MEATS EVALUATION AND TECHNOLOGY
3 or 4 Member Team

I. PURPOSE
This event develops employment skills for students who are interested in experiencing and pursuing a career opportunity in the meat industry. Those who participate will become more knowledgeable consumers of meat and meat animal products and/or involved in the industry of marketing and managing. There are many job opportunities today that deal directly with the information provided in this contest. Students may continue studies in meat and food sciences related disciplines or go on to work in the meat industry at the processing, wholesale or retail levels.

II. EVENT FORMAT & SCORING
A. Team Make-up
1. Three or four individuals per school form a team. All members will be scored and the top three scores will count towards the team total. The student who does not judge at Nationals will be allowed to return to area and state level competition in this event. It will be the job of the school advisor to contact Texas FFA with the name of the student not competing at Nationals, therefore, regaining their eligibility in this event.
2. Team members must come prepared to work in a cold storage room for two hours. They should have heavy sweaters, coats, and other warm clothes. Due to HACCP regulations- bump caps, hairnets, and clean frocks are required to enter the Meats lab (clean frocks must be carried in a plastic bag and returned to the bag when exiting the lab, if re-entry is expected.) Texas Department of Health (TDH) officials may be on site during the contest.

B. Equipment
Compliant clipboard, drop sheet and/or clean folder will be allowed. (See General Rule #18 and the CDE Team Chart end of the General Rules for additional information)

C. General Event Information
1. Students cannot handle the meat, but may handle kidney knobs from 13th rib and above on beef carcasses.
2. Official judges may use all mechanical and electronic devices available to assist in placing.
3. When placing the class of retail cuts the following items should be considered: The four packages should be ranked on differences in such characteristics as percentage lean, amount of bone, fat trim, seam fat, amount of connective tissue, lean color, marbling, firmness of fat and lean, freshness and correct and attractive packaging that is appropriate for the cut. The following are criteria for ranking the cuts along with the approximate percent emphasis that should be placed on the various characteristics:
   a. Percentage lean Includes the amount of lean, subcutaneous fat, seam fat, connective tissue and bone. This is the most important factor and therefore carries the greatest amount of emphasis (50%).
   b. Lean color Many studies report that lean color is one of the most important factors in consumer purchasing. Both cuts that are excessively dark or light should be discriminated against (25% emphasis).
   c. Texture and firmness Coarse textured cuts or those with soft lean or fat should be discriminated against (10% emphasis).
   d. Marbling Amount and distribution of marbling, especially in the cuts from the loin, should be considered (5% emphasis).
   e. Workmanship Angular cuts, inappropriately sized plastic foam trays and irregular wrap should be discriminated against (10% emphasis).

f. <u>Unwholesomeness</u> This should be a basis for automatically ranking a package last.
4. The students are not allowed to touch or handle the retail cuts in any manner during the event.
5. Any area of the cut or package in contact with the table (out of sight) should be considered as acceptable.

D. Written Exam (50 points)
1. Exam will consist of 25 questions. Questions will be worth 2 points each.
2. Questions will **ONLY** come from:
   a. "Meat Science & Food Safety" PowerPoint (CEV)
   b. The same chapters will be used at Nationals with the corresponding year:
      2018, 2020:
      Meat Storage and Handling, Meat Cookery, Processed Meats, and Food Safety.
      2017, 2019, 2021:
      Legislation and History, Animal Care and Handling, Meat Nutrition, and Purchasing Meat.
3. Exam will be taken during one group rotation period.

E. Retail Meat Cuts (280 points)
1. The retail meat cuts will be divided into 4 parts (10 cuts per part).
2. Contestants will be given 1 minute to identify each cut.
3. One point will be given for identification of the correct species.
4. Two points will be given for correct primal cut identification.
5. Three points will be given for correct retail cut identification.
6. One point will be given for correct cookery method.
7. ID sheet will be provided, including numbers of meat cuts.
8. Refer to National Rulebook for cut lists.

F. Beef Quality and Yield Grading (120 points)
1. There will be two classes for beef quality and yield grading with three carcasses per class.
2. Contestants will be given 10 minutes per class.
3. 20 points are awarded for the correct grading of each carcass. (10 points for Yield Grade and 10 points for Quality Grade)
4. Yield and Quality Grading follows current USDA Standards.
   a. **Yield Grading Scoring**
      I. Yield grades will be to the nearest tenth (.1) of a grade.
      II. One point will be deducted for a .2-.3 grade above or below the official grade.
      III. Two points will be deducted for a .4-.5 grade above or below the official grade.
      IV. Three points will be deducted for a .6-.7 grade above or below the official grade.
      V. Four points will be deducted for a .8 grade above or below the official grade.
      VI. Five points will be deducted for a .9 grade above or below the official grade.
      VII. Six points will be deducted for one full yield grade above or below the official grade.
      VIII. Ten points will be deducted for a yield grade missed by more than one official grade.
   b. **Quality Grading Scoring**
      I. One point will be deducted for a third of a grade above or below the official grade.
      II. Three points will be deducted for two-thirds of a grade above or below the official grade.
      III. Six points will be deducted for a full grade above or below the official grade.
      IV. Ten points will be deducted for being more than one full grade above or below the official grade.

G. Placing of Six Classes (300 points)
1. Six classes will be selected from the following list (may have two of the same type):

a. Beef carcasses and/or value based. (See pricing sheet example below references)
b. Pork carcasses (may or may not be ribbed)
c. Lamb carcasses (may or may not be ribbed)
d. Wholesale pork cuts (hams or loins)
e. Beef wholesale cuts (round, short loin, full loin, ribs)
f. Retail cuts -students will place four packages from one of the following seven selections:
   I. Beef: T-bone, porterhouse or rib-eye steaks
   II. Pork: blade or loin chops.
   III. Lamb: blade or loin chops.
2. Contestants will be given 10 minutes per class
3. Each class will be worth 50 points.
H. Questions (50 points)
1. 10 total written questions will be given over two placing classes (five per class).
2. Each question will be worth five points for a total of 50 points.
3. The questions will be given during one rotation period.
4. Contestants may use notes taken during the event.
I. 15 rotations will be provided with one rotation serving as a sit-out.

III. SCORING

Written Exam	50
Retail Meat Cuts	280
Beef Quality and Yield Grading	120
Placing Classes	300
Questions	50
TOTAL INDIVIDUAL POINTS	**800**
TOTAL TEAM POINTS	**2,400**

IV. TIEBREAKER
A. Ties for team awards shall be broken as follows:
1. The team with the highest score in the identification wins.
2. If still tied, the highest score in questions classes.
3. If still tied, the highest total score in the carcass grading.
4. If still tied, the team with the high alternate score.
5. If still tied, the teams will be accompanied by their advisor and will meet with contest officials who will conduct a coin toss to determine the higher placing team.

B. Ties for individual awards shall be broken as follows:
1. The individual with the highest score in the identification wins.
2. If still tied, the highest score in questions classes.
3. If still tied, the highest total score in the carcass grading.
4. If still tied, the individuals will be accompanied by their advisor and will meet with contest officials who will conduct a coin toss to determine the higher placing individual.

V. REFERENCES

Texas Meats Evaluation and Technology ID list can be found on JudgingCard at the following link: www.judgingcard.com/resources/list.aspx

Materials Available from IMS:
<u>Printed Materials</u>
0225 Purchasing Pork Poster - A Consumer Guide to Identifying Retail Pork Cuts
0226 NLMB Meat Evaluation Handbook
0229 NAMP Meat Buyers Guide
0411 Preliminary Cutability Grade Ruler - NASCO
0412 Beef Ribeye Grid
8820-A Evaluating & Grading Carcasses and Wholesale Cuts, IMS
4034 Meat Evaluation Handbook, IMS
8561-A Recognizing the Beef Harvesting Process
8561-B Evaluating Beef Carcasses
8562-B Evaluating Pork Carcasses
     8563-B Evaluating Lamb and Goat Carcasses
     7020 Marbling Photographs (6" x 9") National Meat Board USDA

CEV70574 Meat Science & Food Safety PowerPoint (this is the resource for the exam)
CEV80000 Beef Carcass Quality Grading
CEV80001 Practice Beef Carcass Grading
CEV80290 Retail Cut Identification
CEV80244 Meat Judging & Grading
CEVD0296 Meat Judging Contest VII
CEVD0295 Meat Judging Contest VI
CEVD0294 Meat Judging Contest V

SAMPLE BEEF CARCASS PRICING SHEET (TRAINING AID)

Values in parentheses are discounts and should be subtracted from the Carcass Base Price, which is established based on the exhibits USDA Quality and Yield Grade. Prices on the Grid Pricing Sheet may change from year to year.

Example Class:
Carcass #1: Carcass Weight = 758 pounds
Quality Grade = Choice –
Yield Grade = 2.5
Base Value - $125.00
No Discounts
Carcass Value = $125.00

Carcass #2: Carcass Weight = 976 pounds
Quality Grade = Choice +/o
Yield Grade = 3.9
Base Value - $127.00
Weight Discounts = minus $4.00
Carcass Value = $123.00

Carcass #3: Carcass Weight = 758 pounds
Quality Grade = Choice +/o
Yield Grade = 3.2
Base Value - $127.00
Dairy Discounts = Minus $5.00
Carcass Value = $122.00

Carcass #4: Carcass Weight = 843 pounds
Quality Grade = Ineligible due to being a Dark Cutter
Yield Grade = 3.5
Base Value - $92.00
Bruise on Left Side Loins extending into the Longissimus dorsi muscle = minus $10.00
Carcass Value = $82.00

Final Placing 1-2-3-4

Pricing Sheet Example – prices based on USDA Beef Carcass Price Equivalent Index and the USDA National Carcass Premiums and Discounts.

BASE PRICE ($/CWT.)

	Prime	Choice +/o	Choice -	Select	Standard	Hardbone	Dark Cutter/Blood Splash
YG 1	$136	$130	$126	$119	$110	$96	$92
YG 2	$134	$128	$125	$117	$108	$96	$92
YG 3	$133	$127	$123	$116	$107	$96	$92
YG 4	$121	$115	$112	$104	$95	$84	$81
YG 5	$113	$108	$104	$97	$87	$77	$73

DISCOUNTS ($/CWT.)

Carcass Weight			
<500	($27)	Dairy Type *	($5)
500 to 549	($16)	Bruise	($10) per side **
550 to 599	($4)		
900 to 949	($2)		
960 to 999	($4)		
1000 and up	($19)		

* Carcasses exhibiting dairy type are ineligible for YG1 and YG2 premiums
** Maximum discount of $20 per carcass for bruising