

# **Holstein Foundation 2024 Dairy Bowl Practice Questions**

1. Ideally, what time of day should soil temperature readings be consistently taken?

Morning

2. It is estimated that a footbath needs to be refilled every how many cow passes?

150 to 300 passes

3. Name the Director of the Holstein Foundation.

Diedra Harkenrider

4. One-third of all milk produced every year in the U.S. goes toward what?

Making cheese

5. Dairy cows from which region of the U.S. consume the most by-products?

West

6. What is the recommended tractor speed for mowing hay?

8 to 15 mph

7. How often should a bulk tank be cleaned and disinfected?

Every time it is emptied

8. Where will Class 13 of the Young Dairy Leaders Institute be held?

Tampa, FL

9. What is the recommended bedding to keep young calves warm during the winter?

Straw

10. After udder stimulation how long does it take for the cow to reach optimal oxytocin levels?

1 to 2 minutes

11. Abomasal displacement most often occurs to which side?

Left

12. According to the 2022 U.S. dairy statistics, which state has the greatest number of cows in the U.S.?

California

13. A calf's body is what percent water?

70%

14. Once regarded as the low value byproduct of cheese making, what was often dumped down drains or spread on fields?

Whey

15. What is known as the failure to expel fetal membranes within 24 hours of calving?

Retained placenta

16. Soybean meal mainly provides what nutrient to the dairy ration?

Protein

17. What body condition score should a cow be at dry-off?

3.0 to 3.5

18. Name the top dairy trading partner for the U.S.

Mexico

19. What is the biggest disadvantage of using straw for bedding?

Dirtier faster

20. What is the main form of cow housing on U.S. dairy farms accounting for thirtynine percent?

Tie stall barns

21 The Dietary Guidelines for Americans recommends children 4 to 8 years old consume how many cup-equivalents of fat-free and low-fat dairy per day?

2.5 cup-equivalents

22. Holstein Association USA and what university have partnered to establish a research, development, and demonstration center for the dairy industry at the school's dairy farm?

Western Kentucky University

23. What natural substance seals the teat canal during a cow's dry period?

Keratin

24. What size ice cream container is the most purchased size?

Half-gallon

25. If a calf has watery scours within the first 2 to 4 days of life, it is likely that the source is what bacteria?

E. coli

26. Cows that have recently calved experience a drop in blood concentration of what mineral?

Calcium

27. What state has the greatest number of dairy farms?

Wisconsin

28. What is the most dangerous symptom of scours?

Dehydration

29. What part of the calf works as an insulator by trapping air and creating a boundary between the body and chilly outside air?

Hair coat

30. When using manure solids for bedding, it should be dried to what percent dry matter to avoid excessive moisture?

60 to 65% dry matter

31. What can cause delays in circulating testosterone concentrations, delayed puberty, and decreased testicular size during the peripubertal period?

Inadequate nutrition

32. Low-bacteria colostrum may be stored at 39 degrees F for how long before feeding?

48 hours

33. What is the target pH for corn silage?

3.7 to 4.2 pH

34. The longest particles of a ration will be retained on the top sieve of a Penn State Particle Separator. That sieve has openings that are how big?

19 millimeters or .75 inches

35. Electrolytes can be fed by a nipple bottle or pail if the calf will drink voluntarily. If a calf is too weak or refuses to suck, what tool should be used?

Esophageal feeder

36. Since the Federal Milk Marketing Order reforms implemented in 2000, what has been the mechanism to price the supermajority of the nation's milk?

Multiple Component Pricing (MCP)

37. Name a major problem from chopping whole plant corn at too long of cut?

Poor packing in the silo, more sorting in feed bunk; poor corn silage kernel processing

38. What is the best way to ensure that no drug residues remain in meat or milk sold?

Keep accurate records of treatment

39. What stage of calving is characterized by dilation of the soft tissue of the birth canal?

Stage II

40. How many follicular waves are seen in a typical estrous cycle?

2 or 3 follicular waves

41. Liquid nitrogen in semen tanks is kept at what temperature?

-320 to -321 degrees F

42. What vitamin is derived from carotenoids found in plants and serve a wide range of functions to the animal?

Vitamin A

43. What is defined as the ideal range of temperatures that cows prefer?

Thermoneutral

44. What do we call the total energy available in a feed?

Gross energy

45. Name the Dairy Systems Manager of World Dairy Expo.

Laurie Breuch

46. Net wraps have improved baling and storage by what percent through a reduction in dry matter losses and moisture spoilage?

30%

47. How many sexed sperm are contained in one straw of semen?

2 million (traditional would be about 10 million)\*\* ST Genetics markets a "4M" (4 million)

48. When checking cornfields, frequently potassium is the blame for discoloring, however what is the true reason?

Limited water supply

49. A new form of hardware disease is becoming popular as plastic finds its way into a dairy cow's diet. What is this condition called?

Software or plastic disease

50. For its first 50 years, where was the National Intercollegiate Dairy Cattle Judging Contest held?

Waterloo, IA

51. Once again inbreeding rates have taken off with what three countries leading the pack?

U.S., Canada, and Italy

52. During the summer, good ventilation includes controlling heat and cooling the animals. In the winter, what is the other purpose that comes into play?

Removing moisture

53. When planting soybeans, early-season control programs need to be geared toward weeds that emerge when air temperatures are between 40 degrees F and what temperature?

70 degrees F

54. In business terms, what does COP stand for?

Cost of production

55. What should be the minimum air speed in the cow resting area to avoid heat stress?

2.25 mph

56. What should be supplemented to calves that are dehydrated?

Oral electrolytes

57. The GCI is on track to award more than \$5 million in grants to fund research projects focused on decreasing enteric methane in the dairy and beef industries after receiving an unprecedented amount of research proposals. What does GCI stand for?

Greener Cattle Initiative

58. Through ingestion of quality colostrum after birth, calves acquire maternal immunoglobulins. This process is commonly referred to as what?

Passive transfer of immunity

59. Name the graphic designer of *The Pulse*.

Kayla Wright

60. Since its inception in 2002, what organization has been supporting growth and education for the dairy industry?

Professional Dairy Producers Foundation

61. What is known as a cold stressed illness that occurs when the core body temperature falls below 95 degrees Fahrenheit?

Hypothermia

62. On average, alfalfa has about 8% internal ash, while grass has what percent internal ash?

6%

63. Of the 240 million acres of U.S. cropland devoted to seven major crops, livestock manure is only applied to what percent?

7 to 9%



64. Amino acids are particularly important for dry cow rations. What are the two most limiting amino acids typically for cows?

Methionine and lysine

65. The gut accounts for what percent of all metabolic and protein synthesis in dairy cows?

30%

66. What is the disease referred to as HBS, and is a sudden death disease of adult dairy cows and was first reported in the early 1990's?

Hemorrhagic bowel syndrome, jejunal hematoma or jejunal hemorrhage syndrome

67. The Environmental Protection Agency and Army Corps of Engineers announced a final rule establishing a definition of WOTUS. What does WOTUS stand for?

Waters of the United States

68. The Grade A Pasteurized Milk Ordinance, which governs the state regulatory agencies in the implementation and enforcement of their Grade A milk safety program, requires that all bulk milk tankers be sampled and analyzed for what type of residues before the milk is processed?

Animal drug residues

69. What is calculated by multiplying heat detection rate and conception rate?

Pregnancy rate

70. June is National Dairy month, and Nelson-Jameson, a leading distributor in the food processing industry, is kick-starting the celebration and debut of what countrywide contest?

Art contest

71. With the boom in anaerobic digestion system installations and a growing interest in carbon credits, the potential for on-farm production of what may not be far off?

Biochar

72. What is the name of the genetic defect in Holstein cattle characterized by otherwise healthy animals that are unable to stand?

Early Onset Muscle Weakness Syndrome  
(Calf recumbency also acceptable)

73. Butterfat hit a new record with U.S. milk averaging what percent last year?

4.08% butterfat

74. Thirty-seven dairy companies representing more than 90% of the school milk volume in the U.S. have signed on to the Healthy School Milk Commitment. The voluntary effort is spearheaded by who?

International Dairy Foods Association

75. Name one way to control or limit potato leafhopper damage to alfalfa.

Insecticide application, planting resistant varieties or cutting alfalfa hay early

76. When integrating beef embryos into your herd you should select the correct recipients to increase success. Selecting only first, second, or third-lactation cows with no more than how many services is recommended?

Three services

77. Name the three primary macronutrients needed by the plant in crop production?

Nitrogen, phosphorus, and potassium

78. What ligament supports the uterus, oviducts, and ovaries?

Broad ligament

79. What is it called when the uterus shrinks back to normal, nonpregnant size and function?

Involution

80. How many inches is the most accepted row spacing for corn planting?

30 inches

81. What corn nutrient deficiency results in reddish-purple leaves, delayed maturity, poor root growth, and poor overall productivity?

Phosphorus

82. The energy value of whole-plant corn silage is primarily related to what silage constituent?

Starch

83. What is the single largest food assistance program in the United States?

Supplemental Nutrition Assistance Program (SNAP)

84. The American Association of Bovine Practitioners declared in 2019 that pain management should be the standard of care for what in calves?

Horn removal

85. On an annual basis, more than how many million people received food assistance subsidies over the last 10 years?

40 million

86. What is longevity defined as?

Long existence

87. Ringworm lives outside of the immune system, where?

On the skin

88. You purchased 100 pounds of 8-12-10 fertilizer. What does the number 8 mean?

Fertilizer is 8% nitrogen

89. Dark color and a burnt odor are general indicators of what problem in silage?

Heat damage

90. Proper teat dip procedures require how much of the teat be coated?

Three-quarters of all sides

91. At a minimum, calves require what percent of their body weight, preferably more, in milk each day?

10%

92. Under what degree threshold in Fahrenheit is the temperature at which young calves under 21 days old must expend energy to stay warm, limiting energy available for immune function and growth?

Under 60 degrees F

93. Name the three ways teat end shape is classified.

Flat, round and pointed

94. Most cows should reach their lowest body condition score at how many days in milk?

38 to 45 days

95. In 2022, U.S. suppliers had their best year for what type of exports since 2013, as sales rose 43%?

Butterfat

96. What region received the highest mailbox price in 2022?

S. Missouri

97. Cows average 1.5 mounts an hour, and mounting activities last for how many seconds during estrus?

4 to 6 seconds

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

6.2 to 7.0 pH

99. What menu item whose creation was supported by dairy checkoff quickly gained iconic status with Taco Bell fans, has become a permanent selection at the restaurant?

Grilled Cheese Burrito

100. What do we call the process by which the first streams of milk are expressed from each teat before milking?

Forestripping

101. Manure can be a great source of what in today's agricultural industry?

Fertilizer

102. It is not uncommon for what percent of the lactating cow herd to be repeat breeders?

15 to 25%

103. Heifers reach puberty around 45% of their mature body weight at how many months old?

9 to 11 months

104. E. coli reduction requires cleanliness in the maternity pen, as it lives in the intestinal tract and is transferred via what?

Feces

105. Once rarely seen in dairy herds, serovar Dublin is now the most common form of what found on dairies?

Salmonella

106. What is defined as a female fertility trait predicting the percentage of nonpregnant cows that become pregnant during each 21-day period compared to breed base average?

Daughter Pregnancy Rate