

National FFA Organization
2014 Meats Evaluation & Technology CDE
Meat Formulation Problem Solving

USDA Food Standards and Labeling Policy for Ground Beef:

May not contain added fat. Maximum total fat 30 percent. Cheek meat is permitted up to 25 percent and must be declared in the ingredients statement. For more than 25 percent, show as “Ground Beef and Cheek Meat,” all the same size. Beef of skeletal origin or from the diaphragm or esophagus (weasand) may be used in the preparation of chopped beef, ground beef, or hamburger. Heart meat and tongue meat as organ meats are not acceptable ingredients in chopped beef, ground beef, or hamburger.

Specifications on ground beef for this activity:

1. Ingredients must be beef.
2. No variety meats may be used.
3. No product more than three days old may be used.
4. All fresh products must be stored at a temperature not to exceed 33° F.
5. Least cost determined should be performed on acceptable ingredients to select the lowest cost product that meets all ground beef guidelines.

You have received an order with the following specifications:

Desired fat content of finished product = 10%
Batch size = 750 lbs.
Manufacture date = Thursday, October 30, 2014

Available Ingredients

Product	Slaughter Date	Temp. “°F”	% Fat Content	\$ Price/lb.
80% Lean Trim	October 27	33°	20%	2.33
Beef Hearts	October 27	32°	6%	1.63
Boneless Rib	October 28	33°	13%	3.47
Sirloins	October 26	32°	15%	2.64
Fresh Hams	October 27	33°	12%	1.99
Beef Chucks	October 27	32°	18%	2.05
Scrap Beef; Bin C	October 28	32°	8%	2.41

Instructions: Carefully read each item and possible answers. Mark the correct answers on the appropriate CDE form. Completely fill the chosen ovals to indicate your answers. You may write on this exam and utilize the back of other printed exams for scratch paper.

**Meat Formulation Problem Solving
Solution**

Which of the following was the correct formulation for this problem?

1. 80% Lean Trim & Beef Chucks
2. 80% Lean Trim & Scrap Beef; Bin C
3. Beef Chucks & Scrap Beef; Bin C
4. Beef Hearts & 80% Lean Trim
5. Beef Hearts & Beef Chucks
6. Beef Hearts & Scrap Beef; Bin C
7. Boneless Rib & Scrap Beef; Bin C
8. Fresh Hams & Beef Hearts
9. Fresh Hams & Scrap Beef; Bin C
10. Sirloins & Scrap Beef; Bin C

**Meat Formulation Problem Solving
Questions**

1. What was the price per pound of the correct final batch?
 - A. \$1.75
 - B. \$1.77
 - C. \$1.83
 - D. \$2.34
 - E. \$2.40
2. What was the total cost of the correct final batch?
 - A. \$1,326.45
 - B. \$1,753.50
 - C. \$1,797.30
 - D. \$2,125.50
 - E. \$2,340.00
3. What percentage of the correct final batch was 80% Lean Trim?
 - A. 0%
 - B. 12%
 - C. 17%
 - D. 80%
 - E. 100%
4. Which potential product was excluded because of freshness?
 - A. 80% Lean Trim
 - B. Beef Hearts
 - C. Boneless Rib
 - D. Fresh Hams
 - E. Sirloins
5. How much of the correct final batch consisted of Beef Chucks?
 - A. 0 lbs.
 - B. 150.0 lbs.
 - C. 247.5 lbs.
 - D. 307.5 lbs.
 - E. 600.0 lbs.
6. What percentage of the correct final batch consisted of Scrap Beef; Bin C?
 - A. 0%
 - B. 10%
 - C. 20%
 - D. 80%
 - E. 90%
7. What percentage of the correct final batch was fat?
 - A. 0%
 - B. 10%
 - C. 75%
 - D. 90%
 - E. 100%

National FFA Organization
2014 Meats Evaluation & Technology CDE
Meat Formulation Problem Solving

<i>KEY</i>

<u>Item</u>	<u>Answer</u>
Solution	#3
1.	D
2.	B
3.	A
4.	E
5.	B
6.	D
7.	B