

**2014 Senior Dairy Quiz Bowl Questions**

**Round 07**

**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. Acid-detergent fiber (ADF) in triticale increases as the plant matures. However, what happens to the neutral-detergent fiber (NDF) content of triticale as it matures in the field?**

ANS: NDF content increases

**2. Which compartment of the ruminant stomach has a lining that looks like a honeycomb and functions to trap wire, nails or other objects the cow may eat?**

ANS: Reticulum

**3. Which of the following is the main reason for not feeding excessive protein in the ration?**

**a) nitrogen toxicity      b) protein toxicity      c) it is expensive and wasteful**

ANS: c) it is expensive and wasteful

**4. When a calf dies on the farm, veterinarians often conduct a postmortem exam to find out the cause of death. What is another name for this postmortem exam?**

ANS: necropsy

**5. Who is considered to be the father of modern genetics?**

**a) Louis Pasteur      b) Gregor Mendel      c) Gustav DeLaval      d) Marie Curie**

ANS: b) Gregor Mendel

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 disease in calves that affects their muscles can be caused by a shortage of Vitamin E and Selenium?

ANS: White Muscle Disease

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

ANS: alleles

3. What waxy substance found in a cow's teat provides a barrier to bacteria?

ANS: Keratin

4. During heat stress, which one of the following times is closest to when a typical cow's internal body temperature peaks?

a) 11:30 p.m.      b) 11:30 a.m.      c) 7:30 p.m.      d) 7:30 a.m.

ANS: a) 11:30 p.m.

5. Why is Poloxalene often added to rations when cows are grazing alfalfa or clover?

ANS: to prevent bloat

6. What hormone is secreted by the corpus luteum?

ANS: progesterone

**7. In the dairy cow, what volatile fatty acid is the precursor for glucose?**

ANS: Propionate

**8. In reference to milk quality testing, what does P.I. stand for?**

ANS: Preliminary Incubation

**9. You purchase 100 pounds of 8-12-10 fertilizer. What does the number 10 mean?**

ANS: the fertilizer contains 10 percent potash or potassium

**10. When you "churn" cream, what product does it turn into?**

ANS: Butter

**11. What metabolic disease that occurs in early lactation dairy cows is often treated with propylene glycol?**

ANS: ketosis

**12. From egg to adult, how many days are in the fly life cycle?**

ANS: 10 days

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

ANS: lactic acid (also accept lactate)

**14. What is the term for a farm's unique identification number that is part of the National Animal Identification System?**

ANS: Premises I.D.

**15. What is the name of the virus that causes small blisters on the teats followed by sores and scabs and is spread by the milker?**

a) Staph aureus      b) cow pox      c) mastitis      d) metritis

ANS: b) cow pox

**16. What is the current U.S. legal limit for somatic cells in milk?**

ANS: 750,000 cells/ml

**17. A.I. organizations package semen in straws with each straw containing approximately:**

- a) 1000 to 3000 sperm cells
- b) 10 thousand to 30 thousand sperm cells
- c) 10 million to 30 million sperm cells

ANS: c) 10 million to 30 million sperm cells

**18. During the digestive process, what enzyme functions to break down fat (or lipids)?**

ANS: lipase

**19. What is the predominant class of immunoglobulins found in bovine colostrum?**

- a) IgA
- b) IgG
- c) IgM
- d) IgF

ANS: b) IgG

**20. A deficiency of what mineral has been associated with increased retained placenta in cows and white muscle disease in calves?**

ANS: selenium

**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. Which of the following is the main advantage to using a “Brown Midrib” variety for corn silage?**

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

ANS: c) lower lignin content and greater fiber digestibility

**2. Where is the streak canal located on a cow?**

ANS: in the teat

**3. Which one of the following accounts for the largest share of the expenses in producing milk?**

- a) labor      b) mastitis      c) feed      d) electricity**

ANS: c) feed