

**2006 Virginia FFA Dairy Cattle Career Development Event
Dairy Management Exercise**

Important!!! Record your answers on your opscan sheet. Each question is worth 3 points. Total points possible = 150.

For questions 1-15, use the herd summaries that accompany this exercise. Identify the herd (A, B, C, D or E) that best meets the criterion stated for each question.

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|--|---|
| 1. Most cows on the current test day B | 9. Highest yearly percent successful services E |
| 2. Highest rolling yearly herd average for milk A | 10. Highest percent of herd bred to proven AI sires E |
| 3. Highest current test day milk for all cows A | 11. Highest percentile rank for proven AI sires B |
| 4. Highest current test day milk for milking cows B | 12. Lowest average age at first calving D |
| 5. Lowest days in milk as of the current test day B | 13. Lowest percent of cows left herd E |
| 6. Highest fat test on the current test day D | 14. Lowest average somatic cell score - current test day E |
| 7. Lowest days open D | 15. Lowest average days dry C |
| 8. Highest yearly percent heats observed B | |
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Multiple Choice Questions - Select the single best answer for each question.

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| 16. What is the maximum level of fat recommended in a lactating cow's ration?
(A) 0-1%
(B) 2-4%
(C) 5-7%
(D) 8-10%
(E) 11-13% | 20. Why are ionic salts used in pre-fresh cow rations?
(A) To help prepare cows for the sudden demand for blood calcium
(B) To increase the palatability of the ration
(C) To induce calving
(D) To prevent mastitis
(E) To prevent rickets |
| 17. If a farmer said she was feeding a 16% dairy feed, to what would the 16% be referring?
(A) Acid detergent fiber
(B) Ash
(C) Crude fiber
(D) Crude protein
(E) Neutral detergent fiber | 21. What is the recommended temperature of water for washing the bulk tank, lines, and other equipment?
(A) 100°F
(B) 120°F
(C) 140°F
(D) 160°F
(E) 180°F |
| 18. Proteins derived from ruminant sources cannot be used in ruminant rations because of concerns associated with what disease?
(A) Brucellosis
(B) Ketosis
(C) Listeriosis
(D) Mad cow disease
(E) Milk fever | 22. Which part of the milking system causes the alternate vacuum pressure between the teat cup shell and liner?
(A) Air injector
(B) Pulsator
(C) Vacuum gauge
(D) Vacuum pump
(E) Vacuum regulator |
| 19. Corn silage has the best fermentation and preservation characteristics with minimal seepage when harvested at what percent dry matter?
(A) 25%
(B) 35%
(C) 50%
(D) 65%
(E) 75% | 23. Which one of the following milking procedures is <u>not</u> recommended?
(A) Check foremilk and udder for mastitis.
(B) Predip teats in an effective product and provide a 20 to 30-second contact time.
(C) Dry teats completely with an individual towel.
(D) Attach milking unit within 1 minute after the start of stimulation.
(E) Do not shut off vacuum before removing unit. |
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24. What is the largest cost associated with mastitis?
(A) Discarded milk
(B) Drugs
(C) Labor
(D) Reduced milk production
(E) Veterinarian
25. Cows milked three times per day would be expected to produce how much more milk than those milked twice a day?
(A) No difference
(B) 3-5%
(C) 8-15%
(D) 20-25%
(E) 30-33%
26. What hormone would you give a cow if you wanted to cause the corpus luteum to regress?
(A) Epinephrine
(B) Estrogen
(C) Oxytocin
(D) Progesterone
(E) Prostaglandin
27. How long does it usually take for a cow's reproductive tract to return to normal after calving?
(A) 1 week
(B) 2 weeks
(C) 30-45 days
(D) 60-75 days
(E) 90-100 days
28. Estimated Relative Conception Rates are calculated for which dairy breed(s)?
(A) Holstein only
(B) Jersey only
(C) Holstein and Jersey
(D) Brown Swiss, Holstein, and Jersey
(E) All five major U.S. dairy breeds
29. Which one of the following is not a use of ultrasound in a reproductive management program?
(A) Determine embryonic losses
(B) Determine sex of an embryo
(C) Measure progesterone levels in blood
(D) Monitor cystic ovaries
(E) Pregnancy determination
30. What is an infection of the uterus called?
(A) Bloat
(B) Ketosis
(C) Laminitis
(D) Metritis
(E) Parturient paresis
31. How often is the genetic base for USDA Sire Summaries updated?
(A) Semiannually
(B) Annually
(C) Biannually
(D) Every five years
(E) Every ten years
32. How would a Holstein cow with a final score of 82 be classified?
(A) Excellent
(B) Fair
(C) Good
(D) Good Plus
(E) Very Good
33. DUMPS is an undesirable recessive trait in which dairy breed?
(A) Ayrshire
(B) Brown Swiss
(C) Guernsey
(D) Holstein
(E) Jersey
34. A 7% ___ solution should be painted on the calf's navel soon after birth to seal the entrance from disease causing organisms.
(A) Chlorine
(B) Copper sulfate
(C) Hydrogen peroxide
(D) Iodine
(E) Sodium chloride
35. What percent of heifers born have extra teats?
(A) Less than 5%
(B) 5-10%
(C) 15-25%
(D) 30-40%
(E) 45-50%
36. What is the common name for traumatic gastritis?
(A) Bang's disease
(B) Foot and mouth disease
(C) Hardware disease
(D) John's disease
(E) Twisted stomach
37. Blackleg most often occurs in cattle that are fed what type of diet?
(A) Hay
(B) High grain
(C) Liquid
(D) Pasture
(E) Total mixed ration

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38. What test is used to identify Brucellosis in cattle?
(A) Charm test
(B) Conductivity
(C) Cryoscope
(D) Milk ring test
(E) Phosphatase test
39. What is the normal temperature of an adult dairy cow?
(A) 95.0°F
(B) 98.6°F
(C) 101.5°F
(D) 102.5°F
(E) 105.0°F
40. What is the name of the instrument used to puncture the rumen in cases of bloat?
(A) Balling gun
(B) Colostrometer
(C) Cryoscope
(D) Elastrator
(E) Trocar
41. What is name of the process by which udder tissue reverts to a non-milk-producing state after drying off?
(A) Atresia
(B) Evolution
(C) Involution
(D) Phagocytosis
(E) Resorption
42. What hormone is released by the pineal gland in response to longer day length?
(A) Adrenaline
(B) Melatonin
(C) Oxytocin
(D) Relaxin
(E) Testosterone
43. Holsteins make up approximately what percent of the US dairy cow population?
(A) 50%
(B) 60%
(C) 70%
(D) 80%
(E) 90%
44. Which category receives the most emphasis on the Dairy Heifer Score Card?
(A) Body Capacity
(B) Dairy Character
(C) Feet and Legs
(D) Frame
(E) Udder
45. What term is used to describe the movement of nitrate through soils to groundwater?
(A) Erosion
(B) Evaporation
(C) Leaching
(D) Runoff
(E) Transevaporation
46. What is the standard length of a DHIA record?
(A) 60 days
(B) 100 days
(C) 260 days
(D) 305 days
(E) 365 days
47. What type of fly is associated with grubs or warbles in cattle?
(A) Face fly
(B) Heel fly
(C) Horn fly
(D) House fly
(E) Stable fly
48. What is the current dairy price support that was legislated as part of the 2002 Farm Bill?
(A) \$5.15/cwt
(B) \$7.50/cwt
(C) \$9.90/cwt
(D) \$12.35/cwt
(E) \$15.00/cwt
49. How much does a bushel of soybeans weigh?
(A) 32 pounds
(B) 48 pounds
(C) 52 pounds
(D) 56 pounds
(E) 60 pounds
50. What effect does providing 16 to 18 hours of light per day to cows have on milk production?
(A) None
(B) Decreases milk production by 5-15%
(C) Decreases milk production by 25%
(D) Increases milk production by 5-15%
(E) Increases milk production by 25%

2006 Virginia FFA Dairy Cattle Career Development Event

Class #1 - Pedigrees

Instructions: You are a commercial registered dairy producer with an objective of improving the genetics in your herd. Place the pedigrees below on the basis of this information. Mark your placing in the "Class 1" column in the "Placing Classes" section on the front side of your Opscan sheet.

<p>PEDIGREE 1</p> <p>VG-86 VG-MS CTPI +1566 PTA +1714M +38F +49P +1.63T 5-01 2 297 24970 3.5 881 3.0 743 3-03 2 365 26860 3.8 1025 3.1 822 2-01 2 365 22540 3.5 798 3.1 695</p>	<p>SIRE VG-86 VEV+ 5-04 GM TPI +1764 PTA +2587M +66F +65P 99%R PTA +2.67T +2.26UDC +2.25FLC 99%R</p>	<p>PATERNAL GRANDSIRE EX-96 EEEE 10-04 GM TPI +1257 PTA +1732M +56F +50P 99%R</p>
		<p>PATERNAL GRANDDAM VG-87 ++VEV GMD DOM 5-03 6-05 2 305 26950 3.9 1057 2.9 786 3-06 2 288 20210 3.6 730 2.9 585 2-01 2 305 22310 3.8 858 3.0 676</p>
	<p>DAM VG-86 +V++E 2-11 CTPI +1460 PTA +1856M +49F +55P 52%R PTA +1.13T +.87UDC +.40FLC 53%R 4-04 3 305 31930 3.5 1120 3.0 953 2-03 2 303 25790 3.7 946 3.0 766</p>	<p>MATERNAL GRANDSIRE VG-85 +VVV 5-11 GM TPI +1357M PTA +1785M +38F +44P 99%R</p>
		<p>MATERNAL GRANDDAM VG-85 VVV++ GMD DOM 3-08 CTPI +1401 PTA +1958M +51F +70P 60%R 2-05 2 365 34530 3.0 1035 3.2 1098</p>
<p>PEDIGREE 2</p> <p>GP-82 4-01 CTPI +1490 PTA +2075M +39F +69P +1.31T 2-01 2 365 22020 3.5 762 3.4 753</p>	<p>SIRE VG-85-3Y TPI +1547M PTA +1323M +84F +47P 87%R PTA +2.35T +2.06UDC +1.01FLC 72%R</p>	<p>PATERNAL GRANDSIRE EX TPI +1305 PTA +917M +32F +30P 99%R PTA +1.57T +.82UDC +1.37FLC 99%R</p>
		<p>PATERNAL GRANDDAM VG-88-5Y CTPI +1538 PTA +1204M +106F +45P 87%R PTA +1.47T +1.32UDC +.62FLC 37%R 5-06 2 365 34786 4.8 1660 3.1 1069 1-11 2 365 31277 4.6 1435 3.1 977 LIFE 1782 116398 4.9 5677 3.4 3996</p>
	<p>DAM GP-84 +VV++ CTPI +1268 PTA +582M +22F +12P PTA +1.13T +2.05UDC +.52FLC 5-00 3 336 31768 3.6 1138 2.9 928 2-04 2 365 29105 3.2 933 3.2 919</p>	<p>MATERNAL GRANDSIRE VG-85 +VVV 6-03 GM TPI +1318 PTA +1.44T +2.09UDC +.70FLC 99%R</p>
		<p>MATERNAL GRANDDAM EX-91 GMD DOM 6-07 2 60 5430 5.8 313 2.9 159 4-09 2 365 31949 4.5 1451 3.5 1118 2-02 2 365 28439 5.0 1413 3.5 990</p>
<p>PEDIGREE 3</p> <p>EX-90 VEVEE CTPI +1670 PTA +1512M +31F +35P +1.40T 3-01 2 364 29980 4.7 1396 3.1 916 2-00 2 348 24190 3.9 946 2.9 699</p>	<p>SIRE EX-90 EEV 5-02 TPI +1650 PTA +1151M +63F +53P 89%R PTA +2.27T +1.79UDC +1.90FLC 86%R</p>	<p>PATERNAL GRANDSIRE G-79 +VGP 5-05 GM TPI +1339 PTA +672M +14F +31P 99%R PTA +1.39T +2.25UDC +1.60FLC 99%R</p>
		<p>PATERNAL GRANDDAM VG-87 VVE+V 5-00 CTPI +1491 PTA +1275M +51F +39P 63%R PTA +2.07T +1.94UDC +.90FLC 67%R 3-04 2 365 37540 3.5 1313 2.9 1093 2-02 2 365 34130 3.4 1155 2.8 953</p>
	<p>DAM VG-87 VEV+V CTPI +1781 PTA +1148M +68F +68P 51%R PTA +2.60T +2.19UDC +.86FLC 58%R 2-06 2 365 34230 4.7 1593 3.5 1182</p>	<p>MATERNAL GRANDSIRE EX-90 EEEV 7-06 GM TPI +1606 PTA +769M -1F +43P 99%R PTA +3.04T +3.04UDC +2.43FLC 99%R</p>
		<p>MATERNAL GRANDDAM VG-87 EVEVV DOM 2-10 CTPI +1791 PTA +1512M +112F +82P 60%R PTA +1.87T +1.12UDC -.52FLC 67%R 1-11 2 365 36710 4.6 1692 3.7 1363</p>
<p>PEDIGREE 4</p> <p>EX-90 EEEVV CTPI +1461 PTA +720M +26F +30P +2.34T 3-04 2 324 27970 3.8 1074 3.3 914 2-02 2 365 25460 4.0 1023 3.3 829</p>	<p>SIRE EX GM TPI +1610 PTA + 1212M +69F +26P 99%R PTA +2.35T +2.01UDC +2.44FLC 99%R</p>	<p>PATERNAL GRANDSIRE GP-81-5Y GM TPI +1105 PTA +53F +6P 99%R</p>
		<p>PATERNAL GRANDDAM VG-87-5Y CTPI +1447 PTA +541M +43F +18P 84%R PTA +2.42T +2.01UDC +1.74FLC 71%R 3-11 2 365 35745 3.7 1325 3.0 1056 2-00 2 365 22871 3.8 866 3.1 700</p>
	<p>DAM VG-85 +V+VV DOM 6-07 CTPI +1435 PTA +873M +51F +48P 68%R PTA +1.53T +.97UDC +2.64FLC 71%R 5-08 2 365 35470 4.1 1451 3.3 1156 2-07 2 365 29460 3.3 984 3.1 921</p>	<p>MATERNAL GRANDSIRE EX-90 GM TPI +1406 PTA +1530M +58F +59P 99%R</p>
		<p>MATERNAL GRANDDAM VG-89 EVEVE GMD DOM 4-02 2-01 2 365 30910 4.1 1254 3.2 996</p>

2006 Virginia FFA Dairy Cattle Career Development Sire Selection Exercises (Classes 2 & 3)

Class 2

Official Placing 3-4-1-2 Cuts 5-4-2

Trait	Bull			
	1	2	3	4
	----- PTA's -----			
Milk	1415	1738	2476	1700
Fat	81	60	84	58
Protein	59	44	82	39
Productive Life	1.1	1.2	-0.3	1.7
Somatic Cell Score	3.32	2.69	3.15	2.63
Udder Composite	0.23	0.83	-0.12	1.03
Feet and Leg Composite	0.84	0.79	0.51	0.14
Daughter Pregnancy Rate	-0.2	0.5	-0.8	1.0
Daughter Calving Ease	8	7	9	6
Service Sire Calving Ease	8	7	10	7
Net Merit	495	481	533	504
Fluid Merit	437	509	505	545

Henry Hokie is a commercial dairy producer interested in increasing the profitability of his herd. Henry ships his milk to a cooperative that pays a premium for fat and protein. *Place the sires above on the basis of this information. Mark your placing in the "Class 2" column in the "Placing Classes" section on the front side of your Opscan sheet.*

Class 3

Official Placing 1-3-4-2 Cuts 6-4-5

Trait	Bull			
	1	2	3	4
	----- PTA's -----			
Milk	1236	1145	746	275
Fat	58	56	85	31
Protein	39	36	32	23
Productive Life	3.0	2.0	2.4	4.5
Somatic Cell Score	2.56	3.00	3.06	2.70
Udder Composite	1.71	1.29	1.04	1.22
Feet and Leg Composite	2.11	2.05	-0.65	1.62
Daughter Pregnancy Rate	0.7	0.1	1.0	1.4
Daughter Calving Ease	6	8	6	5
Service Sire Calving Ease	6	10	4	5
Net Merit	587	431	511	470
Fluid Merit	580	425	478	418

Susie Feedsright is a custom dairy heifer grower who is selecting sires to breed heifers for one of her clients. Her client is a commercial dairy producer who markets his milk in a fluid market. Prior to using Susie's services, the dairy producer was having dystocia problems with first calf heifers. *Place the sires above on the basis of this information. Mark your placing in the "Class 3" column in the "Placing Classes" section on the front side of your Opscan sheet.*

2006 Virginia FFA Dairy Cattle Career Development Event Herd Record Evaluation / Team Collaborative Exercise

KEY

Instructions: Use the individual cow records that are provided to answer the following questions. Use index numbers (not barn names) when identifying cows. Please list cows in numerical order when multiple cows are requested. Assume that no status changes have taken place since test day. Use the test day as the reference date.

1. List the next four cows due to calve.	<u>3792</u>	<u>3859</u>	<u>3929</u>	<u>4028</u>		
2. Identify the cows in milk less than 60 days on the current test day.	<u>3496</u>	<u>3943</u>	<u>3952</u>	<u>3995</u>	<u>4034</u>	
3. List the five cows with the highest ERPA's that are still in the herd.	<u>3596</u>	<u>3833</u>	<u>3896</u>	<u>3970</u>	<u>4000</u>	
4. List the six cows with the highest test day milk on the current test day.	<u>3496</u>	<u>3799</u>	<u>3835</u>	<u>3937</u>	<u>3995</u>	<u>4013</u>
5. Identify the cows with somatic cells scores ≥ 6 on the current test day.	<u>3693</u>	<u>3811</u>	<u>3896</u>	<u>3952</u>	<u>3995</u>	<u>4065</u>
6. List the five cows with the highest percent fat for the lactation to date.	<u>3706</u>	<u>3792</u>	<u>4029</u>	<u>4034</u>	<u>4055</u>	
7. Identify the cows to be pregnancy checked (bred ≥ 35 days as of test day and not yet diagnosed pregnant).				<u>3799</u>	<u>3922</u>	
8. Identify the fifth lactation cows that were in milk on the current test day.			<u>3596</u>	<u>3693</u>	<u>3698</u>	
9. How many reproductive culls are still in the herd?					<u>5</u>	
10. How many cows were dry on the current test day?					<u>8</u>	
11. How many cows were sold since the previous test day?					<u>2</u>	
12. Why did 3706 leave the herd?					<u>Sold-Mastitis</u>	
13. What is the name of 3769's sire?					<u>Bold</u>	
14. Assuming a 60-day dry period is desired, on what date should 3693 be turned dry?					<u>6/18</u>	
15. How many first lactation cows are in milk?					<u>11</u>	
16. What is 3811's rating for the current lactation?					<u>B</u>	
17. How many days were between 3693's 1 st and 2 nd services?					<u>21</u>	
18. What was the reason for 4013's status change on 2/13/06?					<u>Calved</u>	
19. In months, how old was 4102 when she calved?					<u>23</u>	
20. When would you expect 3876 in heat again? (mm/dd)					<u>5/22</u>	
21. What is 3970's projected ME milk production?					<u>25,430</u>	
22. How many days was 3995 dry during her most recent dry period?					<u>62</u>	