

Illinois Association of Vocational Agriculture Teachers Meats Evaluation and Technology Career Development Event

A. General Information

1. **Team:** A team shall consist of five (5) participants. The three (3) individuals with the highest score shall constitute the team score.
2. **Placings/Scoring:** Official ring placings and reasons will be given immediately following completion of the event.
3. **Scorecards:** The Scantron cards used in the event will be CDE form #239562-1.
4. **Team Event:** The Ground Beef Formulation Problem will be solved cooperatively by all team members at the beginning of the event. It is worth 50 points per team
5. **Miscellaneous:**
 - a. Part of the event is held in a cold storage room (25 to 30°F), dress appropriately.
 - b. Participants may use non-programmable (will not store formulas), battery operated calculators if they provide them.
 - c. Calculators may not be shared.
 - d. Participants should not have any measuring devices during competition.
 - e. Participants should have clipboards and #2 pencils for use during the CDE.
 - f. All participants must wear hair nets and smocks. No exceptions will be allowed.
6. **Additional Information:** Refer to the "General Rules" section for the current year for information concerning **Entry Fees, Registration and Location** of the event.
7. **Preregistration is available and encouraged.** Watch *News & Notes* and the *AgEd Listserve* for event details and a preregistration form. Preregistration forms may be downloaded at www.aces.uiuc.edu/itcs/im or www.iavat.org

B. Event Format

1. **Placing Rings:** 5 rings (50 points each) from the following list. (Meat cannot be handled):
 - a. Beef carcasses
 - b. Pork carcasses
 - c. Lamb carcasses
 - d. Wholesale/sub-primal pork cuts
 - e. Wholesale/sub-primal beef cuts
 - f. Beef retail cuts - one of the following options
 - Ribeye Steak
 - Top Loin Steak
 - Boneless Loin Steak
 - Bone-in Loin Steak (includes both T-bone and Porterhouse steaks)
 - g. Pork retail cuts - one of the following options
 - Smoked Ham Center Slice
 - Rib Chop
 - Loin Chop
 - Center Rib Roast
 - Blade Steak
 - h. Lamb retail cuts - one of the following options
 - Arm Chop
 - Rib Chop
 - Loin Chop
 - Square Cut Shoulder Roast

2. Grade one ring of six (6) beef carcasses for QUALITY. [Scoring Note: Fifteen points are added to the participant's score for correctly identifying the Quality Grade, twelve points for being off 1/3 grade, eight points for being off two 1/3 grades, three points for being off three 1/3 grades and zero for missing the correct grade by four or more places. The quality grading ring is valued at 90 points]
3. Grade one ring of six (6) beef carcasses for YIELD. [Scoring Note: Fifteen points are added to the participant's score for correctly identifying the Yield Grade, twelve points for being off 1/3 grade, eight points for being off two 1/3 grades, three points for being off three 1/3 grades and zero for missing the correct grade by four or more places. The quality grading ring is valued at 90 points]

Yield Grade 1 (YG1)	Yield Grade 2 (YG2)	Yield Grade 3 (YG3)	Yield Grade 4 (YG4)	Yield Grade 5 (YG5)
High - 1.00 - 1.33	High - 2.00 - 2.33	High - 3.00 - 3.33	High - 4.00 - 4.33	High - 5.00 - 5.33
Avg. - 1.34 - 1.66	Avg. - 2.34 - 2.66	Avg. - 3.34 - 3.66	Avg. - 4.34 - 4.66	Avg. - 5.34 - 5.66
Low - 1.67 - 1.99	Low - 2.67 - 2.99	Low - 3.67 - 3.99	Low - 4.67 - 4.99	Low - 5.67 - 5.99

4. Identify one ring of **thirty (30)** retail cuts of meat. [Scoring Note: Participant's receive one point for correctly identifying the species, two points for correctly identifying the primal cut, and three points for correctly identifying the retail cut. There are a total of six points possible for each cut **making this portion of the event worth 180 points.**] Listed on the following page are the Primal and Retail cuts of meat and the code that is required for the Scantron answer sheet.

BEEF (B)	Primal	Retail	PORK, FRESH (P)	Primal	Retail	LAMB (L)	Primal	Retail
Brisket			Ham/Leg			Breast		
Brisket, Whole (Bnls)	02	011	Center Slice	05	050	Breast	01	010
Brisket, Corned	02	102	Rump Portion	05	030	Riblets	01	029
Flat Half (Bnls)	02	020	Shank Portion	05	032			
Point Half (Bnls)	02	027	Loin			Leg		
Chuck			Back Ribs	08	005	American Style Roast	07	001
Arm Roast	03	003	Blade Chop	08	076	Center Slice	07	050
Arm Pot Roast (Bnls)	03	004	Blade Chop (Bnls)	08	077	Frenched Style Roast	07	021
Arm Steak	03	046	Blade Roast	08	006	Sirloin Chop	07	083
Arm Steak (Bnls)	03	047	Butterfly Chop (Bnls)	08	078	Sirloin Half (Portion)	07	036
Blade Roast	03	006	Center Loin Roast	08	012	Shank Portion	07	032
Blade Steak	03	048	Center Rib Roast	08	013			
Chuck Eye Roast (Bnls)	03	014	Country Style Ribs	08	015	Loin		
Mock Tender Roast	03	026	Loin Chop	08	080	Double Chop	08	079
Mock Tender Steak	03	054	Rib Chop	08	081	Loin Chop	08	080
Seven (7) Bone Roast	03	031	Sirloin Chop	08	083	Loin Roast	08	025
Seven (7) Bone Steak	03	059	Sirloin Cutlets	08	062			
Top Blade Steak (Bnls)	03	070	Sirloin Roast	08	035	Rib		
			Tenderloin Roast (Whole)	08	040	Rib Chop	10	081
Flank			Top Loin Chop	08	084	Rib Chop (Frenched)	10	082
Flank Steak	04	053	Top Loin Chop (Bnls)	08	085	Rib Roast	10	028
			Top Loin Roast (Bnls)	08	043			
Loin			Top Loin Double Roast (Bnls)	08	044	Shoulder		
Porterhouse Steak	08	056				Arm Chop	13	075
Sirloin Steak	08	060	Shoulder			Blade Chop	13	076
Sirloin Steak (Bnls)	08	061	Arm Picnic	13	002	Neck Slice	13	055
T-Bone Steak	08	066	Arm Roast	13	003	Shoulder (Bnls)	13	034
Tenderloin Roast (Bnls)	08	040	Arm Steak	13	046	Square Cut (Whole)	13	039
Tenderloin Steak	08	067	Blade, Boston	13	007			
Top Loin Steak	08	071	Blade Steak	13	048	Variety Meats		
Top Loin Steak (Bnls)	08	072	Side "Belly"			Heart	16	087
Top Sirloin Steak (Bnls)	08	074	Fresh Side	14	022	Kidney	16	088
			Spareribs			Liver	16	089
Plate			Spareribs	15	038	Tongue	16	092
Short Ribs	09	033						
Skirt Steak (Bnls)	09	063	Variety Meats					
			Heart	16	087			
Rib			Kidney	16	088			
Eye Roast	10	018	Liver	16	089			
Eye Steak	10	051	Tongue	16	092			
Large End Roast	10	024						
Small End Roast	10	037	Various					
Small End Steak	10	064	Cube Steak	17	095			
Small End Steak (Bnls)	10	065	Ground Pork	17	097			
			Hocks	17	098			
Round			Sausage	17	099			
Bottom Round Roast (Bnls)	11	008	Sausage Links	17	100			
Bottom Round Rump Roast (Bnls)	11	009						
Bottom Round Steak	11	049	PORK, SMOKED/CURED					
Eye Round Roast	11	019	Ham/Leg					
Eye Round Steak	11	052	Center Slice	05	104			
Heel of Round Roast	11	023	Ham (Bnls)	05	105			
Round Steak	11	057	Ham (Whole)	05	106			
Round Steak (Bnls)	11	058	Rump Portion	05	112			
Tip Roast	11	041	Shank Portion	05	113			
Tip Roast, Cap Off	11	042						
Tip Steak	11	068	Jowl					
Tip Steak, Cap Off	11	069	Jowl	06	108			
Top Round Roast	11	045						
Top Round Steak	11	073	Loin					
			Back Ribs	08	101			
Shank			Canadian Bacon	08	103			
Cross Cuts	12	016	Loin Chop	08	109			
Cross Cuts (Bnls)	12	017	Rib Chop	08	111			
			Shoulder					
Variety Meats			Picnic (Whole)	13	110			
Heart	16	087						
Kidney	16	088	Side "Belly"					
Liver	16	089	Slab Bacon	14	114			
Oxtail	16	090	Sliced Bacon	14	115			
Sweetbread	16	091						
Tongue	16	092	Spareribs					
Tripe	16	093	Spareribs	15	116			
Various Meats			Various Meats					
Beef for Stew	17	094	Hocks	17	107			
Cube Steak	17	095						
Ground Beef	17	096						

5. **Team Event.** All team members will be responsible for cooperatively solving a ground meat formulation problem. Round decimals for the final answer only. [Scoring Note: The team event is valued at 50 points]

Sample problem: Assume that you manage a meat plant that manufactures ground beef for a chain of retail stores. Your goal is to produce a fresh, wholesome product that complies with all meat inspection regulations and will have three days' shelf life in the meat case. The fat content must comply with the specifications of the stores. The cost of the product should be as low as possible.

Rounding a decimal: 5-9 will be rounded up; 1-4 will be rounded down. Remember, do not round numbers until you get to your final answer.

Example:

Use the Pearson Square to formulate a batch of ground beef to the desired fat content.

Meats:

- (1) Boneless cow meat (10% fat--\$.99/lb.)
- (2) 75% lean beef trimmings (25% fat--\$.79/lb.)

Desired Final Fat Content: 20%
Batch Size: 1,000 lbs.

Determine:

- a. The amounts of the two types of meat that must be blended together to give the desired fat content.
- b. The meat cost of the finished product.

From preceding information:

(A) 10%		(D) 5
	20%	
(B) 25%		(E) <u>10</u>
		15 (Sum)

Proportions:

- (1) Boneless cow = $5/15 = 0.33$
(x 1,000 lbs. = 330 lbs.)
- (2) 75% Beef trim = $10/15 = 0.67$
(x 1,000 lbs. = 670 lbs.)

Verify Final Fat Content:

330 lbs. X 0.10 (fat) = 33 lbs.
670 lbs. X 0.25 (fat) = 167 lbs.
= 200 lbs. Fat/1,000 lbs.
Batch (20% fat)

Cost per Pound:

Boneless cow meat	0.33 x	\$.99/lb	.=	<u>.327</u>
75% trim	0.67 x	\$.79/lb.	.=	<u>.529</u>
				.856 or
				\$.86/lb.

Pearson Square

(A)	(D)
Fat Content	Difference Between
of Meat 1	B and C
	(C)
	Desired Fat Content
	of Finished Batch
(B)	(E)
Fat Content	Difference Between
of meat 2	<u>A and C</u>
	Sum of (D) and (E)

Proportion of ingredient (A) = (D)/(Sum)
Proportion of ingredient (B) = (E)/(Sum)

Suggested References

1. Judging Booklet

J180f *Meat Judging and Grading*

2. Slidefilms & Slide Sets

F/S180-1 *Identification of Retail Meat Cuts*

F/S181a *Identification of Kinds of Meat*

F/S183b *Retail Beef Cut Identification, with study guide*

F/S183b (Supp) *Retail Beef Cut Identification, with study guide*

F/S186 *Retail Pork and Lamb Cut Identification, with study guide*

F/S186 (Supp) *Retail Pork and Lamb Cut Identification, with study guide*

F260 *Quality and Yield Grading of Beef Carcass*

F/S261 *Beef Slaughtering*

F/S264-1 *Pork Carcass Cutting and Processing, Part 1: Fabrication*

F/S264-2 *Pork Carcass Cutting and Processing Part II: Curing and Smoking*

F/S270-1 *Meat Evaluation Classes, Part 1: Beef*

F/S270-2 *Meat Evaluation Classes, Part II: Pork and Lamb*

3. CD-ROM's

MDS100 *Retail Meat Cut Identification and Technology*

MDS100-10 *Retail Meat Cut Identification and Technology Quiz Pack*

4. Other

X180b *Retail Meat Cut Identification--Flash Card Set*

Career Development Events Handbook 2006-2010. National FFA Organization, P.O. Box 68960, 6060 FFA Drive, Indianapolis, IN.46268-6060.

Catalog of instructional materials is available from ITCS Instructional Materials, University of Illinois at Urbana-Champaign, 1401 S. Maryland Dr., Urbana, IL 61801. (800) 345-6087 FAX (217) 333-3917 or available on the World Wide Web (<http://www.aces.uiuc.edu/itcs/im>).

Aid for ordering non-Scantron cards:

No. of teams x No. of participants per team x No. of rings = No. of cards needed,
i.e., 20 teams x 5 participants per team x 5 ring(s) = 500 cards needed.

My event: ____ teams x ____ participants per team x ____ ring(s) = ____ cards.