

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 5th 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 r H e P d N	Test Day Production					Cow No.status... date code	days age @ dry calving	Current Lactation			MatureEquivalent			ERPA \$\$ Dev	PTA milk	Net Merit \$\$\$				
			BCS	milk #	fat %	protein %	s c s				#	days in milk	milk #	fat #	prot #	milk #				fat #	prot #		
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 1000's	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

Somatic Cell Count (1000's)	H Heat Date P Pregnant N Open C Do not breed	Body Condition Score	Somatic Cell Score (linear)	Status Codes 1 In Milk 2 Calved 3 Enter Herd Dry	5 Left Herd 6 First Lactation	7 Entered Herd 8 Aborted 9 Induced Lactation
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Prepared by K.L. Heckaman, Purdue Extension - Kosciusko County, Warsaw, IN & M. Schutz, Purdue University, W. Lafayette, IN

2013 National FFA Dairy Cattle Career Development Event

Official answers for Dairy Management Exercise:

- | | |
|-------|-------|
| 1. D | 21. C |
| 2. C | 22. B |
| 3. B | 23. B |
| 4. D | 24. D |
| 5. E | 25. D |
| 6. A | 26. C |
| 7. A | 27. A |
| 8. C | 28. B |
| 9. C | 29. D |
| 10. D | 30. E |
| 11. B | 31. A |
| 12. A | 32. C |
| 13. A | 33. A |
| 14. C | 34. D |
| 15. D | 35. D |
| 16. E | 36. E |
| 17. E | 37. A |
| 18. C | 38. C |
| 19. A | 39. A |
| 20. E | 40. B |

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

2014 National FFA Dairy Cattle Career Development Event

Official answers for Dairy Management Exercise:

- | | | | |
|-----|---|-----|---|
| 1. | D | 21. | C |
| 2. | A | 22. | B |
| 3. | E | 23. | A |
| 4. | D | 24. | E |
| 5. | A | 25. | B |
| 6. | B | 26. | C |
| 7. | E | 27. | E |
| 8. | B | 28. | A |
| 9. | C | 29. | C |
| 10. | D | 30. | A |
| 11. | B | 31. | B |
| 12. | A | 32. | B |
| 13. | C | 33. | C |
| 14. | A | 34. | A |
| 15. | D | 35. | C |
| 16. | A | 36. | E |
| 17. | B | 37. | A |
| 18. | A | 38. | A |
| 19. | D | 39. | C |
| 20. | E | 40. | E |

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.

2015 National FFA Dairy Cattle Career Development Event

Official answers for Dairy Management Exercise:

- | | | | |
|-----|---|-----|---|
| 1. | C | 21. | B |
| 2. | A | 22. | E |
| 3. | B | 23. | D |
| 4. | A | 24. | B |
| 5. | E | 25. | C |
| 6. | C | 26. | E |
| 7. | D | 27. | B |
| 8. | B | 28. | D |
| 9. | A | 29. | A |
| 10. | A | 30. | A |
| 11. | C | 31. | A |
| 12. | B | 32. | D |
| 13. | D | 33. | D |
| 14. | D | 34. | A |
| 15. | C | 35. | B |
| 16. | C | 36. | D |
| 17. | A | 37. | A |
| 18. | A | 38. | B |
| 19. | C | 39. | C |
| 20. | A | 40. | A |

2016 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 first lactation cow is having 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 one 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 is potentially suffering from rumen acidosis.
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?

2016 National FFA Dairy Cattle Event

Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. Milk is composed of approximately what percent lactose?
A) 0%, B) 5%, C) 8.25%, D) 13.25%, E) 87.25%.
2. 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.
3. Lameness on a dairy farm can lead to higher culling rates, reduced reproductive performance, and lower milk yield. In order to manage lameness on your farm, you implement a locomotion scoring system using a scale from 1 to 5. What score would you give to a cow who is visibly lame, has an arched back and favors one or more feet?
A) 4 or 5, B) 3, C) 2, D) 1, E) All of the above.
4. Fertility, as measured by daughter pregnancy rate, is lowest in which breed?
A) Guernsey, B) Milking Shorthorn, C) Jersey, D) Brown Swiss, E) Holstein.
5. 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.
6. For lunch you have a glass of milk and notice that it has an oxidized flavor to it. In what part of the milk is this off-flavor found?
A) Butterfat, B) Lactose, C) Protein, D) Water, E) Minerals.
7. Beginning January 1, 2017 this practice will not be permitted under the Farmers Assuring Responsible management or FARM program.
A) Dehorning, B) Castrating, C) Eartagging, D) Taildocking, E) All of the above.
8. Which common ailment of dairy cows is medically known as tarsal hygroma?
A) Swollen hock, B) Dehydration, C) Acidosis, D) Lameness, E) Split toed.
9. 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.
10. The Council on Dairy Cattle Breeding (CDCB) introduced a new genetic trait to the genetic evaluation system. The PTA of this trait indicates that daughters of a sire will be less likely to die on the farm. You will find this trait listed as the following on a sire proof:
A) Daughter pregnancy rate, B) Lifetime net merit, C) Cow livability, D) Productive Life, E) None of these is correct.
11. Historically, during what season is the demand for milk highest?
A) Spring, B) Summer, C) Fall, D) Winter, E) It is the same year round.
12. In 2015 which state had the most new dairy cows?
A) New Mexico, B) Wisconsin, C) South Dakota, D) Washington, E) Michigan.

13. Which of the following are tips that would improve the biosecurity on a dairy farm?
A) Stop unrecognized visitors, B) Accompany nonroutine visitors around during their visit, C) Verify all nonregular inspectors and contractors with picture IDs, D) Post biosecurity and no unmanned aircraft signs, E) All of the above.
14. In the past year a dairy herd has had an increase in the occurrence of milk fever. The nutritionist has recommended feeding anionic salts as a method of prevention. To solve the problem, they should be fed: A) At any time, B) Two weeks after calving, C) At calving, D) Two weeks before calving, E) At dry off.
15. This past winter while you were responsible for feeding the baby calves, you made what change in the normal diet of the calves when the average temperature was 15 degrees F for a few weeks. You supplemented the diet with additional?
A) Warm fresh milk, B) Electrolytes, C) Energy, D) Water, E) Vitamin C.
16. Drought stressed forages often contain toxic levels of what substance?
A) Phosphates, B) Nitrates, C) Butyric acid, D) Lactic acid, E) Potassium.
17. Excessive rates of pneumonia in dairy herds are often due to what?
A) Excessive sunlight exposure, B) Cold weather or drafts, C) Inadequate ventilation, D) Contaminated milk, E) All of the above.
18. The Journal of Dairy Science is the official publication of the international organization of educators, scientists and industry representatives who are committed to advancing the dairy industry. This organization is?
A) American Animal Science Association, B) American Dairy Association, C) International Dairy Producers, D) American Dairy Science Association, E) Dairy Herd Improvement Association.
19. Perinatal calf mortality is a significant problem in the dairy industry. What is this problem more commonly referred to as?
A) DOAs, B) Morbidity, C) Pneumonia, D) Stillbirths, E) All of the above.
20. If the heat detection rate is 50% and the conception rate is 25%, what is the pregnancy rate? A) 9%, B) 12.5%, C) 25%, D) 50%, E) It cannot be determined.
21. After harvesting your alfalfa, 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 apply in order to meet the potassium requirement while preventing excess phosphorus run-off?
A) 0-0-44, B) 46-0-0, C) 12-12-12, D) 11-52-0, E) 18-14-24.
22. The condition in a dairy cow where the shoulder separates from the side of the cow and juts out sharply at the elbow is considered in what category of the 2009 PDCA Dairy Cow Unified Scorecard? A) Frame, B) Udder, C) Dairy Strength, D) Feet & Legs, E) Body Capacity.
23. When looking at genetic evaluations, the accuracy is expressed as a percentage and goes up as more progeny contribute to records. We refer to this as: A) Repeatability, B) Reliability, C) Predictability, D) Marketability, E) Heritability.

24. 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) Rumen Acidosis, B) Ketosis, C) Milk Fever, D) Johne's, E) Hardware.
25. Which dry period length will maximize production in the following lactation?
A) None, B) 30 days, C) 45 days, D) 50 days, E) 60 days.
26. You are responsible for the calf development program on a dairy farm. The farm's goal is to develop the rumen of the calf as fast as possible. To achieve this goal, you should feed the calves which of the following?
A) Milk only, B) Hay only, C) Grain only, D) Milk and grain, E) Milk and hay.
27. The best temperature for thawing frozen semen is considered to be: A) An ice bath, B) Room temperature, C) 75-80 degrees C, D) 92-96 degrees F, E) 92-96 degrees C.
28. While at the county fair 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 subcutaneously. Where is the injection site located on your heifer following beef quality assurance recommendations? A) In the muscle of the neck, B) In the vein, C) In the fat layer between the skin and muscle on the neck, D) In the nostril of the nose, E) In the fat layer between the skin and muscle on the rump.
29. Under the current method of pricing, which breed of cows, on average would yield the highest milk price per hundred weight?
A) Brown Swiss, B) Guernsey, C) Ayrshire, D) Jersey, E) Milking Shorthorn.
30. Beginning January 1, 2017 in order to purchase feed that uses medically important antimicrobial drugs such as a medicated milk replacer, you will need to obtain a VFD. What is a VFD? A) Veterinary Food Directions, B) Veterinary Feed Description, C) Veterinary Feed Directive, D) Veterinary Farmaceutical Description, E) None of the Above.
31. In order to obtain a VFD, a farmer must be able to prove what type of on-going relationship with their veterinary? A) Veterinary Client Patient Relationship (VCPR), B) Veterinary Animal Patient Relationship (VAPR), C) Telephone contact only, D) First name basis, E) Veterinary Contact Person Relationship (VCPR).
32. An increase in what compound is the result of rapid degradation of adipose tissue in the cow's body? A) Amino acids, B) Ketones, C) Fatty acids, D) Peptides, E) Ammonia.
33. One indicator that can be used as a sign of good reproduction in your dairy herd is how many cows are pregnant at all times. What percent should be pregnant?
A) 25%, B) 35%, C) 42%, D) 50%, E) 76%.
34. The following information is listed concerning a cow:
365 2X 42,345 3.7 1566 2.9 1228
Which of the following is not correct? A) 305 day lactation, B) Milked two times per day, C) Milk contained 3.7 % milk fat, D) Milk contained 2.9% protein, E) 42,345 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. Which portion of the cow's digestive tract is most subject to "twisting"?
A) Abomasum, B) Omasum, C) Reticulum, D) Rumen, E) Duodenum.
38. After receiving your DHIA herd summary test data, you are concerned about the increasing number of cows with mastitis. You have the cows cultured and discover that the cause is environmental pathogens. To help decrease this occurrence you invite your veterinarian to visit your farm to make recommendations. Which of the following observations by your veterinarian is the cause of the increased cases of mastitis?
A) Using sand as a bedding source, B) A new employee is prepping the milking cows by spraying the teats with water but not drying the teats to remove water and excess manure, C) Post dip is used after milking, D) Cows are fed after milking to keep them standing at least 30 minutes post milking, E) Cows are treated at dry off.
39. Which of the following is not a primary organism associated with mastitis:
A) Staphylococcus aureus, B) Streptococcus agalactia, C) Streptococcus uberis, D) Mycobacterium Paratuberculosis, E) Klebsiella pneumoniae.
40. An example of a Class III use for milk would be to make: A) Hard cheese, B) Ice cream, C) Milk powder, D) Cottage cheese, E) A class III use does not exist.

2016 National FFA Dairy Cattle Career Development Event

Official answers for Dairy Management Exercise:

- | | | | |
|-----|---|-----|---|
| 1. | B | 21. | A |
| 2. | B | 22. | A |
| 3. | A | 23. | B |
| 4. | A | 24. | A |
| 5. | E | 25. | E |
| 6. | A | 26. | D |
| 7. | D | 27. | D |
| 8. | A | 28. | C |
| 9. | E | 29. | D |
| 10. | C | 30. | C |
| 11. | C | 31. | A |
| 12. | E | 32. | B |
| 13. | E | 33. | D |
| 14. | D | 34. | A |
| 15. | C | 35. | B |
| 16. | B | 36. | E |
| 17. | C | 37. | A |
| 18. | D | 38. | B |
| 19. | D | 39. | D |
| 20. | B | 40. | A |

2017 National FFA Dairy Cattle Event

Dairy Management Exercise

Select best answer for each of the following 40 questions.

1. This cheese is the most popular American-type cheese.
A) Cheddar, B) Mozzarella, C) Swiss, D) Monterey Jack, E) Cream Cheese.
2. What type of mastitis is the primary reason antibiotics are administered to dairy cows?
A) Sub-Clinical, B) Clinical, C) Acute, D) Chronic, E) None of the above.
3. For question two the common symptoms of this type of mastitis are?
A) Flakes, B) Clots, C) Hot quarters, D) Watery milk, E) All of the above.
4. What is the most effective measure to prevent new cases of mastitis infections from occurring?
A) Teat-dipping, B) Dry-cow antibiotic treatment, C) Foot trimming, D) Both A&B, E) Both B&C.
5. Lameness on a dairy farm can lead to higher culling rates, reduced reproductive performance, and lower milk yield. In order to manage lameness on your farm, you implement a locomotion scoring system using a scale from 1 to 5. What score would you give to a cow who stands and walks normally and all feet are placed with purpose?
A) 4 or 5, B) 3, C) 2, D) 1, E) All of the above.
6. 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.
7. In order to prevent hock lesions and improve incidence of lameness, which is the best bedding material to use?
A) Sand, B) Straw, C) Wood shavings, D) Stall mats, E) Recycled manure.
8. Tarsal hygroma is which of the following common ailments in dairy cows?
A) Swollen hock, B) Dehydration, C) Acidosis, D) Lameness, E) Split toed.
9. This micro-mineral 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.
10. What dairy breed is the leader in Cheese Merit dollars?
A) Guernsey, B) Milking Shorthorn, C) Ayrshire, D) Brown Swiss, E) Holstein.
11. Which of the following PTA traits was introduced in August 2017 for service sires representing the influence the service sire is expected to have on the number of days his mates carry their calves during their pregnancies.
A) DPR, B) GL, C) SCR, D) SB, E) PL.

12. You recently became the manager of dry cows at a local dairy farm. Not only do you care for the dry cows but also for newborn calves. One issue that you must address immediately is decreasing calf mortality within the first 48 hours. The first purchase you make for the farm is a Brix refractometer to help estimate or measure what?
A) Wither height, B) Colostrum quality, C) Cow's reaction time, D) Amount of bacteria in milk, E) Antibody levels in the blood.
13. At what point during the dry period does a cow's colostrum production cease?
A) At the beginning of the dry period, B) About a week after having the calf, C) At the start of labor, D) A week before having the calf, E) None of the above.
14. Colostrum provides antibodies to newborn calves, but it is also 4 times higher in what important nutrient than normal cow's milk?
A) Water, B) Fats, C) Carbohydrates, D) Protein, E) All of the above.
15. Absorption of antibodies from colostrum primarily takes place in which compartment of a calf's stomach?
A) Omasum, B) Small Intestine, C) Rumen, D) Reticulum, E) Abomasum.
16. In 2015, which state had the most organic dairy farms?
A) Idaho, B) Wisconsin, C) South Dakota, D) Washington, E) Michigan.
17. What trait is defined as adequate constitution with front legs straight, wide apart and squarely placed on the Dairy Cow Unified Scorecard?
A) Front End, B) Rump, C) Dairy Strength, D) Chest Floor, E) Body Capacity.
18. You are the dry cow manager on your dairy farm. You begin to notice after calving cows are experiencing a loss in body condition and are not eating enough dry matter to meet their energy needs to produce milk. After discussing these symptoms with your veterinarian, a blood test also shows the cows with a lower than normal blood glucose, high ketones and free fatty acid levels. What could be the cause of these symptoms?
A) Rumen Acidosis, B) Ketosis, C) Milk Fever, D) Johne's, E) Hardware.
19. To treat the metabolic disorder described in #18 which of the following is fed or administered to the cow?
A) Calcium, B) Propylene glycol, C) Antibiotics, D) Water, E) Nothing the disorder will fix itself.
20. What may be added to feeds as an aid in prevention of the condition described in #18?
A) Calcium, B) Phosphorus, C) Vitamin A, D) Vitamin K, E) Niacin.
21. For the condition described in question 18, in addition to fiber what other ration component is important in minimizing fresh cows' negative energy balance?
A) Starch, B) Protein, C) Water, D) Calcium, E) All of the above.
22. What percent of the average U.S. dairy cow diet could be digested by a human?
A) 0%, B) 10%, C) 20%, D) 50%, E) 100%.

23. 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.
24. Your favorite cow has gone off feed recently. The veterinary says she has ingested pieces of metal and has given her a magnet. In which compartment of the stomach is metal, most often found and would benefit from the magnet?
A) Abomasum, B) Omasum, C) Reticulum, D) Rumen, E) Duodenum.
25. An example of a Class IV use for milk would be to make:
A) Hard cheese, B) Ice cream, C) Chocolate Milk, D) Dried milk powder, E) A class IV use does not exist.
26. A poorly maintained ventilation system on your farm can result in what percent loss of air movement?
A) 10%, B) 30 to 50%, C) 70-80%, D) 85-95%, E) There is no noticeable differences.
27. When this cell is mature, it is the largest in a dairy cow's body.
A) Skin, B) Blood, C) Oocyte or egg, D) Somatic Cell, E) White blood cells.
28. This non-profit organization founded in 1915 funded through the national dairy checkoff program continues to be, committed to providing science-based education about the nutrition and health benefits that dairy foods provide.
A) USDA, B) FDA, C) Federal Milk Market Orders, D) EPA, E) National Dairy Council.
29. You recently received a pedigree for a heifer in your herd. When looking at the pedigree you noticed some of the traits had a zero breeding value. So, when you compare her to the U.S. cow population, she is considered what for these traits?
A) Above average, B) Average, C) Below average, D) An outstanding heifer, E) None of the above.
30. 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.
31. Which of the following is not a part of the cow's digestive tract?
A) Esophagus, B) Omasum, C) Mouth, D) Small Intestine, E) Alveoli.
32. Getting dairy cows bred on the farm is a top priority. What process is used to determine if a cow is pregnant by inserting an arm into the rectum of a cow to feel the reproductive tract?
A) Palpation, B) CMT, C) Prolapse, D) Parturition, E) Involution.
33. Which of the following is **NOT** considered a micro mineral?
A) Phosphorus, B) Potassium, C) Calcium, D) Manganese, E) All but D.

34. Which of the following diseases is caused by a species of mycobacterium?
A) Johnes, B) Brucellosis, C) Tuberculosis, D) Both A and C, E) All of them.
35. What is the “normal” rectal temperature of a dairy cow?
A) 94-95 degrees F, B) 98-99 degrees F, C) 101-102 degrees F, D) 102-103 degrees F,
E) 105-106 degrees F.
36. What is the process called whereby fat globules are broken down to a small, uniform size?
A) Pasteurization, B) Clarification, C) Equalization, D) Homogenization,
E) Standardization.
37. Milk over what somatic cell count cannot be legally shipped.
A) 200,000, B) 400,000, C) 500,000, D) 750,000, E) 1,000,000.
38. Which hormone is responsible for milk letdown hormone?
A) Oxytocin, B) Estrogen, C) Prolactin, D) Adrenalin, E) Progesterone.
39. Which of the following is not an annual plant used as a source of forages for dairy?
A) Corn, B) Alfalfa, C) Wheat, D) Oats, E) Ryegrass.
40. 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.

2017 National FFA Dairy Cattle Career Development Event

Official answers for Dairy Management Exercise:

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|-----|---|-----|---|
| 1. | A | 21. | A |
| 2. | B | 22. | C |
| 3. | E | 23. | A |
| 4. | D | 24. | C |
| 5. | D | 25. | D |
| 6. | D | 26. | B |
| 7. | A | 27. | C |
| 8. | A | 28. | E |
| 9. | E | 29. | B |
| 10. | E | 30. | B |
| 11. | B | 31. | E |
| 12. | B | 32. | A |
| 13. | C | 33. | E |
| 14. | D | 34. | D |
| 15. | E | 35. | C |
| 16. | B | 36. | D |
| 17. | A | 37. | D |
| 18. | B | 38. | A |
| 19. | B | 39. | B |
| 20. | E | 40. | E |