MEATS EVALUATION & TECHNOLOGY

Participants in the Meats Evaluation and Technology Career Development Event (CDE) delve into the science of meat. During this team event, students evaluate beef carcasses for quality and yield grade; identify various meat cuts and place carcasses; and identify wholesale and/or retail cuts.

This event is ideal for students who are interested in exploring or pursuing career opportunities in the meat animal industry. Students are challenged to develop analytical skills, critical–thinking strategies and effective communication skills.

RULES AND REGULATIONS

1. A chartered FFA chapter may enter two teams, with one team designated as the official team. A team may consist of **5 eligible members**. The score of the **4 high individuals** will be used to determine the team score. Anytime there are 2 members of the same chapter in any one practicum/station, they will <u>not ever</u> be allowed to meet together or communicate during the event. There will be <u>no</u> communication between any competitors during the events. Any infraction of this rule will be sufficient to eliminate the contestant from the event.

2. **Retail Meat Cuts Identification** - Students will identify 30 retail cuts of meat. The cuts will be divided into three classes of 10 cuts per class. Students will be given one minute to identify each cut according to the "Meat Identification Card," in Bulletin #4. Refer to "Primal/Retail Cuts Coding" in Bulletin #4 for further information. Only the cuts listed are eligible to be used in this CDE. Students will be given one point for correct species identification; two points for correct prime cut identification and three points for correct retail trade name.

3. **Beef Quality and Yield Grading** - Contestants will quality and yield grade five beef small end rib steaks or beef carcasses ribbed between the 12th & 13th ribs. Ten minutes will be allowed for each class. Form 5 will be used for these classes.

    Quality Grading - The student will be given the carcass maturity score and then will determine a marbling score based on USDA standards and then give the quality grade. The possible quality grades and a corresponding letter are listed at the bottom of Form 5. The student should write the name and number under the column titled "Quality Grade."

    Yield Grading - Using Form 5 and small end rib steaks or beef carcasses ribbed between the 12th & 13th ribs, students will be given carcass weights and Kidney, Pelvic and Heart Fat which is given for each "carcass". Students will determine Ribeye size, fat thickness and calculate the Yield Grade. After completing these steps, the student should write in the final "Yield Grade" and corresponding letter found under "Yield Grade" at the bottom of "Form 5." Only the final yield will be graded.

4. **Evaluation** - Six of the following classes will be selected for students to place:

    a. Two classes of retail cuts - beef, pork, or lamb.
    b. Four class of four wholesale cuts - beef, pork or lamb

    Ten minutes will be allowed to place each class.

5. Team Activity - From the wholesale/retail classes above, 2 will be selected for the written questions team activity class. There will be 10 questions worth 5 points per question.

    Sample question: Which Pork Shoulder has the greatest amount of seam fat?

6. Event Scoring: The State Meats CDE will be scored as follows:

Section A:	Retail Meat Cut Identification	180 points
Section B:	Quality and Yield Grading	50 points each
Section C:	Placing of four wholesale classes	200 points
Section D:	Placing of two retail classes	100 points
Team Activity		50 points
TOTAL EVENT		**630 points**

Possible score card option: <u>JudgingCard scorecard</u>

7. Contestants and official judges are to make their placing and identifications without handling the meat

8. Other than the official cards for the CDE, contestants will also be allowed to have <u>blank paper</u>. No mechanical aid such as a measuring device or light can be used in arriving at a decision. Non-programmable calculators may be used in the CDE.

9. Each contestant must bring their own frock & helmet.

TIEBREAKERS
If ties occur, the following sections of the event, in this order, will be used to determine award recipients:
Individual
      1. Identification of retail meat cuts.
      2. Grading.
      3. Class questions.
Team
      1. Team activity score.
      2. Retail Identification total of the team.
      3. Grading total of the team.
      4. Class questions total of the team.

REFERENCES

<u>Meat Evaluation Handbook</u>, copies of wall size charts of beef, pork, and lamb, a set of full color slides of retail meat cuts and the Meat Board Guide to Identifying Meat Cuts are available from National Cattlemen's Beef Association 444 N. Michigan Avenue, Chicago, IL 60611. Fax # - 800-368-3136

U.S. standards for grades of meat, the rib eye grids are available from Livestock and Seed Division, MS, USDA, WASHINGTON, D.C. 20250.
Preliminary Yield Grade Ruler: NASCO, Ft. Atkinson, Wisconsin 53538.

<u>Yellow Pages</u>, for Section E of the CDE: America Meat Institute, PO Box 3556, Washington, D.C. 20007.

<u>Ribeye Grid</u> I.D. AS-34, Iowa State University, Cooperative Extension Service, Ames, Iowa 60010.

Retail Cuts Code Sheet with Cookery

Species	Primal	Retail Cut	Cooking Method	Species	Primal	Retail Cut	Cooking Method
B	B	89	M	Beef	Brisket	Corned	Moist
B	B	15	M	Beef	Brisket	Flat Half, Bnls	Moist
B	B	10	M	Beef	Brisket	Whole, Bnls	Moist
B	C	26	M	Beef	Chuck	7-bone Pot-Roast	Moist
B	C	03	M	Beef	Chuck	Arm Pot-Roast	Moist
B	C	04	M	Beef	Chuck	Arm Pot-Roast, Bnls	Moist
B	C	06	M	Beef	Chuck	Blade Roast	Moist
B	C	13	D/M	Beef	Chuck	Eye Roast, Bnls	Dry/Moist
B	C	45	D	Beef	Chuck	Eye Steak, Bnls	Dry
B	C	20	M	Beef	Chuck	Mock Tender Roast	Moist
B	C	48	M	Beef	Chuck	Mock Tender Steak	Moist
B	C	21	D	Beef	Chuck	Petite Tender	Dry
B	C	29	D/M	Beef	Chuck	Shoulder Pot Roast (Bnls)	Dry/Moist
B	C	58	D	Beef	Chuck	Top Blade Steak (Flat Iron)	Dry
B	D	47	D/M	Beef	Flank	Flank Steak	Dry/Moist
B	F	49	D	Beef	Loin	Porterhouse Steak	Dry
B	F	55	D	Beef	Loin	T-bone Steak	Dry
B	F	34	D	Beef	Loin	Tenderloin Roast	Dry
B	F	56	D	Beef	Loin	Tenderloin Steak	Dry
B	F	59	D	Beef	Loin	Top Loin Steak	Dry
B	F	60	D	Beef	Loin	Top Loin Steak, Bnls	Dry
B	F	64	D	Beef	Loin	Top Sirloin Cap Steak, Bnls	Dry
B	F	63	D	Beef	Loin	Top Sirloin Steak, Bnls Cap Off	Dry
B	F	62	D	Beef	Loin	Top Sirloin Steak, Bnls	Dry
B	F	40	D	Beef	Loin	Tri Tip Roast	Dry
B	G	28	M	Beef	Plate	Short Ribs	Moist
B	G	54	D/M	Beef	Plate	Skirt Steak, Bnls	D/M
B	H	22	D	Beef	Rib	Rib Roast	Dry
B	H	13	D	Beef	Rib	Ribeye Roast, Bnls	Dry
B	H	45	D	Beef	Rib	Ribeye Steak, Bnls	Dry
B	H	50	D	Beef	Rib	Ribeye Steak, Lip-On	Dry
B	I	08	D/M	Beef	Round	Bottom Round Roast	Dry/Moist
B	I	09	D/M	Beef	Round	Bottom Round Rump Roast	Dry/Moist
B	I	43	M	Beef	Round	Bottom Round Steak	Moist

Species		Primal		Retail Cut				Species	Primal	Retail Cut
B		I		46				Beef	Round	Eye Round Steak
B		I		51				Beef	Round	Round Steak
B		I		52				Beef	Round	Round Steak, Bnls
B		I		36				Beef	Round	Tip Roast - Cap Off
B		I		57				Beef	Round	Tip Steak - Cap Off
B		I		39				Beef	Round	Top Round Roast
B		I		61				Beef	Round	Top Round Steak
B		N		82				Beef	Various	Beef for Stew
B		N		83				Beef	Various	Cubed Steak
B		N		84				Beef	Various	Ground Beef
P		E		44				Pork	Ham/Leg	Pork Fresh Ham Center Slice
P		E		25				Pork	Ham/Leg	Pork Fresh Ham Rump Portion
P		E		27				Pork	Ham/Leg	Pork Fresh Ham Shank Portion
P		E		91				Pork	Ham/Leg	Smoked Ham, Bnls
P		E		90				Pork	Ham/Leg	Smoked Ham, Center Slice
P		E		96				Pork	Ham/Leg	Smoked Ham, Rump Portion
P		E		97				Pork	Ham/Leg	Smoked Ham, Shank Portion
P		E		35				Pork	Ham/Leg	Tip Roast, Bnls
P		E		38				Pork	Ham/Leg	Top Roast, Bnls
P		F		05				Pork	Loin	Back Ribs
P		F		66				Pork	Loin	Blade Chops
P		F		67				Pork	Loin	Blade Chops, Bnls
P		F		06				Pork	Loin	Blade Roast
P		F		68				Pork	Loin	Butterflied Chops Bnls
P		F		11				Pork	Loin	Center Loin Roast
P		F		12				Pork	Loin	Center Rib Roast
P		F		69				Pork	Loin	Country Style Ribs
P		F		70				Pork	Loin	Loin Chops
P		F		71				Pork	Loin	Rib Chops
P		F		73				Pork	Loin	Sirloin Chops
P		F		53				Pork	Loin	Sirloin Cutlets
P		F		30				Pork	Loin	Sirloin Roast
P		F		93				Pork	Loin	Smoked Pork Loin Chop
P		F		95				Pork	Loin	Smoked Pork Loin Rib Chop
P		F		34				Pork	Loin	Tenderloin, Whole
P		F		74				Pork	Loin	Top Loin Chops
P		F		75				Pork	Loin	Top Loin Chops, Bnls
P		F		37				Pork	Loin	Top Loin Roast, Bnls

Species		Primal		Retail Cut			Species	Primal	Retail Cut
P		J		03			Pork	Shoulder	Arm Roast
P		J		41			Pork	Shoulder	Arm Steak
P		J		07			Pork	Shoulder	Blade Boston Roast
P		J		42			Pork	Shoulder	Blade Steak
P		J		94			Pork	Shoulder	Smoked Picnic, Whole
P		K		98			Pork	Side	Slab Bacon
P		K		99			Pork	Side	Sliced Bacon
P		K		17			Pork	Side/Belly	Fresh Side
P		L		32			Pork	Spareribs	Pork Spareribs
P		N		85			Pork	Various	Ground Pork
P		N		86			Pork	Various	Hock
P		N		83			Pork	Various	Pork Cubed Steak
P		N		87			Pork	Various	Pork Sausage Links
P		N		87			Pork	Various	Sausage
P		N		92			Pork	Various	Smoked Pork Hock
L		A		24			Lamb	Breast	Ribs (Denver Style)
L		E		01			Lamb	Leg	American Style Roast
L		E		44			Lamb	Leg	Center Slice
L		E		16			Lamb	Leg	Frenched Style Roast
L		E		18			Lamb	Leg	Leg Roast, Bnls
L		E		73			Lamb	Leg	Sirloin Chops
L		E		31			Lamb	Leg	Sirloin Half
L		F		70			Lamb	Loin	Loin Chops
L		F		19			Lamb	Loin	Loin Roast
L		H		71			Lamb	Rib	Rib Chops
L		H		72			Lamb	Rib	Rib Chops Frenched
L		H		22			Lamb	Rib	Rib Roast
L		H		23			Lamb	Rib	Rib Roast, Frenched
L		J		65			Lamb	Shoulder	Arm Chops
L		J		66			Lamb	Shoulder	Blade Chops
L		J		33			Lamb	Shoulder	Square Cut
L		N		88			Lamb	Various	Shank
B		M		76			Beef	Variety	Heart
L		M		76			Lamb	Variety	Heart
P		M		76			Pork	Variety	Heart
B		M		77			Beef	Variety	Kidney
L		M		77			Lamb	Variety	Kidney
P		M		77			Pork	Variety	Kidney

Name: _____   Chapter: _____

Species

B Beef	P Pork	L Lamb

Primal Cuts

A Breast	H Rib or Rack
B Brisket	I Round
C Chuck	J Shoulder
D Flank	K Side (Belly)
E Ham or Leg	L Spareribs
F Loin	M Variety Meats
G Plate	N Various Meats

Retail Cuts

Roasts/Pot Roasts
1 American Style
2 Arm Picnic
3 Arm Roast
4 Arm Roast (Bnls)
5 Back Ribs
6 Blade Roast
7 Blade Boston
8 Bottom Round Roast (Bnls)
9 Bottom Round Rump Roast (Bnls)
10 Brisket, Whole (Bnls)
11 Center Loin Roast
12 Center Rib Roast
13 Eye Roast (Bnls)
14 Eye Round Roast
15 Flat Half (Bnls)
16 Frenched Style
17 Fresh Side
18 Leg Roast (Bnls)
19 Loin Roast
20 Mock Tender Roast
21 Petite Tender
22 Rib Roast
23 Rib Roast (Frenched)
24 Ribs (Denver Style)
25 Rump Portion
26 Seven (7) Bone Roast
27 Shank Portion
28 Short Ribs
29 Shoulder Roast (Bnls)
30 Sirloin Roast
31 Sirloin Half
32 Spareribs
33 Square Cut (Whole)
34 Tenderloin (Whole)
35 Tip Roast (Bnls)
36 Tip, Cap Off Roast
37 Top Loin Roast (Bnls)
38 Top Roast (Bnls)
39 Top Round Roast
40 Tri-Tip Roast

Steaks
41 Arm Steak
42 Blade Steak
43 Bottom Round Steak
44 Center Slice
45 Eye Steak (Bnls)
46 Eye Round Steak
47 Flank Steak
48 Mock Tender Steak
49 Porterhouse Steak
50 Ribeye, Lip-On Steak
51 Round Steak
52 Round Steak (Bnls)
53 Sirloin Cutlets
54 Skirt Steak (Bnls)
55 T-Bone Steak
56 Tenderloin Steak
57 Tip, Cap Off Steak
58 Top Blade (Bnls) Flat Iron Steak
59 Top Loin Steak
60 Top Loin (Bnls) Steak
61 Top Round Steak
62 Top Sirloin Steak (Bnls)
63 Top Sirloin Cap Off Steak (Bnls)
64 Top Sirloin Cap Steak (Bnls)

Chops
65 Arm Chop
66 Blade Chop
67 Blade Chop (Bnls)
68 Butterflied Chop (Bnls)
69 Country Style Ribs
70 Loin Chop
71 Rib Chop
72 Rib Chop (Frenched)
73 Sirloin Chop
74 Top Loin Chop
75 Top Loin Chop (Bnls)

Variety Meats
76 Heart
77 Kidney
78 Liver
79 Oxtail
80 Tongue
81 Tripe

Various Meats
82 Beef for Stew
83 Cubed Steak
84 Ground Beef
85 Ground Pork
86 Hocks
87 Sausage Link/Pattie
88 Shank

Smoked/Cured
89 Brisket, Corned
90 Center Slice
91 Ham (Bnls)
92 Hocks
93 Loin Chop
94 Picnic (Whole)
95 Rib Chop
96 Rump Portion
97 Shank Portion
98 Slab Bacon
99 Sliced Bacon

ID #	Species	Primal	Retail		Score
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Carcass Grading
Meat Evaluation CDE

Name_____   Chapter_____
Number_____

Carcass Yield Grading

Record the Final Yield Grading (FYG) in the marked column as a decimal number rounded to the nearest 0.1 (Example: 3.4). Only the FYG is scored.

Grayed out center sections are provided for notes/scoring and are not required.

#	HCW	Backfat	KPH	REA	Final Yield Grade (FYG)	Pts Awarded
1						
2						
3						
4						
5						
6						
					TOTAL SCORE	

Carcass Quality Grading

Record the Quality Grade in the marked column.
Grayed out center sections are scoring only.

#	Quality Grade	Pts Awarded
1		
2		
3		
4		
5		
6		
	TOTAL SCORE	

Grading Options

Prime High	Select High	Commercial High
Prime Ave	Select Low	Commercial Ave
Prime Low	Standard High	Commercial Low
Choice High	Standard Ave	Utility High
Choice Ave	Standard Low	Utility Ave
Choice Low		Utility Low

ALIGNMENT TO AFNR CONTENT STANDARDS & OREGON EMPLOYABILITY SKILLS

- Employability 01. Adhere to workplace practices
- Employability 02. Exhibit personal responsibility and accountability
- Employability 03. Practice cultural competence
- Employability 04. Demonstrate teamwork and conflict resolution
- Employability 05. Communicate clearly and effectively
- Employability 06. Employ critical thinking to solve problems
- Employability 07. Demonstrate creativity and innovative thinking
- Employability 08. Demonstrate fluency in workplace technologies
- Employability 09. Plan, organize, and manage work
- Employability 10. Make informed career decisions
- ABS.01.01 Apply micro- and macroeconomic principles to plan and manage inputs and outputs in an AFNR business.
- ABS.01.02 Read, interpret, evaluate and write statements of purpose to guide business goals, objectives and resource allocation.
- ABS.01.03 Devise and apply management skills to organize and run an AFNR business in an efficient, legal and ethical manner.
- ABS.02.01 Apply fundamental accounting principles, systems, tools and applicable laws and regulations to record, track and audit AFNR business transactions (e.g., accounts, debits, credits, assets, liabilities, equity, etc.).
- ABS.02.02 Assemble, interpret and analyze financial information and reports to monitor AFNR business performance and support decision-making (e.g., income statements, balance sheets, cash-flow analysis, inventory reports, break-even analysis, return on investment, taxes, etc.).
- ABS.03.01 Develop, assess and manage cash budgets to achieve AFNR business goals.
- ABS.04.02 Develop production and operational plans for an AFNR business.
- ABS.05.01 Analyze the role of markets, trade, competition and price in relation to an AFNR business sales and marketing plans.
- ABS.05.02 Assess and apply sales principles and skills to accomplish AFNR business objectives.
- ABS.05.03 Assess marketing principles and develop marketing plans to accomplish AFNR business objectives.
- AS.01.01 Evaluate the development and implications of animal origin, domestication and distribution on production practices and the environment.
- AS.01.02 Assess and select animal production methods for use in animal systems based upon their effectiveness and impacts.
- AS.01.03 Analyze and apply laws and sustainable practices to animal agriculture from a global perspective.
- AS.02.01 Demonstrate management techniques that ensure animal welfare.
- AS.02.02 Analyze procedures to ensure that animal products are safe for consumption (e.g., use in food system, etc.).
- AS.04.01 Evaluate animals for breeding readiness and soundness.
- AS.04.02 Apply scientific principles to select and care for breeding animals.
- AS.04.03 Apply scientific principles to breed animals.
- AS.05.01 Design animal housing, equipment and handling facilities for the major systems of animal production.
- AS.05.02 Comply with government regulations and safety standards for facilities used in animal production.
- AS.06.01 Classify animals according to taxonomic classification systems and use (e.g. agricultural, companion, etc.).
- AS.06.02 Apply principles of comparative anatomy and physiology to uses within various animal systems.
- AS.06.03 Select and train animals for specific purposes and maximum performance based on anatomy and physiology.

- AS.07.02 Analyze biosecurity measures utilized to protect the welfare of animals on a local, state, national, and global level.
- CRP.02.01 Use strategic thinking to connect and apply academic learning, knowledge and skills to solve problems in the workplace and community.
- CRP.02.02 Use strategic thinking to connect and apply technical concepts to solve problems in the workplace and community.
- CRP.04.01 Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.
- CRP.08.02 Investigate, prioritize and select solutions to solve problems in the workplace and community.
- FPP.03.01 Implement selection, evaluation and inspection techniques to ensure safe and quality food products.
- FPP.03.02 Design and apply techniques of food processing, preservation, packaging and presentation for distribution and consumption of food products.
- FPP.03.03 Create food distribution plans and procedures to ensure safe delivery of food products.
- FPP.04.01 Examine the scope of the food industry by evaluating local and global policies, trends and customs for food production.
- FPP.04.02 Evaluate the significance and implications of changes and trends in the food products and processing industry in the local and global food systems.