1. PURPOSE

The purpose of the Dairy Evaluation CDE is to provide a competitive event for agricultural education students which emphasizes skills in dairy cattle management and evaluation.
2. OBJECTIVES

a. To provide a practical experience to students enrolled in agricultural education with an interest in dairy cattle to help prepare for industry positions or in management of a modern dairy herd.
b. To develop students’ skills in observation, analysis, communication and team collaboration.
c. To provide experience in the evaluation of dairy cattle type, production records and dairy herd management.

3. ELIGIBILITY

a. Any agricultural education student enrolled in an agricultural education class may compete in this CDE. As this event occurs at the Nebraska State Fair in August, agricultural education students who graduated the previous spring are eligible to compete.
b. Students who have competed in a previous National Dairy Evaluation CDE are not eligible to participate in the Nebraska Dairy Evaluation CDE.
c. Each school may enter one team of 4 contestants who will compete in all areas of the Dairy Evaluation CDE.
d. Each school may also enter up to 4 additional contestants who will complete the individual components of the contest and will be eligible for individual awards only.
e. As this contest is held in conjunction with the State 4-H Dairy Judging contest, eligible students may participate in both contests as long as they meet entry requirements.
f. To insure that students participating in both the FFA and 4-H portion of the contest are eligible, any potential alternates to the FFA teams must be listed at the time of registration.
g. Registration fees for the contest are $5 per individual.
4. REQUIRED ATTIRE

a. For the placing and oral reasons portion of the contest, contestants are required to wear the current State Fair t-shirt which will be provided to the contestants. Contestants competing in both the FFA and 4-H portions of the contest may wear either the FFA or 4-H State Fair t-shirt.

h. For the team portion of the contest, teams may wear their State Fair FFA t-shirts, Official FFA Dress, Chapter FFA t-shirts or polos, or other appropriate attire.

5. REQUIRED SUPPLIES AND EQUIPMENT

Each contestant should have a writing instrument and notebook for note taking during the contest.

6. EVENT SCHEDULE

a. Entries are due to the contest superintendent by August 10.

b. Team scenarios will be emailed to entered teams on August 11.

c. The contest will take place during the first weekend of the Nebraska State Fair in conjunction with the State 4-H Dairy Evaluation contest.

   a. The team activity and individual tests will take place the morning of the contest date.
   
   b. The judging and oral reasons portion of the contest will the afternoon of the contest date.

   c. Awards will be given at the conclusion of the contest.

6. EVENT SCHEDULE
8:00 a.m. – 11:00 a.m. – Team presentations and individual written exam; exact time to be designated for each school.
12-12:15 p.m. Judging Contest Registration
12:15-12:30 p.m. Judging Orientation
12:30-2 p.m. Judging of classes
2-2:15 p.m. Break (*Contestants will move to a different location to give oral reasons.*)
2:15-4 p.m. Oral Reasons Given
5:00-6:30 p.m. – Dairy Contest Awards Ceremony

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### 7. ANNUAL THEME

The team presentation will be based on a topic similar to the National FFA Dairy Evaluation topic for that year. Topics known at this time are:

- 2017: Feed/Nutrition
- 2018: Housing/Facilities
- 2019: Health/Diseases
- 2020: Genetics/Reproduction
- 2021: Young Stock Management

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### 8. EVENT FORMAT

a. The management test will contain 50 questions - 40 industry related questions and 10 questions using a dairy herd record evaluation sheet to evaluate individual cows (similar to the team problem from contests prior to 2012).

b. Each contestant will place six classes of dairy cattle.

c. Each contestant will give three sets or oral reasons.

d. Each team will be provided a dairy farm management scenario to identify problems and determine possible improvements. Teams should assume the role of a hired consultant advising a producer (judges). Teams will have 10 minutes to complete their presentation, with an additional five minutes allowed for questions.

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### 9. SCORING
a. Each question of the management test will be worth 2 points, for a total of 100 points possible.

b. Each class of cattle is worth 50 points, for a total of 300 points possible.

c. Each set of oral reasons is worth 50 points, for a total of 150 points possible.

d. The team presentation is worth 200 points. The team presentation will be scored using the following rubric:

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Very Strong</th>
<th>Strong</th>
<th>Fair</th>
<th>Poor</th>
<th>Score</th>
<th>Weight</th>
<th>Total Score</th>
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<tbody>
<tr>
<td></td>
<td>19 – 25 points</td>
<td>13 – 18 points</td>
<td>7 – 12 points</td>
<td>0 – 6 points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Appearance</td>
<td>Everyone neat and properly dressed</td>
<td>Most of the team neat and properly dressed</td>
<td>Some of the team neat and properly dressed</td>
<td>Few to none of the team members neat and properly dressed</td>
<td></td>
<td>* 1</td>
<td></td>
</tr>
<tr>
<td>Value of Information</td>
<td>Does an excellent job with supplying information for the problems</td>
<td>Does a good job of supplying information for the problems</td>
<td>Does a fair job of supplying information for the problems</td>
<td>Does a poor job of supplying information for the problems</td>
<td></td>
<td>* 2</td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Information provided in a very convincing manner</td>
<td>Information provided in a strong manner</td>
<td>Information provided but is not very convincing in presentation</td>
<td>Information given in a very poor manner</td>
<td></td>
<td>* 2</td>
<td></td>
</tr>
<tr>
<td>Distribution of Activity</td>
<td>All team members participate in presentation</td>
<td>Only 3 members participate in presentation</td>
<td>Only 2 members participate in presentation</td>
<td>Only 1 team member presents the presentation</td>
<td></td>
<td>* 1</td>
<td></td>
</tr>
</tbody>
</table>
**10. TIEBREAKER**

If needed, the following tiebreakers will be used in the order listed:

a. Total reasons score

b. Lower placing score on reasons classes

c. Written test score

d. Total placing score

e. Team ties will be broken using the same criteria as stated above, using the team totals in each area.

**11. RESOURCE MATERIALS**

A thorough list of resources is listed in the rules for the National FFA Dairy Evaluation CDE information. Possible resources include the Hoard’s Dairyman magazine and Animal Science textbooks, websites, or other publications.

**12. PAST EXAMS**

A copy of the exam will be emailed to all participating chapters following the completion of the contest. Others wishing to obtain past exams need to contact the contest superintendent.
13. POST-CDE DEBRIEFING OPPORTUNITY

a. Official placings of the classes will be shared following the completion of the contest.

b. Copies of the judges’ critique sheets will be sent to the participating schools as soon as possible after the contest.
Appendix 1. Practice Exam

2017 State FFA Dairy Evaluation Contest Written Exam

Name ___________________________ School ___________________________

Directions: Answer each of the following questions by circling the correct answer or providing the requested information. Each answer is worth 2 points.

1. Which compartment of a cow’s four-compartment stomach acts as the true stomach?
   a. Omasum   b. Rumen
   c. Abomasum   d. Reticulum

2. What is a TMR?
   a. Time Management Requirement   b. Total Managed Ration
   c. Total Mixed Ration   d. Total Milking Requirements

3. Brucellosis is also known as:

4. Dry cows need 0.8 percent K in their diet. What element is K?
   a. Potassium   b. Calcium   c. Phosphorus   d. Lead

5. A long, deep, and wide barrel and deep heart girth describe:
   a. Frame   b. Feed and legs   c. Dairy character   d. Body capacity

6. The most limiting factor in milk production is a shortage of energy in the ration. What is the most commonly used grain in rations to provide energy in the cow’s diet?

7. The most common reason for culling cows from a herd is:
   a. Low milk production   b. Weak feet and legs
   c. Small frame   d. Poor disposition

8. What has the most influence on the amount of milk any cow produces?
   a. Heredity   b. Milking equipment
   c. Proper feeding   d. Type of milking parlor

9. A shortage of calcium salts in the blood of older, high-producing cows may cause:
10. Longer and leaner neck, cleaner and more angular, and sharper over the shoulders are terminologies which describe:
   a. Body capacity    b. Dairy character   c. Feet and legs    d. Frame

11. Rump width is related to calving ease. The width is determined by evaluating the distance between the inside points of the:
   a. Stifle    b. Thurl    c. Tail head    d. Pin bones

12. Sickle-hocked cows will have too much stress on the leg muscles and tendons. The rear legs and feet of an extremely sickle-hocked cow are:
   a. Too straight    b. Too narrow    c. Too far under the body    d. Too wide

13. With proper nutrition, heifers should reach the right size for breeding at about _____ months of age.
   a. 14 – 15    b. 8 – 10    c. 18 – 20    d. 21 – 24

14. The average gestation length for dairy cows is _____ days.
   a. 283    b. 175    c. 270    d. 205

15. After calving, it is critical that the newborn calf receives colostrum, the first milk secreted by the mother. Colostrum is important to the newborn calf because the milk is high in:

16. High quality roughages can lower the cost of the feed for the dairy herd. What percentage of the dry matter in the dairy ration should come from roughages?
   a. 25 – 35%    b. 60 – 80%    c. 85 – 95%    d. 10 – 20%

17. Which calving interval is the most profitable?
   a. 8 – 9 months    b. 10 – 11 months    c. 12 – 13 months    d. 14 – 15 months

18. The larval stage of the heel fly migrates through the body of cattle, eventually creating a hole in the skin along the animal's back. Swellings, called warbles, appear on the back of the animal. What is the name of this external parasite?
   a. Screwworm fly    b. Mite    c. Lice    d. Cattle grub
19. A swelling of the tissue that attaches the hoof to the foot, caused by overeating concentrates or a sudden change in a ration, is called:
   a. Founder  
   b. Fescue foot  
   c. Enterotoxemia  
   d. Fluorosis

20. Off flavors reduce milk quality and cause dissatisfied customers. The most common off flavor in raw milk is caused by:
   a. High bacteria counts  
   b. Feed  
   c. Fly spray  
   d. Poor barn ventilation

21. A rolling herd average (RHA) is based on how many months?
   a. 1  
   b. 12  
   c. 24  
   d. The lifetime of the cow

22. What does the term freshen mean to the dairy producer?
   a. To become pregnant  
   b. To give birth  
   c. To stop producing milk  
   d. None of these

23. Protein is a combination of amino acids. The amino acids are unique among compounds involved in nutrition because they contain what element?
   a. Copper  
   b. Nitrogen  
   c. Calcium  
   d. Helium

24. Which part of the digestive tract is responsible for reabsorbing water?
   a. Esophagus  
   b. Rumen  
   c. Small intestine  
   d. Large intestine

25. Which reproductive condition results when the fetal membranes remain within the uterus for an extended period following the act of calving?
   a. Retained uterus  
   b. Retained ovum  
   c. Retained placenta  
   d. Retained follicle

26. How many uterine horns are in the female reproductive tract?
   a. 1  
   b. 2  
   c. 3  
   d. 4

27. When does the greatest mammary tissue growth occur during a cow’s life?
   a. Before she is born  
   b. At puberty  
   c. During the first pregnancy  
   d. During the second pregnancy

28. Each animal inherits certain genes from both parents. What percentage of genes does a calf receive from its sire?
   a. 25%  
   b. 50%  
   c. 75%  
   d. 85%
29. The optimal length of the dry period in dairy cows is _____ days.
   a. 5 – 10  b. 20 – 30  c. 50 – 70  d. 100 – 130

30. What is the hormone that causes milk letdown?

31. Coccidia infection can occur when calves are 4 to 8 weeks old. Coccidia causes:
   a. BVD  b. Pneumonia  c. IBR  d. Scours

32. Reduced gestation length and retained placenta typically are the first symptoms of what vitamin inadequacy?
   a. Vitamin K  b. Vitamin D  c. Vitamin A  d. Vitamin B

33. What is the most essential nutrient in animal feeding and health?
   a. Silage  b. Calcium  c. Water  d. Salt

34. Why is fat added to dairy rations?
   a. To add body condition score  b. To help fight BVD
   c. To add a concentrated form of energy  d. To increase volatile fatty acid level

35. A free martin is a:
   a. Heifer that has not yet been serviced  b. Bull born twin to a heifer
   c. Cow that has just had its calf weaned  d. Heifer born twin to a bull

36. When a small metal object punctures the stomach wall and leads to infection, the resulting disease is:

37. As a rule of thumb, when milk production _____, the fat content _____.
   a. Decreases, increases  b. Decreases, decreases
   c. Increases, increases  d. Stops, increases

38. Feeding bulky feeds during the dry period and gradually bringing fresh cows back on grain are ways to prevent:
39. _____ represents the largest daily input cost to produce milk.
   a. Labor   b. Water   c. Animals   d. Feed

40. What is a nonfunctional mammary gland called?
   a. Absent quarter   b. Nonproductive quarter
   c. Blind quarter   d. Bulging quarter

Use the information chart on the last page to answer questions 41 – 43.

41. Which 4 cows have the most desirable somatic cell count?
    122, 149, 151, 168

42. Which 3 cows will be the next to calve?
    119, 130, 138

43. Which 3 cows have the most desirable relative value?
    934, 954, 956
## Appendix 2. Dairy Herd Record Evaluation

<table>
<thead>
<tr>
<th>Cow Body</th>
<th>Test Day Evaluation</th>
<th>Current Lactation</th>
<th>Mature Equivalent</th>
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<td>ID</td>
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<td>1000's Date</td>
<td>Milk Fat Protein</td>
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<td></td>
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<tr>
<td></td>
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<td>In Milk Pounds</td>
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<tr>
<td></td>
<td></td>
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<td>Pounds Pounds</td>
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