

## 2011 National FFA Dairy Cattle Event

### Dairy Management Exercise

Select the best answer for each of the following 50 questions.

**For questions 1 through 15, use the “herd reports” which are attached to the quiz.**

1. Which herd currently has the highest average genetic level for protein yield?
2. In which herd will calves born over the next year have the lowest estimated genetic merit for milk yield?
3. Which herd shows the least change in genetic producing ability for milk from current cows to that for the daughters expected from current matings?
4. In which herd did the cows have the highest average protein test for the last year?
5. Which herd has the lowest percentage of cows with high somatic cells in the second lactation?
6. Which herd currently has the most successful breeding program in terms of getting cows pregnant again quickly after calving?
7. Which herd shows the worst mammary health within the second lactation cows?
8. Which herd has had the least success in getting heifers to calve at an early age?
9. Which herd has the longest calving interval for the past year?
10. Which herd produced the most energy-corrected milk for first lactation cows in the month of September?
11. Which herd appears to have the greatest increase in size over the past year?
12. In which herd would you expect the lowest nutrient demand when balancing a current ration for the milking cows?
13. Which herd has the lowest proportion of dry cow days for the current month?
14. Which herd appears to have the smallest range in ages of cows?
15. Which herd has the lowest average fat yield on an age corrected basis?

16. Which group consumes the most water on a dairy: a) dry cows, b) heifers, c) calves, d) lactating cows, e) all of the above.
17. How long should cows stand before lying down after milking to minimize teat exposure to environmental pathogens? a) 90 minutes, b) 30 minutes, c) 45 minutes, d) 15 minutes, e) 0 minutes.
18. How much does a block of cheese weigh? a) 5 pounds, b) 10 pounds, c) 20 pounds, d) 30 pounds, e) 40 pounds.
19. Manure run off from a field is most likely to occur in what season? a) winter, b) fall, c) summer, d) spring, e) the chance is the same all year long.
20. For a high producing mid-lactation cow the average body condition score should be: a) 2.00, b) 2.50, c) 2.75, d) 3.00, e) 3.25.
21. A hundred weight (cwt) weighs how many pounds? a) 25 pounds, b) 50 pounds, c) 100 pounds, d) 200 pounds, e) 250 pounds.
22. Lameness annually averages what percent among dairy herds? a) 25 to 30%, b) 0-10%, c) 30 to 40 %, d) less than 5%, e) greater than 40%.
23. This state made it illegal to dock the tail of any horse or cow in January 2010: a) Wisconsin, b) Ohio, c) Michigan, d) Oregon, e) California.
24. Which of the following is not a fat-soluble vitamin? a) Vitamin A, b) Vitamin B, c) Vitamin D, d) Vitamin E, e) Vitamin K.
25. Which cow stomach compartment allows it to eat coarse feeds such as haylage? a) omasum, b) abomasum, c) rumen, d) small intestine, e) reticulum.
26. The best genetics on a farm generally belong to which of the following groups? a) calves, b) yearlings, c) first calf heifers, d) old cows, e) all of the above.
27. What is parturition? a) chewing, b) calving, c) harvesting silage, d) milking, e) medication.
28. What percentage of all milk sold in the U.S. is pasteurized? a) 78%, b) 82%, c) 91%, d) 99%, e) 100%.
29. Potassium carbonate can be sprayed on hay for what purpose? a) reduce drying time, b) preserve wet hay until it dries, c) increase digestibility, d) increase palatability, e) all of the above.

30. When is the best time to feed anionic salts to prevent milk fever? a) dry off, b) 1 month prior to calving, c) 2 weeks before calving, d) 1 week before calving, e) at calving.
31. What is the major buffer produced by cows that assists in maintaining optimum rumen pH? a) cellulose, b) calcium, c) phosphorus, d) lipids, e) saliva.
32. The breed with the highest average solids-not-fat content (%) in milk is: a) Ayrshire, b) Brown Swiss, c) Guernsey, d) Holstein, e) Jersey.
33. Which of the following is a part of the reproductive tract of the bull? a) ovaries, b) Cowpers gland, c) vulva, d) cervix, e) none of the above.
34. An increase in what compound is the result of rapid degradation of adipose tissue in the cow's body? a) amino acids, b) ammonia, c) fatty acids, d) peptides, e) ketones.
35. Which of the following is NOT a postpartum disease of dairy cattle? a) abortion, b) milk fever, c) retained placenta, d) obturator paralysis, e) prolapsed uterus.
36. This process breaks down fat globules down to a small, uniform size. a) pasteurization, b) equalization, c) homogenization, d) clarification, e) standardization.
37. Milk used for ice cream would be classified as what? a) Class I, b) Class II, c) Class III, d) Class IV, e) No class exists for this use.
38. On the Unified Dairy Cow Score Card, the category "rear feet and legs" accounts for how many points? a) 10, b) 15, c) 20, d) 25, e) 40.
39. If the heat detection rate is 30% and the conception rate is 40%, what is the pregnancy rate? a) 7%, b) 12%, c) 15%, d) 35%, e) 70%.
40. Which nutritional disease is most often associated with laminitis? a) Johne's, b) arthritis, c) ketosis, d) acidosis, e) traumatic gastritis.
41. Which body part on a cow is used as the reference point to determine the height of the udder floor? a) hook, b) teat length, c) hock, d) tail, e) vulva.
42. Which of the following are reasons that results in poor quality colostrum? a) pre-milking, b) young cow, c) dirty udder and teats, d) leaking teats, e) all of the above.

43. Which volatile fatty acid produced by the rumen is the primary source of energy and milkfat? a) acetic acid, b) butyric acid, c) propionic acid, d) none of the above, e) all of the above.
44. Which of the following is not an example of an environmental mastitis-causing pathogen? a) E. coli, b) Staph aureus, c) Klebsiella, d) Strep. dysgalactiae, e) Strep. uberis.
45. What is the minimum percentage of total solids-not-fat content in the legal definition of milk? A) 6.75%, b) 7.25% c) 8.%, d) 8.25%, e) 9.25%.
46. The ideal temperature range for dairy cattle is 25 to 65 degrees F. In which of the following ways can a dairy cow lose body heat through: a) convection, b) conduction, c) radiation, d) evaporation, e) all of the above.
47. The estrous cycle consists of four stages. Which of the following is not one of the four stages? a) monoestrus, b) metestrus, c) diestrus, d) estrus, e) proestrus.
48. The current genetic model for evaluating bulls and cows is which of the following: a) PTA, b) animal model, c) net merit model, d) TPI, e) herdmate comparisons model.
49. Which of the following diseases is characterized by a cow that gains too much weight during the late lactation or the dry period? a) fat cow syndrome, b) Johne's, c) overeating disease, d) ketosis, e) BVD.
50. Which of the following factors should be considered when planning a waste management system? a) environmental, b) social, c) operational, d) legal requirements, e) all of the above.

## 2012 National FFA Dairy Cattle Event

### Herd Record Evaluation

Select the one cow that best answers each of the following 10 questions.

**For questions 1 through 10, use the “herd record evaluation” which is attached to the quiz.**

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

## 2012 National FFA Dairy Cattle Event

### Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. The Purebred Dairy Cattle Association revised the Showmanship scorecard in 2011. In place of factors to be evaluated and points breakdown, showmanship evaluations now will be categorized on what three levels of severities of discrimination for the exhibitor and animal? a) slight, b) moderate, c) severe, d) all of the above, e) none of the above.
2. The process that adds vitamins to milk is called? a) clarification, b) standardization, c) pasteurization, d) separation, e) fortification.
3. During a cow's lactation: a) 2/3's of the milk is produced during the first half, b) cows usually will peak in the second or third month, c) for each pound of milk added on to peak, there will be 200 to 240 more pounds, d) all of the above e) none of the above.
4. Dairy producers give oral calcium salts to cows to prevent what disease? a) mastitis, b) ketosis, c) infertility, d) milk fever, e) udder edema.
5. Frozen colostrum on the farm may be safely stored for what period of time? a) 1 year, b) 2 years, c) 3 years, d) 4 years, e) it is not recommended to freeze colostrum at all.
6. Which of the following is not an annual plant used as a source of forages for dairy cattle? a) corn, b) alfalfa, c) wheat, d) oats, e) ryegrass.
7. The process by which the first few streams of milk are removed from the teat prior to milking is called? a) backflushing, b) milk let-down, c) forestripping, d) sanitizing, e) on farm screening.
8. How many pounds of whole milk does it take to make one gallon of ice cream? a) 5 pounds, b) 8 pounds, c) 10 pounds, d) 12 pounds, e) 15 pounds.
9. When looking at a DHIA test sheet, the term 305 ME stands for: a) 305 pound milk efficiency, b) 305 day milk equivalent, c) 305 day milk energy, d) 305 day mature efficiency, e) 305 day mature equivalent.
10. What is parturition? a) chewing, b) calving, c) harvesting silage, d) milking, e) medication.
11. Which vitamin is considered the sunshine vitamin? a) Vitamin A, b) Vitamin C, c) Vitamin D, d) Vitamin E, e) Vitamin K.

12. This country is home to the most milking cows in the world. a) China, b) India, c) United States, d) Canada, e) New Zealand.
13. This state made it illegal to dock the tail of any horse or cow in January 2010: a) Wisconsin, b) Ohio, c) Michigan, d) Oregon, e) California.
14. How often is the United State Farm Bill renewed? a) every year, b) every two years, c) every three years, d) every four years, e) every five years.
15. What are the hereditary units that determine a portion of the animal's appearance, performance, behavior and other characteristics? a) genes, b) chromosomes, c) microsatellites, d) nucleotides, e) peptides.
16. Which of the following is a condition that will possibly result in a decrease in a fat test? a) illness, b) estrus, c) finely chopped feeds d) extremely hot weather, e) all of the above.
17. Which part of the calf's stomach is the largest? a) omasum, b) abomasum, c) rumen, d) small intestine, e) reticulum.
18. When breeding a dairy cow, fertilization of the egg or ova normally occurs in which part of the reproductive tract? a) ovary, b) vagina, c) uterus, d) infundibulum , e) none of the above.
19. Which hormone is released by the pineal gland in response to longer day length? a) estrogen, b) progesterone, c) oxytocin, d) melatonin, e) prostaglandin.
20. What is the major buffer produced by cows that assists in maintaining optimum rumen pH? a) cellulose, b) calcium, c) phosphorus, d) lipids, e) saliva.
21. On the Unified Dairy Cow Score Card, the category "udder" accounts for how many points? a) 10, b) 15, c) 20, d) 25, e) 40.
22. Which of the following is NOT a postpartum disease of dairy cattle? a) abortion, b) milk fever, c) retained placenta, d) obturator paralysis, e) prolapsed uterus.
23. Which volatile fatty acid produced by the rumen is a precursor for glucose? a) acetic acid, b) butyric acid, c) propionic acid, d) none of the above, e) all of the above.
24. Calves need to drink how many times more water as their dry feed intake? a) 2 times, b) 4 times, c) 6 times, d) 8 times, e) 10 times.

25. What term is used to describe a calf that is born backwards? a) parturition, b) abnormal presentation, c) breech, d) freemartin, e) cryptorchidism.
26. Cottage cheese, ice cream, and yogurt are examples of soft dairy products made from milk and are described as which class of dairy products? a) Class I, b) Class II, c) Class III, d) Class IV, e) No class exists for this use.
27. Which dairy breed originated in central Europe? a) Ayrshire, b) Brown Swiss, c) Holstein, d) Jersey, e) Milking Shorthorn.
28. An increase in what product is the result of rapid degradation of adipose tissue in the cow's body? a) amino acids, b) ammonia, c) fatty acids, d) peptides, e) ketones.
29. In 2010 this state led the United States in producing the most milk per person. a) South Dakota, b) Vermont, c) Wisconsin, d) Idaho, e) New Mexico.
30. Who is responsible for funding the National Dairy Council? a) consumers, b) Congress, c) dairy farmers, d) all of the above, e) none of the above.
31. Which of the following materials is commonly used in footbaths for cows with foot rot? a) copper sulfate, b) calcium carbonate, c) sodium chloride, d) monosodium phosphate, e) all of the above.
32. Which of the following factors affect the nutritive value of manure? a) method of storage, b) climate, c) type of feed ration, d) method of application, e) all of the above.
33. The number one milk producing cooperative in the United States based on member milk volume in 2010 was which of the following? a) Land O'Lakes, Inc., b) California Dairies, Inc., c) Northwest Dairy Association, d) Dairy Farmers of America, e) Dairyland Cooperative, Inc.
34. Which system of the cow's body is primarily affected by "LDA"? a) nervous, b) respiratory, c) digestive, d) reproductive, e) endocrine.
35. The USDA food guide is now referred to as this instead of a pyramid? a) plate, b) stair steps, c) ration, d) glass, e) serving size estimator.
36. Dairy farms typically group their milking herd by which of the following factors: a) body condition score, b) production level, c) stage of lactation, d) reproductive status, e) all of the above.
37. What season of the year are the incidences of retained placentas and metritis the highest? a) spring, b) summer, c) fall, d) winter, e) it the same all year.



38. The dairy industry will have a role in helping to feed the world's growing population. In 2050 the world's population is estimated to be how many people? a) 7 billion b) 8 billion, c) 9 billion, d) 10 billion e) 11 billion.
39. Which food has the most calcium per serving: a) spinach, b) low-fat yogurt, c) low-fat cream cheese, d) low-fat milk, e) they all contain the same amount of calcium.
40. Morbidity rate is defined as? a) the number of dead animals, b) the number of sick animals, c) both the number of sick and dead animals, d) the number of animals given an antibiotic for treatment, e) none of the above.

## 2013 National FFA Dairy Cattle Evaluation and Management CDE

### Herd Record Evaluation

Select the one cow that best answers each of the following 10 questions.

**For questions 1 through 10, use the “herd record evaluation” which is attached to the quiz.**

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

## 2013 National FFA Dairy Cattle Evaluation and Management CDE

### Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. Milk over what somatic cell count cannot be legally shipped in the United States?
  - A. 200,000
  - B. 400,000
  - C. 500,000
  - D. 750,000
  - E. 1,000,000
2. After a cow calves, the uterus goes through which process to return to normal function?
  - A. Evolution
  - B. Regression
  - C. Involution
  - D. Parturition
  - E. Fertilization.
3. Which of the following dairy breeds has the longest gestation period?
  - A. Ayrshire
  - B. Brown Swiss
  - C. Guernsey
  - D. Holstein
  - E. Jersey
4. You have 1,500 pounds of milk. How many pounds of hard cheese will it yield?
  - A. 75
  - B. 100
  - C. 125
  - D. 150
  - E. 300
5. A dairy cow's first milking of colostrum has how many more times the protein percentage of that found in normal whole milk?
  - A. 1 times more
  - B. 2 times more
  - C. 3 times more
  - D. 4 times more
  - E. 5 times more

6. This category replaced body capacity and dairy character on the updated 2009 PDCA Dairy Cow Unified Scorecard.
  - A. Dairy Strength
  - B. Frame
  - C. Dairyness
  - D. General Appearance
  - E. None of the above
  
7. On average this group of animals on a dairy farm will have the best genetics?
  - A. Calves
  - B. Yearlings
  - C. First calf heifers
  - D. Old cows
  - E. There is no difference between these groups
  
8. What term is used to describe a period of increased growth rate that follows a growth restriction imposed earlier in a heifer's life?
  - A. Weaning
  - B. Average Daily Gain
  - C. Compensatory growth
  - D. Growth spurt
  - E. Mastication
  
9. What is the name of the disease commonly found in dairy cows caused by the organisms Staph. Aureus, Strep. uberis and Klebsiella?
  - A. metritis
  - B. listeriosis
  - C. mastitis
  - D. brucellosis
  - E. black leg
  
10. Fats are broken down in which part of the digestive system?
  - A. Rumen
  - B. Abomasum
  - C. Large Intestine
  - D. Small Intestine
  - E. All of the above
  
11. The precursor of this vitamin is beta-carotene and is found commonly in legumes and grasses.
  - A. Vitamin E
  - B. Vitamin A
  - C. Vitamin D
  - D. Vitamin B
  - E. Vitamin K

12. The most common type of milking parlor in use today is:
  - A. Herringbone
  - B. Parallel
  - C. Parabone
  - D. Rotary
  - E. Side opening
  
13. Which of the following is not a condition that results in a decreased fat test?
  - A. Age of cow
  - B. Finely chopped feeds
  - C. Extremely hot weather
  - D. Estrus
  - E. Low fiber content in ration
  
14. What is the name of the University of Wisconsin professor who developed the butterfat (milk fat) test that was the basis for DHIA testing?
  - A. Dr. Westphalia
  - B. Dr. Pasteur
  - C. Dr. Babcock
  - D. Dr. Crave
  - E. Dr. Tyznick
  
15. Milk used for butter production would be classified as what?
  - A. Class I
  - B. Class II
  - C. Class III
  - D. Class IV
  - E. Class V
  
16. What percent of the ova in a mature cow's ovaries were present at birth?
  - A. 25%
  - B. 40%
  - C. 50%
  - D. 75%
  - E. 100%
  
17. Which body condition score is considered inadequate for a dairy cow during peak production?
  - A. 0.5 to 1.0
  - B. 1.5 to 2.0
  - C. 2.5 to 3.0
  - D. 3.5 to 4
  - E. Both A & B

18. For animals born in 2012, which breed had the highest percentage of inbreeding?
- A. Ayrshire
  - B. Brown Swiss
  - C. Guernseys
  - D. Red & White
  - E. Jersey
19. Mortality rate is defined as?
- A. the number of dead animals during a specified period of time
  - B. the number of sick animals during a specified period of time
  - C. both the number of sick and dead animals
  - D. the number of animals given an antibiotic for treatment
  - E. none of the above
20. What country is the 5<sup>th</sup> largest global milk producer and the world's foremost importer of dairy products?
- A. India
  - B. Russia
  - C. New Zealand,
  - D. United States
  - E. China
21. For each gallon of milk produced, approximately how many gallons of blood pass through the udder?
- A. 300 gallons
  - B. 600 gallons
  - C. 400 to 500 gallons
  - D. 150-200 gallons
  - E. 50-100 gallons
22. If the heat detection rate is 35% and the conception rate is 20%, what is the pregnancy rate?
- A. 27.5%
  - B. 7%,
  - C. 20%
  - D. 35%
  - E. 10%
23. During silage fermentation, production of which volatile fatty acid results in a rank, rancid or even fishy smell?
- A. Anionic
  - B. Butyric Acid
  - C. Acetic Acid
  - D. Lactic Acid
  - E. Propionic acid

24. Which one of the dairy cow's four stomach compartments is known as the "fermentation vat"?
- A. Abomasum
  - B. Omasum
  - C. Reticulum
  - D. Rumen
  - E. Duodenum
25. Which of the following is the name of the part of a cow's back that lies between the withers and the loin?
- A. rump
  - B. thurl
  - C. poll
  - D. chine
  - E. barrel
26. Anaerobic digesters form primarily what gas?
- A. Oxygen
  - B. Carbon Dioxide
  - C. Methane
  - D. Nitrous Oxide
  - E. All of the above
27. Which hormone is responsible for milk letdown hormone?
- A. Oxytocin
  - B. Estrogen
  - C. Prolactin
  - D. Adrenalin
  - E. Progesterone
28. Beef producers pay a one dollar per head checkoff for each beef animal sold at market. How much do dairy producers pay for each cull dairy cow that is sent to market?
- A. \$0.25
  - B. \$1.00
  - C. \$0.15
  - D. \$0.50
  - E. \$0.75

29. All U.S. dairy farms are inspected by state inspectors through a program coordinated by the Food and Drug Administration. Inspectors follow a publication called the PMO. What does PMO stand for?
- A. Pure Milk Ordinance
  - B. Post Milking Opportunity
  - C. Posted Milk Ordinance
  - D. Pasteurized Milk Ordinance
  - E. Power Milk Operation
30. When referring to livestock farms, the letters abbreviating “CAFO” stand for?
- A. Contained Animal Feeding Operations
  - B. Concentrated Acidosis Feeding Option
  - C. Contaminated Animal Feed By Offal
  - D. Contained and Fertilized Ovulation
  - E. Concentrated Animal Feeding Operations
31. What is the name of the stomach disorder in which there is a physical dislocation of the cow's fourth stomach compartment?
- A. DA (displaced abomasum)
  - B. Arthritis
  - C. Johne's
  - D. Acidosis
  - E. Ketosis
32. A cattle embryo has contains how many chromosomes?
- A. 26
  - B. 100
  - C. 60
  - D. 30
  - E. 45
33. SPC is a measure of bacteria counts in milk. What do the letters SPC stand for?
- A. standard plate count
  - B. somatic pasteurization count
  - C. secondary preliminary count
  - D. super plate count
  - E. super preliminary count
34. The normal body temperature of a cow is?
- A. 110°F
  - B. 98.6°F
  - C. 105.7°F
  - D. 101.5°F
  - E. 200°F



35. Which of these is a reason antibiotics can be misused?
- A. Incomplete treatment protocols,
  - B. Not involving your veterinarian,
  - C. Not maintaining treatment records,
  - D. All of the above,
  - E. None of the above.
36. The USDA signed an agreement in March 2013 to gradually transition genetic evaluations from the USDA to which organization?
- A. National Genome Research Institute
  - B. Food and Drug Administration
  - C. Center for Disease Control
  - D. Select Sires
  - E. Council on Dairy Cattle Breeding
37. What does NFDM stand for?
- A. Nonfat dry milk
  - B. No Fun Dairy Mandate
  - C. Nonfat Dairy Milk
  - D. National Forum of Dairy Milkers
  - E. Not for drinking milk
38. How much water can a lactating cow consume in one day?
- A. 5 gallons
  - B. 15 gallons
  - C. 35 gallons
  - D. 25 gallons
  - E. 100 gallons
39. Coccidia infection can occur when calves are 4 to 8 weeks old. Coccidia causes:
- A. Scours
  - B. Pinkeye
  - C. BVD,
  - D. Pneumonia
  - E. IBR
40. In a cow, where would you find an alveolus?
- A. Small Intestine
  - B. Udder
  - C. Brain
  - D. Skin
  - E. Large Intestine

# 2013 National FFA Dairy Cattle Event - Dairy Herd Record Evaluation - Management Quiz

Date of Test: 5-22-13		Report Information current through 5-23-13																			page 1				
scc 1000's	date bred	X-b		BCS	Test Day Production				Cow No.	.....status...		days age @ dry calving	Current Lactation			MatureEquivalent			ERPA \$\$ Dev	Net					
		r	H		milk #	fat %	protein %	s c		date	code		#	days in milk	milk #	fat #	prot #	milk #		fat #	prot #	PTA milk	Merit \$\$\$		
332	5/17/13	4		3.25	51	4.3	3.9	5	105		7-09	2	45	3-02	2	318	28405	1094	810	31441	1205	872	776	-249	-33
650	5/19/13			3.75	63	3.3	2.8	6	110		6-02	2	42	3-00	2	356	27255	1033	784	28701	1078	794	818	921	136
5231	4/24/13	2	P	2.75	50	3.3	3.3	9	132		9-21	2	64	3-03	2	244	20326	821	669	27813	1128	901	931	464	182
284	5/16/13	2		2.75	68	4.5	2.7	5	293		12-18	2		3-06	2	156	11651	520	356	21369	943	682	590	729	-15
	11/2/12	4		3.25	DRY				308		5-25	2	35	2-11	2	363	31233	1170	960	32489	1208	960	1696		
	9/2/12	5		4.00	DRY				324		12-25	6	74	2-06	1	514	36332	1449	1169	26062	997	782	324	25	71
150				2.75	78	5.4	2.9	4	354		12-11	2	47	3-06	2	163	12406	517	366	22857	1022	705	24	455	73
2012				3.00	62	4.2	3.0	7	368		5-11	2	61	3-10	2	12	729	58	23				888		
	10/27/12	3	P	3.25	DRY				379		2-16	3	162	2-02	1	461	30361	1173	935	25766	979	763	-189		
162	1/31/13	3	P	2.75	48	4.9	3.8	4	401		8-14	2	55	3-01	2	282	20402	842	638	23964	967	734	-225		
3568	5/18/13	5		1.75	81	4.4	3.2	8	402		11-19	2	63	3-04	2	185	15171	595	433	23351	1012	649	-151		
	11/28/12	4	P	3.75	DRY				403		8-03	3	87	1-09	1	657	34951	1308	1170	24517	901	744	-52		
201	2/14/13			2.75	75	3.5	2.8	4	404		8-14	2	81	3-00	2	282	23147	946	694	28239	1125	831	-233		
83		1		3.25	45	4.2	2.5	3	405		1-18	2		3-05	2	130	7749	311	227	14668	705	536	-1092		
	10/5/12	4	P	2.75	DRY				406		8-12	2	50	3-00	2	284	20163	873	673	24679	1051	803	160	1677	168
472				3.25	77	4.4	2.9	5	407		10-07	2	20	3-02	2	228	19473	745	562	26765	1058	754	123		
100	9/13/12	4		3.00	50	3.4	3.4	3	408		8-15	6		2-00	1	645	46923	1697	1395	30378	1144	854	497	1141	130
50	2/8/13	3	P	3.25	37	4.3	2.9	2	409		8-12	6		1-11	1	648	42495	1612	1310	25153	902	775	-291	-16	-62
	9/18/12	2	P	3.25	DRY				515		7-25	2	61	2-10	2	302	18090	681	570	21358	791	653	1130		
	11/1/12	7		3.25	DRY				518		8-08	6	42	1-11	1	652	41159	1870	1378	26753	1073	800	22		
70	12/25/12	3		3.25	36	4.8	2.7	2	521		12-09	6		2-02	1	530	34585	1589	1087	25964	1197	765	440	-606	-92
1400		2	P	2.75	54	3.4	3.1	7	524		3-28	2	63	3-05	2	81	6291	234	185	22217	966	691	52		
175	5/2/13	3		3.25	69	3.1	2.9	4	528		11-17	2	23	3-01	2	187	13258	587	407	20537	910	612	-643		
143	4/14/13			3.00	78	5.0	4.0	4	533		6-18	6		2-08	1	339	24600	1017	778	26717	1073	819	340		
625				2.50	71	4.0	3.8	6	539		4-08	2	28	3-05	2	45	3212	166	97	20525	1002	695	220	794	81
623	1/1/13	1		3.00	47	4.1	2.9	6	555		2-16	3	26	2-00	1	461	32064	1211	991	27238	1015	793	369	573	163
301				3.25	78	3.9	3.4	5	557		4-02	2	41	3-02	2	51	4080	161	114	23349	975	662	339	850	135
12	4/19/13			3.25	38	2.9	2.3	1	585		3-15	6		2-01	1	434	37268	1214	984	33384	1102	845	905	1345	159
88	3/2/13	2		2.75	61	4.7	2.7	3	589		2-19	6		2-00	1	458	33959	1266	1005	29875	1129	837	616	-777	-65
500	11/11/06	2		3.00	57	4.5	3.6	5	599		4-28	3	67	2-00	1	390	27270	1078	847	27045	1103	826	302	1447	145
748	2/17/13	7		3.50	41	3.9	2.4	6	600		2-11	6		1-11	1	466	27682	1201	853	25009	1031	716	-92	153	56
1245				3.25	61	3.6	3.0	7	604		3-27	2	16	3-00	2	57	3543	129	100	19947	788	574	-706	574	-37
2022	2/8/12			3.00	58	4.7	3.3	7	620		3-29	6		2-00	1	420	27134	1095	794	25224	1072	715	-104		
10		3	P	3.25	53	3.9	3.4	0	630		5-06	6		2-01	1	382	26774	979	760	26877	983	739	293		
12	6/5/13	1		3.00	32	3.8	2.3	0	640		4-14	6		2-01	1	404	26950	1124	885	26132	1086	851	437		
1245	7/20/13			2.50	44	4.3	3.4	7	641		5-16	6		2-01	1	372	23343	899	682	25440	985	724	236	474	233
	9/8/12	3	P	4.25	DRY				642		4-04	6	62	1-11	1	414	26870	988	787	25676	942	724	-143		
338	10/23/12	7		2.75	54	3.2	3.3	5	658		3-15	6		1-10	1	434	23653	737	770	24340	753	775	-350	64	48
	9/19/12	2	P	3.50	DRY				667		4-17	6	75	1-10	1	401	25433	968	768	25998	986	765	243	627	108

# 2013 National FFA Dairy Cattle Event - Dairy Herd Record Evaluation - Management Quiz

Date of Test: 5-22-13

Report Information current through 5-23-13

page 3

scc	date bred	X-b r e d	H P O	BCS	Test Day Production				Cow No.	.....status... date code	days age @ dry calving	Current Lactation						PTA milk	Net Merit \$\$\$					
					milk #	fat %	protein %	s c s				# days in milk	milk #	fat #	prot #	MatureEquivalent milk #	fat #			prot #	ERPA \$\$ Dev			
111	11/12/12	3	P	3.25	42	5.2	3.1	3	700	4-01	2	58	3-04	2	417	27644	1242	902	24298	1119	765	-286	151	70
73	12/15/12	6	P	3.00	53	3.5	3.5	2	702	5-15	3	2	3-02	2	371	30977	1247	888	31375	1205	861	1316		
56	1/2/13	5	P	3.00	35	4.4	2.9	4	743	10-07	6		2-06	1	590	40712	1835	1228	25727	1175	741	46	83	124
228	1/31/13	2		3.50	65	3.9	2.8	6	751	9-11	2	54	3-05	2	254	22312	692	658	28182	872	822	324	286	160
958	12/29/12	3	P	3.25	59	4.7	4.0	7	788	8-18	2	85	3-03	2	278	15638	699	487	18958	822	580	-623	387	-44

<b>Somatic Cell Count (1000's)</b>	<b>H Heat Date</b>	<b>Body Condition Score</b>	<b>Somatic Cell Score (linear)</b>	<b>Status Codes</b>		
	<b>P Pregnant</b>			<b>1 In Milk</b>	<b>5 Left Herd</b>	<b>7 Entered Herd</b>
	<b>N Open</b>			<b>2 Calved</b>	<b>6 First Lactation</b>	<b>8 Aborted</b>
	<b>C Do not breed</b>			<b>3 Enter Herd Dry</b>		<b>9 Induced Lactation</b>

Prepared by K.L. Heckaman, Purdue Extension - Kosciusko County, Warsaw, IN & M. Schutz, Purdue University, W. Lafayette, IN

## 2014 National FFA Dairy Cattle Event

### Herd Record Evaluation

Select the one cow that best answers each of the following 10 questions.

**For questions 1 through 10, use the “herd record evaluation” which is attached to the quiz.**

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

## 2014 National FFA Dairy Cattle Event

### Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. You have to treat your sick heifer. After reading the product label, you learn that the shot has to be given subcutaneously. Where is this injection site located on your heifer?
  - a) In the muscle
  - b) In the rump
  - c) In the fat tissue
  - d) Under the skin
  - e) Anywhere on your heifer that you want to give the shot
  
2. What is the name of the ring shaped muscle that closes the opening at the lower end of a cow's teat?
  - a) Sphincter Muscle
  - b) Teat Canal
  - c) Keratin
  - d) Alveolus
  - e) None of the above
  
3. This micromineral has been shown to be effective in decreasing the rate of foot rot, heel cracks and laminitis in dairy cattle.
  - a) Copper
  - b) Iodine
  - c) Selenium
  - d) Manganese
  - e) Zinc
  
4. Who invented the centrifugal cream separator?
  - a) Dr. Westphalia
  - b) Dr. Babcock
  - c) W. D. Hoard
  - d) Dr. Delaval
  - e) Gail Borden
  
5. What percentage of U.S. dairy farms are family owned and operated?
  - a) 97%
  - b) 89%
  - c) 75%
  - d) 52%
  - e) 36%
  
6. Which of the following is a part of the reproductive tract of the bull?
  - a) Ovaries
  - b) Cowpers gland
  - c) Vulva
  - d) Cervix
  - e) None of the above

7. Comfort for calves is just as important as cow comfort. Which of the following factors is the most important for achieving the goal of calf comfort?
- a) Bedding
  - b) Ventilation
  - c) Amount of square feet per calf
  - d) None of above
  - e) All of the above
8. The function of this organ is nutrient regulation and glucose production.
- a) Udder
  - b) Liver
  - c) Thyroid
  - d) Pancreas
  - e) Kidney
9. What genetic code is used to identify animals that are tested heterozygous polled?
- a) PP
  - b) PO
  - c) PC
  - d) PH
  - e) RC
10. Which nutritional disease is most often associated with laminitis?
- a) Johne's
  - b) Arthritis
  - c) Ketosis
  - d) Acidosis
  - e) Traumatic gastritis
11. Milk used for ice cream and cottage cheese production would be classified as what?
- a) Class I
  - b) Class II
  - c) Class III
  - d) Class IV
  - e) Class V
12. Which vitamin is not water soluble?
- a) Vitamin E
  - b) Vitamin C
  - c) Riboflavin
  - d) Vitamin B
  - e) Biotin
13. Which of the following dairy breeds is not part of a joint breed classification program?
- a) Guernsey
  - b) Milking Shorthorn
  - c) Jersey
  - d) Brown Swiss
  - e) Ayrshire

14. After silage is harvested, it goes through a fermentation process. If the fermentation process exceeds 100 degrees F after the silage is harvested, which of the following nutrients is broken down, heat damaged and unavailable to the cow?
- a) Protein
  - b) Fat
  - c) Minerals
  - d) Vitamins
  - e) All of the above
15. Somatic cells in milk are a more common name for which immune system cells?
- a) Red blood cells
  - b) Antibodies
  - c) Immunoglobulins
  - d) White blood cells
  - e) Infection
16. What state led the United States in milk per cow in 2012?
- a) New Mexico
  - b) Arizona
  - c) Colorado
  - d) Washington
  - e) Michigan
17. Which one of a dairy cow's four stomach compartments main function is the dehydration of partially digested feed?
- a) Abomasum
  - b) Omasum
  - c) Reticulum
  - d) Rumen
  - e) Small Intestine
18. Which of the following dairy breeds had the greatest increase in total registrations from 2012 to 2013?
- a) Jersey
  - b) Holstein
  - c) Guernsey
  - d) Brown Swiss
  - e) Ayrshire
19. What is the industry standard for total time cows should be resting on an average day?
- a) less than 5 hours
  - b) 6-8 hours
  - c) 9-11 hours
  - d) 12-14 hours
  - e) More than 15 hours

20. What enzyme found in the inner lining of a calf's stomach is used as a coagulant in cheese making to curdle milk?
- a) Insulin
  - b) Oxytocin
  - c) Methionine
  - d) Folic Acid
  - e) Rennet
21. How many amino acids are considered to be essential in the dairy cow, and therefore are required in the diet?
- a) 30
  - b) 40
  - c) 10
  - d) 25
  - e) 18
22. What campaign, started in April of 2014, has led to the donation of over 100,000 gallons of milk into our nation's food banks?
- a) MILC
  - b) Great American Milk Drive
  - c) Indianapolis 500
  - d) CWT
  - e) None of the above
23. Which insect is responsible for the spread of pink eye?
- a) Face Fly
  - b) Lice
  - c) Mosquito
  - d) Horn Fly
  - e) Tick
24. What acronym is used to represent daughter pregnancy rate on a sire summary?
- a) BSE
  - b) BVD
  - c) CVM
  - d) DVM
  - e) DPR.
25. In the updated 2009 PDCA Dairy Cow Unified Scorecard, in the udder category which trait receives the highest priority?
- a) Rear udder
  - b) Udder depth
  - c) Udder cleft
  - d) Fore udder
  - e) Teat placement.



26. In a cow, where would you find papillae?
- a) Small Intestine
  - b) Udder
  - c) Rumen
  - d) Skin
  - e) Large Intestine
27. A forage particle separator is used to do what?
- a) Check ration uniformity
  - b) Check for sorting
  - c) Check for over mixing and particle size reduction
  - d) Evaluate where there is enough long fiber in the ration
  - e) All of the above
28. Prior to March 2013 the USDA was responsible for genetic evaluations but this responsibility has now transitioned to which of the following organizations?
- a) Council on Dairy Cattle Breeding
  - b) ABS
  - c) FDA
  - d) National Genome Research Institute
  - e) Select Sires
29. What is most frequently the cause of high bacteria counts in milk?
- a) Mastitis
  - b) Weather
  - c) Dirty Equipment
  - d) Wrong size teat cup liner
  - e) Improper pulsation ratio
30. Which of the following is a symptom of clinical mastitis?
- a) All of the following
  - b) Hot quarter
  - c) Clots
  - d) Flakes
  - e) Watery milk
31. This term is defined as dividing the number of cows you have by the number of stalls or headlocks.
- a) Cows per stall
  - b) Stocking density
  - c) Rate at which the barn is overcrowded
  - d) Pen Size
  - e) Bunk space
32. Which of the following is not an example of an estrus synchronization program?
- a) CIDR
  - b) GnRH
  - c) Pre-Synch
  - d) Heat-synch
  - e) Co-Synch

33. Which of the following is an infectious disease?
- a) Milk fever
  - b) Hardware disease
  - c) Ringworm
  - d) Bloat
  - e) All of the above
34. The material used in a footbath for cows with foot rot problems is.
- a) Copper sulfate
  - b) Calcium carbonate
  - c) Sodium chloride
  - d) Monosodium phosphate
  - e) Iron oxide
35. This bacteria causes “Circling Disease” in cattle.
- a) Salmonella
  - b) Mycoplasma
  - c) Listeria
  - d) Leukosis
  - e) Haemophilus somnus
36. Which of the following factors should be considered when planning a waste management system?
- a) Environmental
  - b) Social
  - c) Operational
  - d) Legal requirements
  - e) All of the above
37. Every five years, genetic evaluations of US dairy cattle undergo a “base change”. When is the next time that the base change will happen?
- a) December 2014
  - b) April 2015
  - c) The base will remain the same and no change will occur
  - d) May 2016
  - e) It already happened in 2013
38. Which hormone produced by the uterus causes regression of the corpus luteum?
- a) PGF
  - b) FSH
  - c) LH
  - d) GnRH
  - e) P4
39. In 2013 which state produced 741 million pounds of yogurt to lead the nation in production of this dairy product?
- a) Indiana
  - b) California
  - c) New York
  - d) Michigan
  - e) Wisconsin

40. Which of the following is not an example of a cultured dairy product?

- a) Buttermilk
- b) Kefir
- c) Sour cream
- d) Yogurt
- e) Butter

Prepared by K.L. Heckaman, Purdue Extension – Kosciusko County, Warsaw, IN

## 2015 National FFA Dairy Cattle Event

### Herd Record Evaluation

Select the one cow that best answers each of the following 10 questions.

**For questions 1 through 10, use the “herd record evaluation” which is attached to the quiz.**

1. Indicate which cow is potentially suffering from rumen acidosis.
2. Which cow should be the next one to be dried off after the testing date, assuming that breeding dates are accurate?
3. 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.
4. Which cow has the lowest mature equivalent for fat?
5. Indicate the cow having the least impact on the somatic cell count in the bulk tank.
6. Indicate which cow is having the most impact on the somatic cell count in the bulk tank.
7. Select the cow that will transmit the lowest expected breeding value to her offspring for milk.
8. Select which cow will be the next one to calve after the testing date, assuming normal gestation length.
9. Determine the cow with the highest expectation among the cows for the value of a future lactation's production, relative to the herd average.
10. Select the cow which is the most significantly underweight.

## 2015 National FFA Dairy Cattle Event

### Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. White blood cells (leukocytes) that move into the udder during inflammation and epithelial cells from milk producing tissues are two type of cells that are measured when your cow is suffering from what?  
A) Pinkeye, B) Milk Fever, C) Mastitis, D) Ketosis, E) None of the above.
2. After milk is picked up at the farm, how often should the bulk tank be washed and sanitized? A) Every time it is emptied, B) Once a Day, C) Once a week, D) Monthly, E) Once a year.
3. You recently visited a farm that installed new lights in the freestall barn. The goal was to increase the photoperiod of the cows by providing them with 16-18 hours of light to increase milk production. What hormone is released by the pineal gland in response to this lighting change?  
A) Oxytocin, B) Melatonin, C) Progesterone, D) Prostaglandin, E) Relaxin.
4. When lameness caused by abscesses, infection, foot rot or injury is common in a dairy herd, what should the owner implement immediately to help reduce lameness in his herd? A) Footbath, B) New bedding, C) Change milking times, D) Increase the moisture in the bedding pack, E) All of the above.
5. It is often said you can't improve what you can't measure. The Brix refractometer is a tool used on many dairy farms to help estimate or measure what?  
A) Wither height, B) Light quality C) Cow's reaction time,  
D) Amount of bacteria in milk, E) Colostrum quality.
6. Healthy calves are essential to any dairy operation. To be a better grower of calves you have joined the Dairy Calf & Heifer Association. According to this organization, how many quarts of colostrum should a calf receive in the first four hours of life?  
A) 1 quart, B) 2 quarts, C) 4 quarts, D) 8 quarts, E) 12 quarts.
7. If there are large numbers of flies around the dairy barn, what should be the first thing to be examined in an attempt to solve the fly problem?  
A) Cow feeding procedures, B) Milking procedures, C) Calf feeding procedures,  
D) Manure handling procedures, E) Mowing the grass.
8. Mastitis is a growing problem on your neighbor's farm. You notice that he is bedding his cows with straw. You recommend that he should change his bedding to what to help decrease the amount of bacteria? A) Sawdust, B) Sand, C) Compost, D) Chopped Bark, E) All of the above will work.
9. When using a body condition scoring system of 1 to 5, what does a score of 1 mean? A) Extremely thin, B) Average body condition, C) Extremely fat, D) Above average body condition, E) These are the best cows in the herd.

10. Paul Bunyan's ox "Babe" had a rare genetic disorder that caused him to be blue. Both his parents were apparently normal. What are the odds his next full-sib will be blue? A) 25%, B) 50%, C) 67%, D) 75%, E) 100%.
11. In what part of whole milk are most of the off-flavors found?  
A) Protein, B) Lactose, C) Butterfat, D) Water, E) Minerals.
12. A cow is almost ready to calf. You observe excessive fluid accumulation in the udder and surrounding tissues. What do we call this condition?  
A) Ketosis, B) Udder Edema, C) IBR, D) Mastitis, E) Bangs.
13. This dairy breed was originally used for milk, meat and draft purposes. Today it is known for high protein to fat ratio, longevity, sound feet and legs, and having few health problems. Which breed is this?  
A) Guernsey, B) Milking Shorthorn, C) Jersey, D) Brown Swiss, E) Holstein.
14. The following information is listed concerning a cow:  
305      3X      35,234      4.2      1480      3.2      1127  
Which of the following is not correct? A) 305 day lactation,  
B) Milked three times per day, C) Milk contained 4.2 % milk fat,  
D) Milk contained 3.2% milk fat, E) Milk contained 3.2% milk protein.
15. You infuse an antibiotic into a cow's udder to treat her for mastitis, how should her milk be handled? A) Discard milk from treated quarter according to label,  
B) Discard milk from treated quarter for 72 hours,  
C) Discard all milk according to label, D) Discard all milk for 72 hours,  
E) Discard all milk for 96 hours.
16. What state is currently working on a proposal to establish a new Federal Milk Marketing Order? A) New Mexico, B) Wisconsin, C) California, D) Washington, E) Michigan.
17. Absorption of antibodies from colostrum primarily takes place in which compartment of a calf's stomach?  
A) Abomasum, B) Omasum, C) Reticulum, D) Rumen, E) Small Intestine.
18. During evening chores you notice one of your heifers is not feeling well and is in need of treatment. After reading the product label you are using for treatment, you learn that the shot has to be given IM. Where is the injection site located on your heifer? A) In the muscle of the neck, B) In the vein, C) In the fat tissue, D) Under the skin, E) It doesn't matter.
19. The Council on Dairy Cattle Breeding recently reported the following milestone achieved in genotyping dairy animals in August 2015. A) 500,000 genotyped, B) 750,000 genotyped, C) 1 million genotyped, D) The first animal with 100% of its genome typed, E) 3 million genotyped.
20. All quality assurance programs insist that a farmer have what type of on-going relationship with their veterinary? A) Veterinary Client Patient Relationship (VCPR), B) A relationship is not required, C) Telephone contact only, D) First name basis, E) None of the above.

21. The dairy cow has the ability to digest some of the plant carbohydrates which animals with simple stomachs cannot. Which of the following is not one of these carbohydrates? A) Cellulose, B) Lignin, C) Hemicellulose, D) Starch, E) Pectin.
22. Cull heifers and cows have been treated with hormones to cause them to become sexually active as heat check animals. What is the primary hormone that is used? A) Estrogen, B) Progesterone, C) LH, D) FSH, E) Testosterone.
23. Which of the following countries was the number 1 milk and milk product importer in 2014? A) Japan, B) Algeria, C) Saudi Arabia, D) China, E) Russian Federation.
24. This waxy substance found in the teat duct limits bacterial growth and provides a physical barrier against bacteria.  
A) Alveoli, B) Keratin, C) Myoepithelial, D) Prolactin, E) Papillae.
25. Little Miss Muffet sat on her tuffet, eating her curds and whey. How many pounds of whey are produced from 10 pounds of milk?  
A) 1 pound, B) 10 pounds, C) 9 pounds, D) 5 pounds, E) 0 pounds.
26. When a dairy farm operation is owned by a single individual, what type of business entity is this called? A) Limited Liability Corporation, B) Limited Liability Partnership, C) C Corporation, D) S Corporation, E) Sole proprietorship.
27. What corn forage is typically harvested with a forage harvester equipped with an ear-snapper header? The ear should be chopped with a short length-of-cut and then well processed with the on-board kernel processor.  
A) Earlage, B) Snaplage, C) Corn Silage, D) Haylage, E) All of the above.
28. What is the name of the new fluid milk beverage that is ultra-filtered that Coca-Cola is producing with Select Milk Producers?  
A) Dairy Pure, B) TruMoo, C) Muscle Milk, D) Fairlife, E) CocaMoo.
29. What is the name of the international organization of educators, scientists and industry representatives who are committed to advancing the dairy industry? The Journal of Dairy Science is the organization's official publication.  
A) American Dairy Science Association, B) American Dairy Association, C) International Dairy Producers, D) American Animal Science Association, E) Dairy Herd Improvement Association.
30. Which of the following countries was the number 1 exporter of milk and milk products in 2014.  
A) New Zealand, B) European Union, C) United States, D) Belarus, E) Australia.
31. The PMO regulations govern the production, hauling, processing, packaging and storage of which type and grades of milk? A) Only Grade A milk, B) Both Grade A and manufacturing milk, C) Manufacturing grade milk only, D) Grade B only, E) Processing grade milk and Grade A.
32. In the reproductive cycle, the level of what hormone in the blood decreases when the corpus luteum is destroyed?  
A) Relaxin, B) Testosterone, C) Oxytocin, D) Progesterone, E) Prostaglandin.

33. After harvesting corn silage, you take a soil test. The test shows your field is high in phosphorus and low in potassium. Which of the following fertilizers would you not apply in order to reduce the potential of phosphorus run off?  
A) 0-0-44, B) 46-0-0, C) 0-0-50, D) 11-52-0, E) 18-4-12.
34. On a dairy farm where foot rot problems have been identified in the herd as a major cause of lameness, which common material is used in the footbath to prevent foot rot:  
A) Copper sulfate, B) Calcium carbonate, C) Sodium chloride, D) Monosodium phosphate, E) Iron oxide.
35. This fatal cattle disease destroys the intestinal lining of ruminants with its major symptom being diarrhea?  
A) IBR, B) Johne's disease, C) Listeria, D) Leukosis, E) Black Leg.
36. Which group of cattle should not be vaccinated with a modified live bovine virus diarrhea vaccine: A) Calves, B) Pre-pubertal heifers, C) Open cows and heifers, D) Pregnant cows and heifers, E) None of the above.
37. Which vitamin is often recommended as a feed additive to minimize the occurrence of fatty liver and ketosis in fresh cows?  
A) Niacin (B-3), B) Vitamin A, C) Thiamine (B-1), D) Vitamin E, E) Biotin (B-7).
38. When the environmental temperature falls below 30 degrees F, the normal diet of a young calf should be supplemented with?  
A) Water, B) Energy, C) Protein, D) Vitamin A, E) Warm fresh milk.
39. A cow who has recently calved has had her blood tested. The test shows that she has a calcium deficiency more than likely related to an imbalance of calcium, phosphorus and Vitamin D. Which disease is the cow suffering from?  
A) Blackleg, B) Ketosis, C) Milk Fever, D) Johne's, E) Hardware.
40. In the updated 2009 PDCA Dairy Cow Unified Scorecard, in the dairy strength category which trait receives the highest priority?  
A) Ribs, B) Chest, C) Barrel, D) Thighs, E) Neck.