



Meat Grading & Certification Branch

BEEF, BULLOCK, AND BULL GRADING METHODS AND PROCEDURES

Purpose

This Instruction defines all procedures in the classing, grading, and application of official grademarks of beef, bullock, and bull carcasses in accordance with the official grade standards. Unless amended by this Instruction, Meat Grading and Certification (MGC) Branch employees must adhere to [the United States Standards for Grades of Carcass Beef](#); MGC 500, Official Maturity Card (Exhibit A); [Code of Federal Regulations \(CFR\), Title 7, Subtitle B, Chapter I, Subchapter C, Part 54 Meats, Prepared Meats, and Meat Products \(Grading, Certification and Standards\)](#); the Official U.S. Department of Agriculture (USDA) Marbling Photographs and Marbling Texture Card, per MGC Instruction 912, Official Marbling Photographs; and MGC Instruction 515, Beef Carcass Instrument Grading Procedures.

To simplify, the terms "carcass" and "carcasses" also mean "side" or "sides."

Applicant Responsibilities

1. Provide Food Safety and Inspection Service (FSIS) approved, meat branding ink.
2. Present carcasses on easily accessible rails without the need for step ladders or stools and/or on moving chains in a manner which eliminates the need for the grader to turn carcasses.
3. Properly rib carcasses or sides in accordance with the official grade standards a minimum of 10 minutes prior to grading. Improperly ribbed carcasses to be re-offered for grading must be properly ribbed and allowed at least ten minutes bloom time.
4. Adequately chill carcasses to a range of 32° F to 40° F in the ribeye. Borderline carcasses presented outside this range are not eligible for a supervisory protest.
5. Adequately illuminate all grading and certification areas with a minimum of 100 foot candle power. Plants cannot protest borderline carcasses presented in areas with less than 100 foot candle power lighting.
6. If yield grading, the carcass weight must be prominently displayed on the carcass, preferably with ½ inch numbers or larger at a location between the ninth rib and the short loin, sirloin separation point, or on a monitor easily visible to the grader. If the weight tag and/or monitor display is not easily visible, or requires bending or stooping to read, the carcass may not be eligible for yield grading.

7. If removing kidney, pelvic and heart (KPH) fat, select carcasses for removal and determine the amount to be removed. (See Special Circumstances Concerning Yield Grading for an alternative KPH removal program under Grader Responsibilities in this Instruction). Such carcasses shall be grade identified in the same manner as carcasses with KPH still attached.
8. If "hot trimming" carcasses, mark or segregate carcasses and identify them to the grader.
9. Carcasses shall be split into two sides in a manner which allows bone maturity evaluations in the sacral, lumbar and thoracic regions. Mis-split carcasses may not be eligible for grading if an accurate maturity evaluation cannot be made.
10. For instrumentation grading, refer to Applicant Responsibilities in MGC Instruction 515, Beef Carcass Instrument Grading Procedures.

Grading Requirements

1. Grade only as carcasses in establishments where the animals are slaughtered or initially chilled, except when an exemption has been granted (MGC Instruction 106, Procedures for Grading Exemptions).
2. All carcasses must bear the required inspection mark(s) or be slaughtered in an FSIS or State approved facility prior to grading or classing.
3. Retained carcasses shall not be graded without specific authorization from an FSIS inspector.
4. If both sides are ribbed, the final grade will reflect the "highest" quality and/or yield grades as determined from either qualifying side.
5. All quality factors shall be determined from the same ribeye.
6. Official USDA grade factors may be obtained from approved instrumentation grade augmentation systems in accordance with MGC Instruction 515, Beef Carcass Instrument Grading Procedures.

Grader Responsibilities

1. Classing
 - a. Beef (steer, heifer, and cow) require no class identification (Grade Identification Codes, Grademarks, and Roller Brand for Beef and Bullock Carcasses and Cuts (Option 1), Exhibit B).
 - b. Bullock must be class identified directly above the quality grade stamp (Grade Identification Codes, Grademarks, and Roller Brand for Beef and Bullock Carcasses and Cuts (Option 1), Exhibit B; and Grade Identification Codes, Grademarks, and Roller Brand for Beef and Bullock Carcasses and Cuts (Option2), Exhibit C).

- c. Bull must be class identified above each yield grade stamp (Location for Applying Grade Stamps for Bull Carcasses and Cuts (Option 3), Exhibit D).

2. Do Not Grade

- a. In natural light, on loading docks, at cooler doors, on rails from which carcasses may be directly loaded for shipment, or any other area that does not provide an ample opportunity for supervisory review prior to shipment. (Carcasses may be roller branded in loading areas if they have been previously grade identified.)
- b. Carcasses that are not easily accessible or require turning.
- c. Carcasses that are too wet and/or icy to retain a legible grade stamp.

3. Do Not Quality Grade

- a. If the cut surface of the ribeye is so dried, aged, frozen or distorted by sawing or ribbing, that the true color, texture, and/or marbling cannot be determined.
- b. If more than a small amount of bloodshot (equal to the minimum slight marbling picture) or calloused tissue (1/2 square inch or more) is in the ribeye.
- c. If the application of pressure, combing, or any other influences altered characteristics of the ribeye to the extent that an accurate grade determination cannot be made.

4. Do Not Yield Grade

- a. When more than minor amounts of fat over the ribeye or other external fat is removed and an accurate adjusted preliminary yield grade (APYG) cannot be made.
- b. If the weight tag is missing, illegible or not prominently displayed.

5. Special Circumstances Concerning Yield Grading

- a. If a carcass which has had external fat removed is determined to be eligible for yield grading, the preliminary yield grade (PYG) must be adjusted, if necessary, to reflect what the intact fat cover of the carcass would have been prior to the removal of fat.
- b. If the udder fat has been removed, the APYG will be based entirely on the actual thickness of fat over the ribeye adjusted for irregular fat deposition on other parts of the carcass. The APYG is not adjusted downward based on the removal of udder fat.

- c. Yield grading may be performed immediately following ribbing.
- d. With prior procedural approval from the Standards, Analysis and Technology (SAT) Branch, KPH may be removed on the harvest floor and the carcass weighed prior to and following removal. If the adjustment in tenths for the amount of removal is printed on the carcass weight tag, the carcass may be yield graded when presented to the grader as if the KPH were still attached.
- e. If the fat over the ribeye at the 12th-13th ribs has been trimmed on both sides, the carcass is not eligible for yield grading.

6. Identification Methods

- a. Only MGC Branch employees and officially licensed employees may apply grade and certification stamps. Under special circumstances, plant personnel may apply grade and certification stamps under the direct supervision of MGC Branch personnel. Each instance must be approved in writing in advance by the Grading and Certification Director. Plants utilizing approved instrumentation grade augmentation systems must comply with MGC Instruction 515, Beef Carcass Instrument Grading Procedures, for applying grade identification marks.
- b. Carcasses or quarters shipped outside the plant location as graded must bear the appropriate designated roller brand.
- c. Carcasses graded and fabricated at the same plant location have the following options:

Option 1:

Final identification of carcass with pop stamp only or other method approved by the Grading and Certification Director (requires an approved FSIS grade label program and grade labeled protective covering, if cuts are marketed with a grade).

Option 2:

Pop stamp carcass and roller brand the entire carcass (round, sirloin, short loin, rib, and chuck) if the grade will be carried forward on all wholesale cuts. It is not necessary to rollerbrand those wholesale cuts that will be marketed as ungraded.

7. Roller branding

- a. Graders must personally apply or directly supervise the application of the roller brand.
- b. For beef, combination quality and yield grade rollers or quality only rollers can be used.

- c. Bullock must use the appropriate grade and class roller brand.
- d. Bull is not roller branded.

8. Do not roller brand

- a. If the area to be roller branded is obstructed by private tags, order tags, etc.
- b. If more than 50 percent of the area to be roller branded is too wet or frozen to retain a legible roller brand.
- c. Over the inspection stamp or preliminary grade identification stamp.
- d. Over bruised or mutilated areas. In these instances, apply the roller brand to the edge of the nearest unmutated or unbruised portion of the wholesale cut.

9. Rebranding

- a. Carcasses or cuts to be rebranded must exhibit previously applied, legible grademarks (pop stamp and/or roller brand).
- b. Positive grade identity must be maintained throughout the process.

10. Regrading

MGC Instruction 506, Removal of Incorrect Grademarks.

11. Beef grading aids

Beef grading aids are available to USDA employees from the MGC Branch Office. Non-USDA employees may purchase beef grading aids from the associations and companies listed in Beef Grading Aids (Exhibit E).

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Exhibit A

UNITED STATES DEPARTMENT OF AGRICULTURE LIVESTOCK AND SEED PROGRAM

OFFICIAL MATURITY CARD

SLIGHTLY ABUNDANT	PRIME Moderately Firm	Firm		COMMERCIAL	Firm
MODERATE	CHOICE		Slightly Firm		
MODEST	Slightly Soft	Slightly Firm			
SMALL				UTILITY	Slightly Firm
SLIGHT	SELECT Moderately Soft		Moderately Soft		
TRACES	STANDARD	Moderately Soft			Soft and Slightly Watery
PRACTICALLY DEVOID	Soft		Soft Watery	CUTTER	

MGC 500 (05/17/06)

(OVER)

	SACRAL	LUMBAR	THORACIC	RIB	
A-	Distinct separation	No ossification	No ossification	Slight tendency toward flatness	1.9 - Muscle visible thru fat many areas THIN - Rib, loin, rump, clod VERY THIN - Outside round, top of shoulder, neck SLIGHT DEPOSIT - Flank, cod
A+ / B-	Completely fused	Nearly completely ossified	Some evidence of ossification	Slightly wide and slightly flat	
B+ / C-		Completely ossified	Partially ossified		2.9 - Nearly completely covered with fat SLIGHTLY THIN - Loin, rib, inside round SLIGHTLY THICK - Rump, hip, clod Lean plainly visible thru fat outside round, top of shoulder, neck SMALL DEPOSIT - Flank, cod
C+ / D-			Outlines plainly visible	Moderately wide and flat	
D+ / E-			Outlines barely visible	Wide and flat	3.9 - Completely covered with fat SLIGHTLY THICK - Loin, rib, inside round MODERATELY THICK - Rump, hip, clod Lean visible thru fat neck, lower outside round SLIGHTLY LARGE DEPOSIT - Flank, cod
TEXTURE		COLOR			
A - Fine B - Tends to be fine* C - Slight coarse D - Moderately coarse E - Coarse	A	C			4.9 - Completely covered with fat MODERATELY THICK - Loin, rib, inside round THICK - Rump, hip, clod Muscle visible on shank, flank, plate LARGE DEPOSIT - Flank cod
		Cm - Moderately dark red U, Cu - Dark red			
		E			
*Standard moderately fine		Cm - Dark red U, Cu - Very dark red			

MGC 500 (Reverse)

Exhibit B

GRADING METHODS AND PROCEDURES

Grade Identification Codes, Grademarks, and Roller Brand for Beef and Bullock Carcasses and Cuts (Option 1)

USDA Prime, Choice, Select

- ① Preliminary grade ident shields on anterior end of loin

USDA
PRIME

USDA CHOICE

USDA SELECT



Identification for all other grades (USDA Standard, Commercial, Utility, Cutter, Canner, Cull)

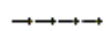
- ② Carcasses or wholesale cuts are identified by full or abbreviated grade name using the grade band.



Class (Bullock)



Indicates area to be roller branded.



Indicates optional areas to be roller branded.



Roller brand inside round, not pictured.

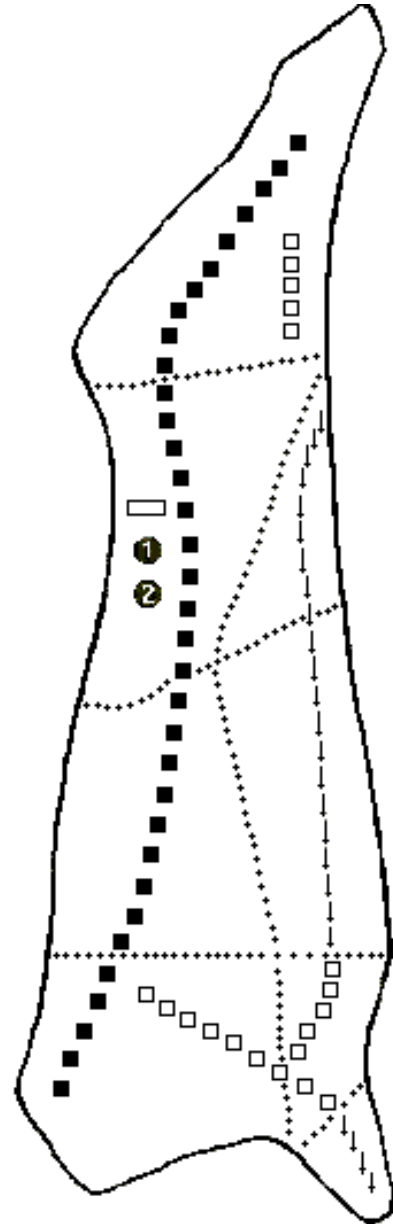


Exhibit C

GRADING METHODS AND PROCEDURES

Grade Identification Codes, Grademarks, and Roller Brand for Beef and Bullock Carcasses and Cuts (Option 2)

USDA Prime, Choice, Select

- ① Official meat grading hammer anywhere on loin.

Final Grade Identification for Carcasses and Cuts

Quality Only



Quality and Yield

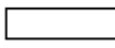


Yield Only



Identification for all other grades (USDA Standard, Commercial, Utility, Cutter, Canner, Cull)

- ② Carcasses or wholesale cuts are identified by full or abbreviated grade name using the grade band.

 Class (Bullock)

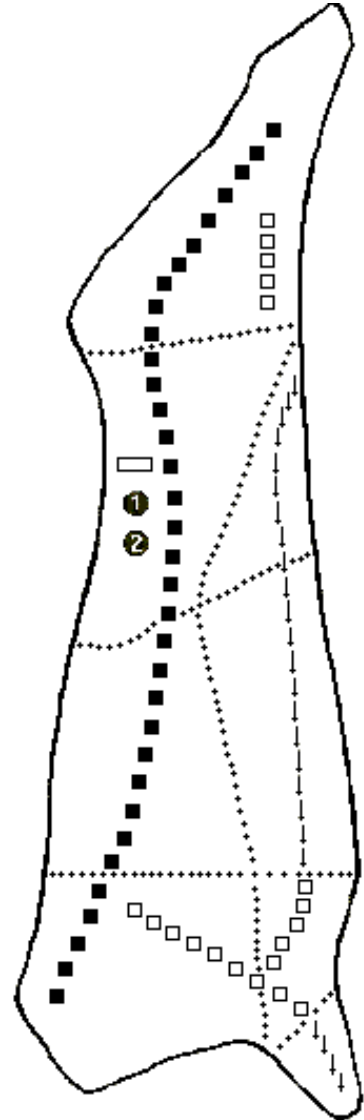


Exhibit D

GRADING METHODS AND PROCEDURES

Location for Applying Grade Stamps for Bull Carcasses and Cuts (Option 3)

USDA Yield Grade 1-5 Class Identification

- ❶ Two required areas:
loin and rib area 5 to 7 inches
from Chine Bone.
- ❷ Six optional areas include
heel, rump, inside round,
knuckle, clod, and brisket.



Note: Bull must be class identified
directly above each yield
grade stamp.

Class (Bull)

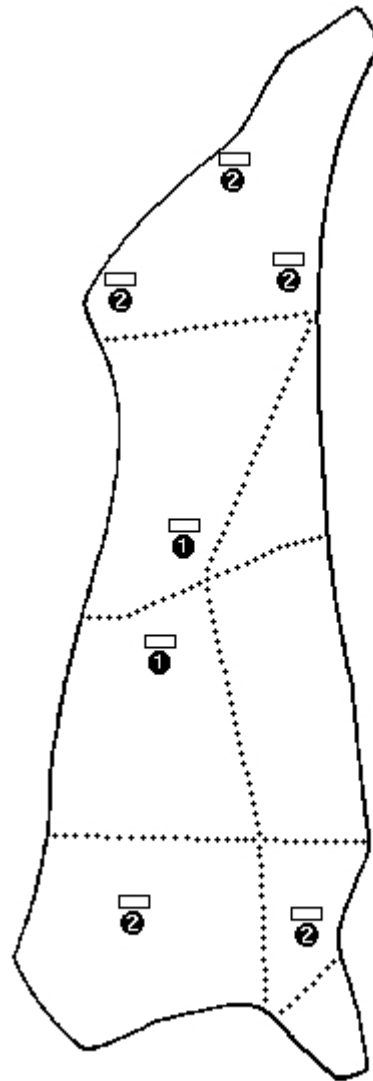


Exhibit E

BEEF GRADING AIDS

Non-USDA employees may obtain the items below as follows:

MEAT EVALUATION HANDBOOK – Primary text for meat grading and selection

American Meat Science Association (www.meatscience.org) phone: (217) 356-5368
1111 North Dunlap
Savoy, IL 61874

USDA RIBEYE GRID – For quick measurement of ribeye area – beef

Art Services phone: (301) 277-7304
4910 Decatur St
Hyattsville, MD 20781

PRELIMINARY YIELD GRADE RULER – for measurement of backfat

NASCO phone: (800) 558-9595
P.O. Box 3837
Modesto, CA 95357

MARBLING PICTURES – Set of six official color prints illustrating the lower limits of degrees of marbling (Slight through Moderately Abundant)

National Cattlemen's Beef Association phone: (303) 694-0305
9110 E. Nichols Avenue, #300 (800) 368-3138
Centennial, CO 80112

A-40 MATURITY PICTURES – Set of seven official color prints illustrating beef carcass bone maturity (A⁰⁰ through A⁵⁰) used as guidelines in certifying A-40 or younger carcasses eligible for Japanese export.

USDA/LSP/MGC Branch phone: (720) 497-2520
13952 Denver West Parkway
Building 53, Suite 350
Lakewood, CO 80401