

2004 Senior Dairy Quiz Bowl Questions

Round 03

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. Which nutrient is broken down by enzymes known as lipases?

ANS: Fat (or lipids)

2. In reference to DCAD (Dietary Cation-Anion Difference) which of the following is the definition of an anion?

- a) a positively charged ion or particle b) a negatively charged ion or particle
c) an ion or particle with a neutral charge

ANS: b) a negatively charged ion or particle

3. What is the name for milk that is remaining in the udder following the completion of milking?

- a) foremilk b) skim milk c) residual milk

ANS: c) residual milk

4. What is the common name for the disease BSE (Bovine Spongiform Encephalopathy)?

ANS: Mad cow disease

5. In the dairy cow's reproductive tract, where does fertilization of the ova take place?

ANS: oviduct

Phase C 20 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 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. What is the main advantage to using a “Brown Midrib” corn variety for silage?

- a) lower lignin content and greater fiber digestibility
- b) higher lignin content and lower fiber digestibility
- c) higher yields

ANS: a) lower lignin content and greater fiber digestibility

2. On average, what should the average daily gain (ADG) be for Holstein heifers from birth to 24 months of age?

- a) 3 to 4 pounds
- b) 2.5 to 3.0 pounds
- c) 1.8 to 2.0 pounds
- d) 1.0 to 1.2 pounds

ANS: c) 1.8 to 2.0 pounds

3. Which of the following is the most costly disease in dairy cattle:

- a) mastitis
- b) foot rot
- c) cystic ovaries

ANS: a) mastitis

4. When a herd develops a low milk fat test, the cause is often a deficiency of:

- a) protein
- b) energy
- c) fiber
- d) selenium

ANS: c) fiber

5. What do the initials ET stand for on a Holstein pedigree?

ANS: Embryo Transfer

6. What is the name of the enzyme that when added to milk to make cheese, causes the milk to coagulate and creates curds and whey?

- a) kinase b) amylase c) rennet

ANS: c) rennet

7. What normally happens to the lactating cow's body weight in the first month after calving?

- a) it increases b) it decreases c) it does not change

ANS: b) it decreases

8. Which mineral is associated with the prevention of goiter?

ANS: Iodine

9. You send a sample of corn silage from your trench silo to the lab for nutrient analysis. The report lists the dry matter of the silage at 32%. How many pounds of dry matter are in one ton (2000 pounds) of the silage?

- a) 680 b) 320 c) 640 d) 2000

ANS: c) 640

10. What happens to the pH of corn silage in a silo during a proper fermentation process?

- a) it increases b) it decreases c) it does not change

ANS: b) it decreases

11. What is the name of the method of determining pregnancy in cattle by sending sound waves through reproductive tissue?

ANS: Ultrasound (or ultrasonic imaging)

12. According to the Pasteurized Milk Ordinance (PMO), what is the minimum standard for solids-not-fat of homogenized whole milk?

- a) 3.25% b) 12.5% c) 8.25% d) 15%

ANS: c) 8.25%

13. "Saturated" fatty acids are completely hydrogenated. How many double bonds do "saturated" fatty acids contain?

- a) 2 b) 4 c) 6 d) none

ANS: d) none

14. What is the most concentrated source of energy in dairy cattle rations?

- a) starch b) fat c) protein d) carbohydrate

ANS: b) fat

15. Which of the following diseases is caused by a type of clostridium bacteria?

- a) acidosis b) ketosis c) blackleg d) white muscle disease

ANS: c) blackleg

16. What metabolic disorder does “propylene glycol” help to prevent in dairy cows?

ANS: Ketosis (Acetonemia)

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

ANS: American Dairy Science Association

18. When are the two times that a cow is most susceptible to becoming infected with coliform mastitis?

- a) peak lactation and dry off b) at calving and at dry off
c) peak lactation and mid dry period

ANS: b) at calving and at dry off

19. On a milking system, what prevents the vacuum from going too high?

ANS: Vacuum regulator or controller (accept regulator or controller)

20. What do we determine when we multiply the nitrogen fraction of a feed by the factor 6.25?

- a) energy content of the feed b) crude protein content of the feed
c) starch content of the feed

ANS: b) crude protein content of the feed

Bonus Questions Each bonus question is worth 20 points.

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 is the name of the foundation that provides funding support for the North Carolina Dairy Youth Program?

ANS: North Carolina Dairy Youth Foundation

2. Name the structure found on the ovary that is also referred to as a “yellow body”:

ANS: Corpus luteum

3. On the PDCA Dairy Cow Unified Score Card, how many points are assigned to the Frame category?

ANS: 15 points