



# 2022 NATIONAL FFA DAIRY CATTLE EVENT

## HERD RECORD EVALUATION

Select the one cow that best answers each of the following ten questions.

**For questions 1 through 10, use the "herd record evaluation" attached to the quiz.**

1. Indicate which first lactation cow has the least impact on the somatic cell count in the bulk tank.
2. Select the cow which is the most significantly overweight.
3. Determine the first lactation cow with the highest expectation among the cows for the value of a future lactation's production, relative to the herd average.
4. Select which cow will be the next to be dried off after the testing date, assuming that breeding dates are accurate.
5. Indicate the cow having the most impact on the somatic cell count in the bulk tank.
6. Indicate which first lactation cow would be culled based on her production and reproduction status.
7. Select the first lactation cow that will transmit the lowest expected breeding value to her offspring for milk.
8. Which cow has the highest mature equivalent for milk?
9. Indicate which cow has the highest index value that selects for the improvement of milk, fat, and protein yield, somatic cell score and productive life.
10. Which cow should be the next one to calve after the testing date, assuming normal gestation length?

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## DAIRY MANAGEMENT EXERCISE

Select best answer for each of the following 40 questions.

1. Consequences of inbreeding in dairy cattle are:\_\_\_\_\_.
  - A. Decreased milk production
  - B. Decreased reproductive performance
  - C. Increased calf mortality
  - D. Slower growth rate
  - E. All of the above.
2. What are the two most common minerals used in footbaths on dairy farms that are actively involved in the formation of hard keratin in hooves?
  - A. Copper and Zinc
  - B. Copper and Biotin
  - C. Zinc and Iodine
  - D. Zinc and Calcium
  - E. Aluminium and Magnesium.
3. According to the PDCA Cow Unified Scorecard, which of the following is NOT a category on the scorecard?
  - A. Frame 15 pts
  - B. Udder 40 pts
  - C. Dairy Character 25 points
  - D. Feet and Legs 20 pts
  - E. Dairy Strength 25 points.
4. One of your recently fresh cows is ill. She has been receiving a high grain, low roughage diet. The consistency of the small amount of manure she produces is "putty-like". Your veterinarian detects a "pinging" sound when using his stethoscope. What is the most likely diagnosis?
  - A. Ketosis
  - B. Milk Fever
  - C. Grass Tetany
  - D. Left Displaced Abomasum
  - E. Rumen Acidosis.

5. Stephen Babcock was responsible for developing the Babcock Test in 1890 to detect what in milk?
  - A. SCC
  - B. Protein
  - C. White blood cells
  - D. Milk fat content
  - E. Antibiotic residues.
  
6. The USDA recently announced their Climate-Smart Agriculture and Forestry Partnership Initiative to fund \$1 billion in climate-smart practices from the CCC. What does CCC stand for?
  - A. Climate Clean Corporation
  - B. Climate Central Committee
  - C. Climate Commodity Corporation
  - D. Commodity Climate Credit
  - E. Commodity Credit Corporation.
  
7. What is a factor that influences the amount of water consumed by dairy cattle?
  - A. Calving ease
  - B. Udder cleft
  - C. Water temperature
  - D. Estrus
  - E. Withers.
  
8. Your milk hauler has just completed picking up milk from your farm and the bulk tank is now empty. How often should the bulk tank be cleaned and disinfected?
  - A. Every day
  - B. Every time it is emptied
  - C. Twice a day
  - D. After every milking
  - E. Once a week.

9. The United State Department of Agriculture's Census of Agriculture started in 1840 and is taken every 5 years. When will the next census happen?
- A. 2022
  - B. 2023
  - C. 2024
  - D. 2025
  - E. It just happened in 2021.
10. Which of the following factors can cause variation in conception rates on a dairy farm?
- A. Heat Detection
  - B. Nutrition
  - C. Cow health
  - D. Semen handling
  - E. All are factors that cause variation in conception rates.
11. One of the common steps of preparing a cow to milk is forestripping because it helps to release oxytocin and aids in the detection of what type of mastitis?
- A. All forms of mastitis
  - B. Clinical
  - C. Sub-clinical
  - D. Mycoplasma
  - E. It can't help to detect mastitis at all.
12. It is your job on the farm to mix the milk replacer to feed the calves. Temperature is a critical component of mixing it properly. How should you check to make sure it has been mixed at the proper temperature?
- A. Feel
  - B. Brix-Refractometer
  - C. Colostremeter
  - D. Thermometer
  - E. If the calf is willing to drink it or not.

13. The National Animal Health Monitoring System surveyed dairy farmers to determine what the most common criteria used for weaning a calf was. The results found which of the following criteria to be most common
- A. Weight
  - B. Height
  - C. Age
  - D. Outside Temperature
  - E. How much calf starter they were consuming.
14. The temperature outside in which a cow can maintain their own core body temperature without having to exert any extra effort to regulate either their heat loss or heat gain is called what
- A. Photoperiod
  - B. Respiration
  - C. Estrus zone
  - D. Thermoneutral zone
  - E. None of the above.
15. When reading bull proofs to select the best bull to use on your dairy heifers. PTA is listed on the proof. What does the acronym PTA stand for?
- A. Probable True Ability
  - B. Productive Transmitting Ability
  - C. Production True Ability
  - D. Predicted Transmitting Accountability
  - E. Predicted Transmitting Ability.
16. A DHIA milk production record may be terminated if what has happened to the cow?
- A. Dried off
  - B. Sold at the sale barn as a cull cow
  - C. Aborted
  - D. Died
  - E. All of the above are correct.

17. After reviewing your recent breeding history for the past month, you contact your nutritionist because you have identified the need to improve conception rates in your herd. She suggests you add what to your rations to improve conception rates because of larger ovarian follicles capable of producing more estrogen, larger corpus luteum and a decrease in embryonic loss?
- A. Fats
  - B. Carbohydrates
  - C. Vitamins
  - D. Minerals
  - E. Protein.
18. An example of a Class I use for milk would be to make\_\_\_\_\_
- A. Hard cheese
  - B. Ice cream
  - C. Chocolate Milk
  - D. Dried milk powder
  - E. Butter.
19. If the heat detection rate is 40% and the conception rate is 20%, what is the pregnancy rate?
- A. 15%
  - B. 20%
  - C. 60%
  - D. 8%
  - E. 45%.
20. In U.S. dairy herds the number 1 reason for culling dairy cows is?
- A. Low milk production
  - B. Lameness
  - C. Mastitis
  - D. Reproductive failure
  - E. Ketosis.

21. Which compartment of the ruminant stomach main function is the dehydration of partially digested feed?
- A. Reticulum
  - B. Omasum
  - C. Rumen
  - D. Abomasum
  - E. Small intestine.
22. Which of the following dairy breeds originated from a British Channel Island?
- A. Ayrshire
  - B. Brown Swiss
  - C. Guernsey
  - D. Holstein
  - E. Milking Shorthorn
23. Gestation length in dairy cattle can vary due to which of the following factors?
- A. All of the following
  - B. Breed of the cow
  - C. Season of the year
  - D. Number of calves carried
  - E. Age of the cow.
24. During a dairy farm visit with your FFA advisor, the dairy farmer asks you what might be wrong with his pre-weaned calves. He provides the following information for you from calves experiencing problems: black feces that looks like engine oil, loose stools, and a few calves have died as a result. Based on these symptoms and signs, you suspect which issue to be causing the problem?
- A. Abomasal ulcers
  - B. Ketosis
  - C. Displaced abomasum
  - D. Feed Refusal
  - E. Heat Stress.

25. As an A.I. sales representative, a dairy producer asks you to help select bulls to improve his future heifers to have the best feet and legs possible. You recommend which of the following bulls to help achieve this goal:
- A. Lionel FLC -0.24
  - B. Ethics FI 2.9
  - C. Coffee FLC 1.25
  - D. Babcock REL 90
  - E. Yolo PL 2.2.
26. The local veterinary has invited you to do a herd visit with him to determine why there is an increase in cows not getting bred each month. You are asked to observe the breeding preparation and procedures. The A.I. Technician removes the straws of semen from the tank and lets them thaw in an 85 degree water bath. After the straws have been in the water bath for 15 seconds, the technician loads the breeding gun to service the cows. You suspect the reason why the cows are not getting bred is because:
- A. The water bath is not warm enough to thaw the semen
  - B. The semen straws are not staying in the water bath long enough to thaw
  - C. The A.I. Technician needs to be retrained on proper thawing procedures
  - D. There should be no reason why the cows aren't getting bred because the procedures are being correctly followed
  - E. A, B, and C are correct.
27. To help improve the conception of cows in #23, what is the recommended minimum length of time frozen semen should be thawed in a warm water bath to maximize the number of motile sperm?
- A. 15 seconds
  - B. 20 seconds
  - C. 30 seconds
  - D. 40 seconds
  - E. 2 minutes.
28. BioPRYN blood test used to determine what in dairy cattle?
- A. Pregnancy
  - B. Nitrate toxicity
  - C. Mastitis
  - D. Dystocia
  - E. Prolactin.

29. It is time to load your cows to bring them to come home to calve. To be successful in moving the cows you make sure to be mindful of the area where the cows do not want any foreign objects entering. This area is commonly known as?
- A. Blind spot
  - B. Flight zone
  - C. Comfort zone
  - D. Point of balance
  - E. Both A and C.
30. Which of the following is NOT considered a macromineral?
- A. Phosphorus
  - B. Potassium
  - C. Sodium
  - D. Iodine
  - E. Sulfur.
31. What is a more common name for erythrocytes?
- A. Red blood cells
  - B. White blood cells
  - C. Leukocytes
  - D. Somatic Cells
  - E. Peptides.
32. Which of the following is the name of the organization that is charged with evaluating genetic traits of dairy cattle?
- A. World Dairy Expo
  - B. Animal Improvement Programs Laboratory
  - C. Dairy Business Association
  - D. Dairy Herd Improvement Association
  - E. National Dairy Shrine.
33. What is the name of the hormone produced by the pituitary that is known as the milk formation hormone?
- A. Prolactin
  - B. Progesterone
  - C. Follicle Stimulating Hormone
  - D. Oxytocin
  - E. Relaxin.

34. The following information is listed concerning a cow:

**365                      3X                      44,828                      3.8                      1703                      3.0                      1344**

Which of the following is not correct.

- A. 365-day lactation
- B. Milked two times per day
- C. Milk contained 3.8 % milk fat
- D. Milk contained 3.0% protein
- E. 44,828 pounds of milk produced.

35. What reproductive hormone tends to be high in lactating, pregnant cows?

- A. Oxytocin
- B. Progesterone
- C. Prostaglandin
- D. Relaxin
- E. Estrogen.

36. If the MUN level is considered high, which nutrient is likely to be in excess?

- A. Fats
- B. Carbohydrates
- C. Vitamins
- D. Minerals
- E. Protein.

37. What metabolic disorder is caused by a deficiency of blood calcium related to an imbalance of calcium, phosphorus, and Vitamin D?

- A. Parturient paresis
- B. Ketosis
- C. Grass Tetany
- D. Fatty Liver
- E. Displaced Abomasum.

38. Recently your cows have been experiencing less production, lower butterfat, and sick cows that never seem to recover. What could be the cause of these symptoms?
- A. Ketosis
  - B. Milk Fever
  - C. Johne's
  - D. Hardware
  - E. Rumen Acidosis.
39. Which condition is a result of the fetal membranes remaining within the uterus for an extended period of time after calving?
- A. Retained Placenta
  - B. Involution
  - C. Separation of tissues
  - D. Metritis,
  - E. Endometritis.
40. What is considered the universal standard criteria for breeding dairy heifers?
- A. Body weight
  - B. Age
  - C. Height at the withers
  - D. Rump Width
  - E. All of the above.

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