

**HOLSTEIN FOUNDATION  
AYRSHIRE QUIZ BOWL  
2026 PRACTICE QUESTIONS**

1. Information about which side of the family is shown on the bottom half of the pedigree?

Maternal side (dam or mother's ancestry)

2. When posing a cow in a show, how should the rear legs be set?

Foot closest to the judge slightly forward

3. How many stalls are there in a double-12 herringbone parlor?

24 stalls

4. During the herd milking schedule, when should mastitis infected cows be milked?

Last

5. How many years old is the annual National Ayrshire Convention?

150 years

6. On a dairy farm, what does the term herringbone refer to?

Milking parlor

7. The first DHI cow testing association was established in what state?

Michigan

8. Which dairy breed's milk has the highest percentage of butterfat on average?

Jersey

9. During which stage of the dry period is the chance of udder infection the lowest?

During the middle

10. Body energy and nutrient reserves can be replenished with most ease during which stage of lactation?

Late lactation

11. Feeding proper rations during the summer is important for both cow comfort and maintaining milk production. Which nutrient is most important during the summer months?

Water

12. What part of the cow is ideally described as lean, incurving to flat and wide apart from the rear?

Thighs

13. When a cow is stressed, how many minutes will it take for her heartbeat to slow down?

20 to 30 minutes

14. What is the average weight of a mature Ayrshire cow?

1,300 pounds

15. What is the average duration a cow in heat will stand to be mounted?

4 to 6 seconds

16. What is the common name for calf diarrhea?

Scours

17. When we refer to the Dietary Guideline for Americans, what is considered a serving of milk or yogurt?

1 cup

18. A low level of progesterone is associated with what pregnancy status of a cow?

Cow is not pregnant

19. Most farmers try to harvest first-cut alfalfa when it is in what stage?

Late-bud stage

20. What type of parlor has become popular because of the constant movement and easy automation? It is often referred to as carousel.

Rotary

21. What is the name for the record of an animal's ancestry which provides genetic and performance information on an individual animal and its ancestors?

Pedigree

22. Approximately how many gallons of blood pass through the udder for each gallon of milk produced?

400 to 500 gallons

23. What is the PDCA maximum allowable limit for topline hair in the showring?

1.5 inches

24. What is the most costly disease affecting the dairy industry?

Mastitis

25. A second or later lactation cow produces half of her total lactation production in approximately how many days, after calving?

120 days (+/-10)

26. What is the part of the back that lies between the withers and the middle of the back called?

Chine

27. Injecting cows with a hormonal form of what vitamin before calving may reduce the incidence of milk fever?

Vitamin D

28. Increased consumption of soft drinks has caused a large gap in the recommended daily amount of what mineral needed by teenagers?

Calcium

29. What generally happens to a cow's body weight during the first 90 days of her lactation?

Decreases

30. Why should a teat dip be used after milking?

To reduce or prevent udder infections

31. When you mate two purebred animals of different breeds, what is it called?

Crossbreeding

32. On what day must a heifer be born to be the oldest possible animal in the fall heifer calf and fall yearling heifer classes?

September 1

33. What do the initials USDA stand for?

United States Department of Agriculture

34. At the end of an animal's registration name, what does the abbreviation ET stand for?

Embryo Transfer

35. What is a mature bovine male called?

Bull

36. The oldest cow ever to live was 49 years old. In what country was she from?

Ireland

37. An Ayrshire must be what percent purebred or higher to participate in ABA programs?

87.5%

38. In dairy cattle reproduction, what do the letters A.I. stand for?

Artificial Insemination

39. Which part of a dairy animal's stomach is referred to as the true stomach?

Abomasum

40. Mange is contagious and tends to occur in dairy cattle housed in close proximity, especially during what season?

Fall or winter

41. Chromosomes are found in what part of the cell?

Nucleus

42. What accounts for the greatest percent of milk production costs on most dairy farms?

Feed

43. Which stomach compartment squeezes most of the water out of the feed it receives?

Omasum

44. A cow should spend how many hours a day lying in the stall resting?

10 to 14 hours

45. Cows produce methane gas. They burp frequently to release the gas from the rumen during normal digestion. If the burping or eructation mechanism becomes paralyzed, gas is trapped, and the cow then becomes what?

Bloated

46. DNA testing is a means of verifying parentage. What type of sample is needed for the lab to best identify DNA markers?

Hair sample from switch or tissue sample

47. What is the normal optimal soil pH for the majority of field crops?

6.2 to 7.0 pH

48. In what gland is bST produced naturally by the cow?

Pituitary gland

49. Grass tetany is a disease linked to the shortage of what element normally found in soil and plants?

## Magnesium

50. How many chromosomes does a cattle embryo have?

60 chromosomes or 30 pairs

51. At what age does youth membership expire through the Ayrshire Breeders' Association?

21 years old

52. How many permanent teeth does a mature dairy cow have?

32 teeth

53. What is the common name for infectious keratoconjunctivitis (care-a-toe-con-junk-tiv-i-tis)?

Pinkeye

54. How much does it cost to transfer an Ayrshire less than 60 days from the date of sale on the rewards program?

\$15.00

55. How many pounds of water does a cow need to consume to produce one pound of milk?

4-6 pounds (water weighs 8.34 pounds per gallon)

56. What disease in humans is a weakening of the bones through loss of calcium and other minerals?

Osteoporosis

57. Percent carbohydrate reserves in alfalfa roots are greatest during which stage of plant growth?

Full bloom

58. Which basic nutrient group provides the cow's major source of energy?

Carbohydrates

59. What name is given to the surrogate mother in embryo transfer work?

Recipient

60. Your veterinarian says that a cow is in the first trimester. What does that mean?

First 3 months of pregnancy

61. In which stomach compartment does metal accumulate?

Reticulum

62. In what city was the first National Dairy Show held?

Chicago

63. What do the initials DBH stand for?

Difficult Births in Heifers

64. What health problem can be caused by liner slippage during milking?

New udder infections or mastitis

65. If a cow has an interdigital foot infection, where is it located?

Between the toes

66. What is subclinical mastitis?

Infection of udder that is not visible

67. The Charm II, gas chromatography and the Signal are tests used to determine levels of what in milk?

Antibiotic levels

68. Rumen bacteria digest carbohydrates to produce volatile fatty acids which are absorbed into the blood and used for what?

Energy

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

Distillers grains

70. What hormone is injected into cattle to cause superovulation?

Follicle Stimulating Hormone

71. What is parturition?

Calving or giving birth

72. Once a straw of semen has been thawed it should be used to inseminate a cow within how many minutes.

10 to 15 minutes

73. What term is used to describe substances that have low pH values?

Acidic

74. What is the recommended temperature to thaw semen?

95 - 98 F

75. Which vitamin deficiency may result in respiratory diseases, night blindness, scours, rough hair coat and reproductive failure?

Vitamin A

76. How can people get infected with tuberculosis?

Drinking unpasteurized milk from infected cows or contaminated water

77. On what day must a heifer be born to be the oldest possible animal in the winter heifer calf and winter yearling classes?

December 1

78. Which milk quality check is performed after holding milk at 55 degrees for 18 hours and determining the bacteria plate count from the milk?

Preliminary Incubation (PI) counts

79. Name the greatest danger attributed to tower silos.

Silo gas or nitrogen dioxide

80. What muscle keeps the teat end closed and helps prevent bacteria from entering the udder?

Sphincter muscle

81. Name the 2025 National Youth Ambassador winner.

Kat Leach

82. What is the name of the waxy substance in the teat duct which helps provide a physical barrier to bacteria?

Keratin

83. Moisture content of a compost mixture should be what percent?

50 to 60%

85. When a cystic follicle is properly treated, it will ovulate to form what structure?

Corpus Luteum

86. When removing manure from a storage pit, what typically must be done to minimize solids accumulation and create a uniform fertilizer for field application?

Agitate manure

87. How are copper sulfate and formalin frequently used in a herd health program?

Foot bath

88. What happens to the nitrate levels of corn after it has been ensiled?

Lowers

89. When discussing production records, what do the initials FCM stand for?

Fat corrected milk

90. What enzyme is deficient in people who are lactose intolerant?

Lactase

91. Which hormone is produced by the pancreas and promotes mammary cell growth and cell division?

Insulin

92. Name two organs in the cow's body that undergo normal involution.

Mammary gland (udder) and uterus

93. How many teeth does a cow have on the front of the upper jaw?

None (dental pad)

94. According to the Center for Disease Control and Prevention, hand washing is the single most important measure for preventing the spread of infection and disease. Washing for at least how many seconds is a guideline to ensure thoroughness?

20 seconds

95. In a feeding program, what do the initials NPN stand for?

Nonprotein Nitrogen

96. Coffee is rich in antioxidants and, when consumed with milk, it is an excellent source of what?

Calcium

97. What is another term for bypass protein that excludes unavailable or heat-damaged protein?

Protected protein, rumen undegraded protein or undegraded intake protein

98. Which stomach compartment secretes a gastric juice that contains hydrochloric acid?

Abomasum

99. What term is used to describe forages that are seeded every year, and whose growth is completed in one crop year?

Annuals

100. What is the maximum number of points given for udder cleft?

5 points

101. In herd health, what disease do the initials BLV stand for?

Bovine Leukosis Virus or Bovine Leukemia Virus

102. Name the Operations Manager of the Ayrshire Breeders' Association.

Amy Fletcher

103. In which specific organ do follicular and luteal cysts occur?

Ovaries

104. What is the major protein in milk called?

Casein

105. What term measures the proportion of confirmed pregnancies relative to the total number of inseminations in a given time period?

Conception rate

106. In what part of the digestive system are protected fats digested?

Small intestine

107. What term describes when a heifer has a negative experience the first time she enters a headlock?

Fear memory

108. What is the name of the instrument used to measure the level of antibodies in colostrum?

Colostrometer or Brix refractometer

109. In bovine health, what do the initials BTV stand for?

Blue Tongue Virus

110. In which stomach compartment of a calf is the enzyme renin produced?

Abomasum