name of the process where legume plants like alfalfa and clover convert atmospheric nitrogen into nitrogenous compounds that are useful to the plant?

ANS: nitrogen fixation

10. If the pH of the rumen fluid is less than 5.5, what is the cow suffering from?

ANS: acidosis

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11. During which season are somatic cell counts generally higher?

ANS: Summer

12. What is the name for the mechanical or pneumatic means that facilitates cooling and provides a uniform product mixture in the bulk tank for sampling?

ANS: Agitator

13. Semen for artificial insemination should be thawed in clean water that is heated to what temperature in degree Fahrenheit?

ANS: 95 degrees

14. In reference to farm employees, what do the letters NIOSH stand for?

ANS: National Institute for Occupational Safety and Health

15. What toxic substance is often formed when sorghum forage is damaged by frost?

ANS: prussic acid

16. Which of the following is the term for the amount of heat required to raise the temperature of one gram of water from 14.5 degrees C to 15.5 degrees C?

ANS: calorie

17. What is the minimum percent fat that butter must contain?

ANS: 80%

18. The Pasteurized Milk Ordinance is the name of the document that established standards for what?

ANS: Grade A Milk

19. The acid detergent fiber content of a high producing cow's ration should be what percentage?

ANS: 18-21%

20. What condition are we referring to in a cow's udder anatomy if the teats point out too much?

ANS: Strutting

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1. Two black and white red carrier Holsteins are mated; what percentage of their offspring would be expected to be red and white?

ANS: 25%

2. What is the hormone that is produced by the fetus in response to stress which initiates parturition?

ANS: cortisol

3. What is the name of the potentially deadly manure gas characterized by a rotten egg smell?

ANS: Hydrogen sulfide

4. Who is the North Carolina Commissioner of Agriculture?

ANS: Steve Troxler

5. What is the most predominant class of immunoglobulins found in bovine colostrum?

ANS: IgG

6. What is the name of the master gland that controls the estrous cycle?

ANS: Pituitary Gland

7. When during the lactation cycle is it most efficient for a high producing cow to regain her body condition?

ANS: late lactation

2020 Senior Dairy Quiz Bowl Questions Round 04

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1. Name 3 items that are important in tractor safety.

ANS: Lighting; slow moving vehicle sign; PTO shield; roll over protection; seat belt; tires

2. Name 3 factors that influence the amount of water consumed by dairy cattle.

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ANS: Body size; environmental temperature; water temperature; water quality; relative humidity; diet; milk production

- 3. Providing a cow calves on or close to her due date and colostrum is milked out within 4 hours of calving, what are 2 variables that can affect the antibody level in the colostrum?**

ANS: disease exposure of the cow, infection; length of dry period; age of cow; cow's vaccination program

- 4. Name 4 of the essential amino acids.**

ANS: phenylalanine; valine; tryptophan; threonine; isoleucine; methionine; histidine; arginine; leucine; lysine

- 5. OSHA inspectors began inspecting dairy farms in 2014. Name 3 areas on the "Dairy Dozen" that inspectors look at.**

ANS: Manure storage and collection facilities; bull/ cow handling facilities; electrical systems; skid steer operations; tractor operation; PTO guards; power transmission/ functional component guards; hazardous energy control during equipment maintenance; posted warnings of farm hazards; confined spaces; bunker silos; noise

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- 1. What is the 18-carbon fatty acid present in milk, particularly from cows grazing on pastures that has been found to have anticarcinogenic effects?**

ANS: CLA or conjugated linoleic acid

- 2. How many hours after calving should a cow pass fetal membranes?**

ANS: 8-12 hours

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3. **What alters rumen fermentation by boosting the production of propionate acid and reducing the production of acetic acid?**

ANS: ionophores

4. **What is the technical name for the milk veins?**

ANS: Subcutaneous Abdominal Veins

5. **What percentage nitrogen is found in most proteins?**

ANS: 16%

6. **How many pounds of milk does it take to make one pound of authentic Greek yogurt?**

ANS: 4 pounds

7. **Cows positive for which virus can develop lymph sarcoma or lymphoma cancer?**

ANS: Bovine Leucosis Virus (BLV)

8. **What immunoglobulin does the mucosal immune system produce?**

ANS: IgA

9. **How many breeds are represented in the Hoard's Dairyman Cattle Judging Competition each year?**

ANS: 5 breeds

10. **What is another name for extra teats?**

ANS: Supernumerary teats

11. **What is the target body condition score for an early lactation animal?**

ANS: 2.5-3.25

12. **What is the approximate percentage of lactose in whole milk?**

ANS: 5%

13. **What is the term for the sum total of all an individual organism's genes?**

ANS: Genome

14. **It takes approximately how many seconds of contact time per teat to complete cleaning when using automated teat scrubbers?**

ANS: 2-4 seconds

15. **When a farm is using a presynch program for reproductive management, how many shots of prostaglandin are given prior to AI timed breeding and has been proven to improve conception rates?**

ANS: 2 shots

16. **What B vitamin can be added to feeds to help prevent ketosis in dairy animals?**

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ANS: Niacin

17. What is the term that describes a farm's ratio of current assets to current liabilities?

ANS: Liquidity

18. When corn silage is harvested at what percent dry matter do you get the best fermentation and preservation?

ANS: 35%

19. What is the term used to describe the process when minerals, especially nitrogen, are removed from the soil by water?

ANS: leaching

20. What is the name of the maternal component of the placental attachment?

ANS: caruncles

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1. What term describes a hemoparasitic or blood-borne disease?

ANS: Anaplasmosis

2. The highest concentration of nitrates is found where in the plant of drought-stressed corn?

ANS: lower stalk

3. How many inches of mercury should the teat and vacuum pressure measure during milking?

ANS: 12-13 inches

4. What is the minimum number of hours a lactating cow should have access to the feed bunk?

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ANS: 20 hours

5. What type of cheese is used for the purpose of calculating Cheese Yield Dollars?

ANS: Cheddar

6. What component in plants gives them their green color?

ANS: chlorophyll

2020 Senior Dairy Quiz Bowl Questions Round 05

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1. A total mixed ration is a blend of all feedstuffs in one feed. Name 4 advantages of feeding a TMR.

ANS: Eliminate selective feeding; consistent ration; higher dry matter intakes; easier to balance; fewer digestive upsets; greater potential for higher milk production; less sorting; ability to feed by-product feeds; lower percent of fiber needed; free choice minerals not needed

2. Name 3 management practices that should be considered in regards to cow safety or comfort in the holding pen or area.

ANS: Minimize time spent in the holding area to less than an hour; safe footing (grooves in floor); proper crowd gate usage; ventilation or cooling of cows (fans, sprinklers); water availability before and after the holding area and milking parlor; lighting; cleanliness

3. Name 3 of the 4 major factors that affect a dairy herd's pregnancy rate when using AI.

ANS: heat detection rates; herd fertility rates; semen fertility; inseminator proficiency

4. Name 3 ways a forage particle separator can be used.

ANS: Evaluate whether there is enough long fiber in the ration; check for over mixing and particle size reduction; develop baseline particle size information for comparison; check ration uniformity; determine optimum mixing order; evaluate whether particle size changes with hay quality; check for sorting

5. Name 3 factors that should be considered when grouping the milking herd.

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ANS: body condition; production level; stage of lactation; lactation number; reproductive status; health

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1. How many days does it take an egg to go through the oviduct of a cow?

ANS: 4 days

2. What term describes the milk-mineral deposit on milk handling equipment?

ANS: Milk stone

3. Which is larger, a 16 gauge needle or 18 gauge needle?

ANS: 16 gauge

4. What is the maximum percent fat that a milking cow ration should contain?

ANS: 8%

5. How many inches of stubble should remain in the field after forage is cut?

ANS: 3-4 inches

6. On the PCDA Scorecard, what is the amount of points given for dairy strength?

ANS: 25 points

7. Glucose and galactose combine to form what disaccharide?

ANS: lactose

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8. In a male animal, where is mature sperm stored?

ANS: Epididymis

9. What is the term for the total amount of energy that a feed contains?

ANS: Gross Energy

10. What is the technical name for the excess fluid accumulation in the udder?

ANS: Edema

11. Who was the dairy pioneer that invented the milk bottle?

ANS: Dr. Harvey Thatcher

12. What breed makes up about 90% of the U.S. dairy cow population?

ANS: Holstein

13. About how much water does the average dairy cow drink every day?

ANS: 30-50 gallons

14. DCAD is a helpful tool to prevent milk fever. What does the acronym DCAD stand for?

ANS: Dietary Cation- Anion Difference

15. What is the most common type of milking parlor that is in use today?

ANS: Herringbone

16. What is the term used to describe the use of technologies to measure physiological, behavioral, and production indicators on individual animals to improve management strategies and farm performance?

ANS: precision dairy farming

17. What is the average duration of standing heat in dairy cattle?

ANS: 7 hours

18. What is the minimum amount of daughters a bull must have in order to have a bull proof published?

ANS: 10 daughters

19. What is the proper name for foot rot?

ANS: Pododermatitis

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20. What state is the national office of the American Jersey Cattle Association located?

ANS: Ohio

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1. What hormone is released prior to calving that enables the cervix to soften and stretch in preparation for expelling the calf?

ANS: Relaxin

2. How many pounds of blood must be pumped through the udder to produce one pound of milk?

ANS: 400 pounds

3. What percent nitrogen does a bag of 15-10-5 bag of fertilizer contain?

ANS: 15%

4. Which part of a ruminant's digestive tract can be described as having a honeycomb appearance?

ANS: Reticulum

5. What term is used to describe milk remaining in the mammary gland following the completion of milking?

ANS: Residual milk

6. The USDA's NOP regulates the standards for any farm, wild crop harvesting, or handling operation that wants to sell an agricultural product as organically produced. What does the acronym NOP stand for?

ANS: National Organic Program

7. How many hours of daylight does a long-day photoperiod provide?

ANS: 16-18 hours

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2020 Senior Dairy Quiz Bowl Questions Round 06

Phase B5 Questions Correct answers are worth 10 points each.

Only the team being asked the questions is to be in the room. Each team will be asked these 5 questions. Answers are to be given by a team captain, but assistance may come from any team member. A question may be repeated only once. Answers must be started within 20 seconds. Partial credit may be given at the discretion of the judges. After one team has been questioned, the other team will enter the contest room and be asked the same 5 questions.

- 1. Name 3 possible advantages to using a custom heifer growing operation?**

ANS: 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

- 2. Name 2 reasons why immature hay is more valuable as a feed for dairy cows than mature hay.**

ANS: Higher nutrient content; greater palatability; higher digestibility; lower fiber

- 3. Name 4 reasons a dairy cow may be culled from the herd.**

ANS: Low production; reproduction; feet and legs; injury; mastitis; udder; disease; disposition

- 4. Name 3 advantages of using artificial insemination over natural service.**

ANS: safety; genetic improvement; better disease control; better record keeping; easier to prove bulls; less expensive than keeping a bull

- 5. Bovine Leukosis Virus (BLV) is a retrovirus that infects lymphoid tissue and can be transmitted to cattle mainly by direct exposure with infected blood, saliva, semen and milk. Name 3 signs of BLV infection.**

ANS: Tumors in lymphoid tissues; weight loss; fever; rear limb weakness or paralysis; gastrointestinal obstructions; enlarged lymph nodes; decreased milk production; loss of appetite; protruding eyeballs; increased blood lymphocytes count

Phase C20 Questions Correct answers are worth 15 points each.

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Both teams are in the room for Phase C. The first contestant to signal will answer the question within 5 seconds after being acknowledged by the moderator. Failure to do so will cost that team 10 points. Any contestant answering a question without being acknowledged by the moderator will lose 10 points. If an answer is incorrect, members of the other team will have the opportunity to answer the question without having it reread except for true/false, either/or and yes/no type questions. If an answer is given in these types of questions, the question will be replaced with a tie breaker question, and given to the other team. No points are deducted for giving an incorrect answer. Team members are not allowed to discuss the answers in this phase. No partial credit is available in Phase C, except for bonus questions. If neither team can offer an answer to the question within 10 seconds, the moderator will give the answer and the question will be dropped but neither team will forfeit points.

1. In some herds, a “gomer” bull may be used. What is the function of this bull?

ANS: Heat Detection

2. How long can frozen colostrum safely be stored?

ANS: 1 year

3. What is most likely to be the limiting nutritional requirement for high producing dairy cattle?

ANS: Energy

4. What is the term used to describe the condition whereby a teat cup slides down the surface of the teat, often accompanied by a squawk?

ANS: Liner slip

5. How much does a gallon of milk weigh?

ANS: 8.6 pounds

6. What calving ease score would you assign to an animal who has had extreme difficulty during parturition?

ANS: 5

7. What is the most common type of manure storage on dairy farms?

ANS: Slurry manure storage

8. Which B vitamin has been shown to improve hoof health as well as milk production?

ANS: Biotin

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9. In reference to animal agriculture, what does CAFO stand for?

ANS: Concentrated Animal Feeding Operations

10. What is the name of the blister-like structure on the ovary that contains the egg before ovulation?

ANS: Follicle

11. What feedstuff is a by-product of ethanol fuel production?

ANS: Distillers grains

12. Which one of the following terms is used to measure the accuracy of a genetic valuation?

ANS: C) Reliability

13. At first calving, what percentage of mature weight should first calf heifers weigh?

ANS: 85%

14. During which season of the year is the demand for milk the highest?

ANS: Fall

15. What is the name of the Federal Milk Marketing Order that includes North Carolina?

ANS: Appalachian

16. In ruminants, glucose can be formed from this Volatile Fatty Acid (VFA) produced in the rumen. What is the name of this VFA?

ANS: Propionate

17. SPC stands for Standard Plate Count. Which one of the following does this measure in milk?

ANS: Bacteria count

18. On a milking machine, if the milk to rest pulsation ratio is set to 59: 41, what percent of the time is the inflation closed?

ANS: 41%

19. In the last few years, which one of the following sections of the U.S. has seen the greatest percentage decline in numbers of dairy farms?

ANS: Southeast

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20. What type of organism is ringworm?

ANS: Fungus

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1. What instrument is used to test the freezing point of milk to determine if water has been added?

ANS: Cryoscope

2. What metabolic disorder is associated with a magnesium deficiency and most often occurs in adult cows milking heavily and grazing lush green pastures?

ANS: Grass tetany

3. When comparing bulls for artificial insemination, what does the acronym ERCR stand for?

ANS: Estimated Relative Conception Rate

4. How many points are allotted for Feet and Legs on the PDCA Dairy Cow Unified Score Card?

ANS: 15

5. What is the predominant acid in anaerobically fermented corn silage?

ANS: lactic acid (also accept lactate)

6. In reference to respiratory function, what is the technical term for heavy, fast breathing?

ANS: Dyspnea

7. What is the term used to describe a group of dairy producers, such as the Maryland-Virginia Milk Producers, who joining together to market their milk?

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ANS: Cooperative

2020 Senior Dairy Quiz Bowl Questions Round 07

Phase B5 Questions Correct answers are worth 10 points each.

Only the team being asked the questions is to be in the room. Each team will be asked these 5 questions. Answers are to be given by a team captain, but assistance may come from any team member. A question may be repeated only once. Answers must be started within 20 seconds. Partial credit may be given at the discretion of the judges. After one team has been questioned, the other team will enter the contest room and be asked the same 5 questions.

- 1. Research in the last decade has concluded that milk has numerous benefits to the human body's health, including a reduction in some cancer types and improving intestinal health. Name 3 other positive benefits that drinking milk is attributed to.**

ANS: Control blood pressure; reduce heart disease; support healthy weight; enhance satiety; bone health; reduce the risk of Type 2 diabetes; hydration

- 2. Name 4 ways a cow can lose water.**

ANS: milk; urine; sweating; breathing; feces

- 3. Name 3 diseases in dairy cattle that are caused by a clostridial organism.**

ANS: black leg; malignant edema; overeating disease; tetanus

- 4. Give 3 reasons why fiber is needed in dairy cattle rations.**

ANS: Maximize dry matter and energy intake; maintain normal rumen function; maintain normal milk fat percentage; protect against post calving difficulty

- 5. Name 2 reasons why it is beneficial to dip a calf navel in iodine shortly after birth.**

ANS: Washes away dirt; kills germs and pathogens that could enter via the naval; aids in drying up the umbilical cord.

Phase C20 Questions Correct answers are worth 15 points each.

Both teams are in the room for Phase C. The first contestant to signal will answer the question within 5 seconds after being acknowledged by the moderator. Failure to do so will cost that team 10 points. Any contestant answering a question without being acknowledged by the moderator will lose 10 points. If an answer is incorrect, members of the other team will have the opportunity to answer the question without having it reread except for true/false, either or and yes or no type questions. If an answer is given in these types of questions, the question will be replaced with a tie breaker question, and given to the other

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team. No points are deducted for giving an incorrect answer. Team members are not allowed to discuss the answers in this phase. No partial credit is available in Phase C, except for bonus questions. If neither team can offer an answer to the question within 10 seconds, the moderator will give the answer and the question will be dropped but neither team will forfeit points.

- 1. Name the virus that causes small blisters on the teats followed by sores and scabs and is spread by the milker.**

ANS: cow pox

- 2. Typical milking unit inflations have a useful life of about how many milkings?**

ANS: 1200

- 3. What test is used to determine if raw milk has been added to pasteurized milk?**

ANS: Phosphate Test

- 4. What term is used to describe a cow who's rear hocks are too close?**

ANS: Cow- hocked

- 5. Lactobacillus bacteria are the good bacteria that are found in what dairy product that humans consume?**

ANS: Yogurt

- 6. What is the recommended cutting height for alfalfa to obtain the highest yields?**

ANS: 2- 2 ½ inches

- 7. How old is a calf when it starts to chew its cud?**

ANS: 2-3 weeks

- 8. The PDCA organization makes the scorecards for classifying dairy cattle. What does PDCA stand for?**

ANS: Purebred Dairy Cattle Association

- 9. What act established the Cooperative Extension System?**

ANS: Smith- lever (of 1914)

- 10. Phase1 of silage making is called the aerobic phase. What gas is produced and then released during this phase?**

ANS: CO2 (Carbon Dioxide)

- 11. What is the minimum number of mature cows that qualify a dairy farm as a Medium CAFO or medium concentrated animal feed operation?**

ANS: 200 cows

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12. How many grams of fat are in a cup of whole milk?

ANS: 8 grams

13. What is the term for the process in which sperm undergo a change in the female reproductive tract, enabling them to penetrate and fertilize the ovum?

ANS: Capacitation

14. Farms need to establish SOP's for all areas of its operation and for the employees. What do the letters SOP stand for?

ANS: Standard Operating Procedures

15. At or above what somatic cell count is a cow considered to have mastitis infection?

ANS: 200,000

16. How many weeks are fungicides effective for?

ANS: 2-3 weeks

17. What is the area in a nutrient management plan called that allows for the slowdown of runoff and filtration of water in runoff?

ANS: buffer strip

18. What is the technical name for the excess fluid accumulation in the udder?

ANS: Edema

19. What is the name of the enzyme that reacts with the fat in milk causing the release of fatty acids and results in rancidity?

ANS: Lipase

20. What is the name of the practice that is a financial incentive from the state or federal government to help farmers pay for equipment or practices that reduce pollution?

ANS: Cost share

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1. **What is the term for the fetal membrane which immediately surrounds the developing calf?**
ANS: Amnion
2. **What term is used to describe the net price received by farmers for milk? It includes all payments received for milk sold and any deductions for costs associated with marketing the milk?**
ANS: Mailbox price
3. **Proteins are chains of 50 or more amino acids. How many different amino acids are there?**
ANS: 20 amino acids
4. **Checking the space between a calf's eyeball and eyelid is one method of checking for what condition?**
ANS: Dehydration
5. **During the summer months farms need to have enough fan capacity to achieve air speed of how many miles per hour to cool the cows?**
ANS: 10-12 mph
6. **What does polled mean?**
Naturally born without horns
7. **What is the recommended time a TMR should be mixed for after the last ingredient is added to get a consistent mix?**
ANS: 2-3 minutes

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