



Handling, Using & Storing Beef

Written by:

Jeannine Schwehofer, Extension Educator

Laurie Messing, Extension Educator

Michigan-raised beef is available year-round.

Recommendations:

When purchasing beef, choose firm and bright red cuts. Cuts should have small flecks of fat within the muscle, which is known as “marbling.” Marbling is desirable because it provides flavor and often improves tenderness. All beef sold in retail stores must have an inspection seal from the U.S. Department of Agriculture (USDA) that indicates it was “Passed and Inspected by USDA.” This seal certifies that the meat was inspected and is wholesome and free from disease (USDA Food Safety and Inspection Service, 2014, August).

Storage & Food Safety:

- To prevent cross-contamination, in the grocery cart or in your refrigerator, always place raw beef in plastic bags to keep juices from leaking or dripping on to other food items.
- Place raw beef in a cooler on ice if the estimated trip from the market to your refrigerator will last more than one hour; this is especially important in warm weather.
- Raw beef should be stored in a bowl or on a platter in the bottom of the refrigerator. Your refrigerator temperature should be at 40 °F or less.
- Store whole-muscle fresh beef cuts for three to five days in the refrigerator.
- Ground beef and variety meats such as liver, kidney and tongue can be stored fresh for one to two days in the refrigerator.
- Use or freeze products with a “sell by” date within three to five days of purchase.
- Use cooked beef that has been safely refrigerated within three to four days.
- Always wash cutting boards, utensils and surfaces that have touched raw beef with hot, soapy water, and then sanitize with 1 teaspoon of regular bleach in 1 quart of warm water.
- Washing meat before cooking it is not recommended. This can cause cross-contamination - when bacteria in raw meat spread to other foods, utensils and surfaces.



Lawn or garden questions?

Visit migarden.msu.edu.

Call toll-free 1-888-678-3464.

Handling, Using and Storing Beef

Thawing:

Always thaw meats in the refrigerator, in the microwave or in cold water. Never thaw meat on the counter.

- It is best to plan ahead for slow, safe thawing in the refrigerator. Small pieces of meat may defrost within one to two days. Large items will take longer, approximately one day for each 5 pounds of weight. Use thawed beef within four days.
- When defrosting meat in the microwave, it is necessary to cook it immediately after thawing because some areas may become warm and begin to cook during microwaving.
- For fast thawing, place food in a leakproof plastic bag and immerse it in cold water. Change the water every 30 minutes to be sure it stays cold. After thawing, cook immediately.
- Beef can be cooked while it is still frozen, but it will take approximately 1 1/2 times as long to cook.

Marinating:

Always marinate meat in the refrigerator. Beef may be marinated for up to 24 hours in the refrigerator. If some of the marinade is to be used as a sauce on the cooked food, set some aside before adding the raw meat. Do not save marinade for future use, and discard used marinade after cooking the meat.

Cooking:

Research indicates that color and texture are not safe ways of determining the doneness of beef products. Use a calibrated food thermometer to make sure the meat reaches the correct temperature. The USDA Food Safety and Inspection Service (2012, June) recommends the following minimum internal cooking temperatures for beef products:

- Ground beef -160 °F
- Steaks -145 °F
- Roasts -145 °F and allowed to rest for 4 minutes before carving (“Resting” the meat means to let it sit for a given amount of time before consuming it.)

Dry-heat cookery methods – such as grilling, broiling, roasting, pan broiling and pan frying – are ideal for more tender cuts of meat.

Moist-heat cookery involves adding moisture and using methods such as braising, pot-roasting or cooking with liquid, such as in stews and soups. Moist-heat cookery is ideal for less tender cuts of meat that require long and slow cooking. Different cuts have different preferred methods of cooking (Table 1).

Canning – Ground or Chopped Beef:

Beef *must be canned in a pressure canner* for a safe product.

Choose fresh, chilled meat. Shape chopped meat into patties or balls. Cook until lightly browned. Ground meat may be sautéed without shaping. Remove excess fat. Fill jars with pieces. Add boiling meat broth, tomato juice or water, leaving 1-inch headspace. Add 2 teaspoons of salt per quart to the jars, if desired.

Adjust lids and process following the recommendations in Table 2 and Table 3 according to the type of canner used.

Canning – Strips, Cubes or Chunks of Beef:

Choose quality chilled meat. Remove excess fat. Remove bones.

Hot pack – Precook meat until rare by roasting, stewing or browning in a small amount of fat. Add 1 teaspoon of salt per quart to the jar, if desired. Fill jars with pieces and add boiling broth, meat drippings, water or tomato juice, leaving 1-inch headspace.

Raw pack – Add 2 teaspoons of salt per quart to the jar, if desired. Fill jars with raw meat pieces, leaving 1-inch headspace. Do not add liquid.

Adjust lids and process following the recommendations in Table 4 or Table 5 according to the type of canner used.

Handling, Using and Storing Beef

Table 1. Approximate number of 3-ounce cooked servings per pound and recommended cooking method(s) for various cuts of beef.

Beef cut**	Alternative name**	Servings per pound***	Preferred Preparation/Cookery Method**
Steaks:			
Tenderloin	Filet	3	Grill/Dry heat
Porterhouse	King Steak	2	Grill/Dry heat
T-bone		2	Grill/Dry heat
Strip (boneless)	New York or Kansas City Strip Steak, Top Loin	2.5	Grill/Dry heat
Rib-eye	Delmonico	3	Grill/Dry heat
Top Sirloin (boneless)	Sirloin Butt Steak	3	Grill/Dry heat
Sirloin Tip	Ball Tip Steak	3	Pan broiling/Dry heat
Chuck Top Blade	Flat Iron, Book or Butler	3	Grill or pan fry or broil/Dry heat
Shoulder Center	Ranch Steak	3	Grill/Dry heat
Top Round	London Broil	3	Grill/Dry heat*
Eye of Round		3	Braise/Moist heat
Tri-Tip		3	Grill/Dry heat
Flank	London Broil	3	Grill/Dry heat*
Skirt	Diaphragm	3	Grill/Dry heat*
Oven Roasts:			
Tenderloin		3	Roast/Dry heat
Ribeye (bone-in)	Prime Rib, Rib Roast	2	Roast/Dry heat
Ribeye	Delmonico Roast	3	Roast/Dry heat
Tri-Tip	Triangle Roast, Bottom Sirloin	3	Roast/Dry heat
Sirloin Tip	Ball Tip Roast	3	Roast/Dry heat
Pot Roasts:			
Chuck (boneless)	Chuck Arm or Chuck Blade Roast	2	Slow cook/Moist heat
7-Bone Chuck		2.5	Slow cook/Moist heat
Cross Rib (bone-in)		2.5	Slow cook/Moist heat
Brisket		3	Slow cook/Moist heat
Top Round		3	Roast/Dry heat
Eye of Round		3	Roast/Dry heat
Bottom Round	Rump Roast	2	Slow cook/Moist heat
Ribs:			
Short Ribs (bone-in)		2	Braise/Moist heat
Short Ribs (boneless)	English Short Ribs, Boneless Braising Ribs	2.5	Braise/Moist heat

Handling, Using and Storing Beef

Table 1. Continued

Miscellaneous:			
Stew Meat	Diced Beef	4	Slow cook/Moist heat
Cross Cut Shanks		2	Stew/Moist heat
Ground Beef		4	Grill or pan broiling/Dry heat
Organ Meats		4	Various or Pan fry/Dry heat
*works well with marinade			
**Adapted from Cattlemen's Beef Board and National Cattlemen's Beef Association, 2013			
***Adapted from Burson, 1989			

Table 2. Recommended process time for ground or chopped beef in a dial-gauge pressure canner.

Style of Pack	Jar Size	Process Time (min)	Canner Pressure (PSI) in pounds at Altitudes of			
			0 - 2,000 ft	2,001 - 4,000 ft	4,001 - 6,000 ft	6,001 - 8,000 ft
Hot	Pints	75	11	12	13	14
	Quarts	90	11	12	13	14

Table 3. Recommended process time for ground or chopped beef in a weighted-gauge pressure canner.

Style of Pack	Jar Size	Process Time (min)	Canner Pressure (PSI) in pounds at Altitudes of	
			0 - 1,000 ft	Above 1,000 ft
Hot	Pints	75	10	15
	Quarts	90	10	15

Table 4. Recommended process time for strips, cubes or chunks of beef in a dial-gauge pressure canner.

Style of Pack	Jar Size	Process Time (min)	Canner Pressure (PSI) in pounds at Altitudes of			
			0 - 2,000 ft	2,001 - 4,000 ft	4,001 - 6,000 ft	6,001 - 8,000 ft
Hot and raw	Pints	75	11	12	13	14
	Quarts	90	11	12	13	14

Table 5. Recommended process time for strips, cubes or chunks of beef in a weighted-gauge pressure canner.

Style of Pack	Jar Size	Process Time (min)	Canner Pressure (PSI) in pounds at Altitudes of	
			0 - 1,000 ft	Above 1,000 ft
Hot	Pints	75	10	15
	Quarts	90	10	15

Information on canning was adapted from the National Center for Home Food Preservation website at http://nchfp.uga.edu/how/can_05/strips_cubes_chunks.html#TBLE2. The National Center for Home Food Preservation adapted their information from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, USDA, revised 2009.

Handling, Using and Storing Beef

Let jars stand undisturbed for 24 hours, remove rings, wash jars, label, date and store. If a jar does not seal, reprocess within 24 hours using the same processing time. Store between 50 to 70 °F in a clean, cool, dark and dry place. For best quality, preserve the amount of beef that you and your family can consume in one year.

Freezing:

Select only high quality, fresh meats to freeze. Meat purchased from grocery stores is ready to be frozen at the cut size in the package or cut into serving-size portions and frozen.

Cutting the meat - Depending on individual preferences for the number of servings and cooking methods, the meat can be cut into roasts, rolled roasts, steaks, chops, stew meat, ground meat, etc., before freezing.

Packaging - Package the meat in meal-size portions. Place one layer of freezer paper or wrap between slices or patties of meat to make them easy to separate and to help speed thawing after they have been frozen. Wrap the meat in freezer paper, freezer bags or aluminum foil. Seal the packaging well to keep air out and moisture in the package. Freezer containers can also be used for ground beef, stew beef or other meats frozen in small portions.

Store-bought meats need to be overwrapped because their clear overwrap packaging is not moisture vapor-resistant. Meat from a meat packer or local butcher typically does not need additional packaging before freezing. Vacuum packaging with home vacuum packagers is also a good choice for packaging. Seal, label, date and freeze the meat packages.

References:

Burson, D. E. (1989). G89-947 Buying meat by the serving. *Historical Materials from University of Nebraska Lincoln-Extension*. Lincoln, NE: University of Nebraska-Lincoln. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1790&context=extensionhist>

Cattlemen's Beef Board and National Cattlemen's Beef Association. (2013). *Beef. It's what's for dinner*. Retrieved from <http://www.beefitswhatsfordinner.com/butchercounter.aspx#explore>.

National Center for Home Food Preservation. (2009, Nov.). *Selecting, preparing and canning meat*. Athens, GA: University of Georgia. Retrieved from http://nchfp.uga.edu/how/can_05/strips_cubes_chunks.html#TBLE2

USDA Food Safety and Inspection Service. (2012, June). *Safe minimum internal temperature chart*. Washington, DC.: Author. Retrieved from www.fsis.usda.gov/wps/wcm/connect/625d9435-4f14-46fe-b207-5d6688cb4db5/Safe_Minimum_Internal_Temperature_Chart.pdf?MOD=AJPERES

USDA Food Safety and Inspection Service. (2014, August). *Beef from farm to table*. Washington, DC.: Author. Retrieved from http://www.fsis.usda.gov/wps/wcm/connect/c33b69fe-7041-4f50-9dd0-d098f11d1f13/Beef_from_Farm_to_Table.pdf?MOD=AJPERES

Resources:

Beef. It's What's For Dinner: <http://www.beefitswhatsfordinner.com/>.

University of Georgia Cooperative Extension. (2006). *So easy to preserve* (5th ed.). Athens, GA.: <http://setp.uga.edu/>

**Find out more about
Michigan Fresh at**
msue.anr.msu.edu/program/info/mi_fresh

MICHIGAN STATE | **Extension**
UNIVERSITY

MSU is an affirmative-action, equal-opportunity employer, committed to achieving excellence through a diverse workforce and inclusive culture that encourages all people to reach their full potential. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Margaret A. Bethel, Interim Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.