

## **What to expect from your freezer beef**

Dr. Brandi B. Karisch – Extension Beef Cattle Specialist, Mississippi State University

One of the perks of being a beef producer is home grown beef. Many producers keep back a calf a year to stock their freezer. Even more producers are beginning to take advantage of the growing demand for local beef, and marketing finished cattle to consumers in their area. Even though many producers may be familiar with the process of feeding a calf for the freezer, figuring how much edible beef to plan for your freezer often comes as a surprise. There are a few steps in the process to get a good estimate of what to expect.

The first step is going from live animal weight to hot carcass weight. This is referred to as the dressing percentage. On average we expect beef cattle dressing percentage to be around 60 to 64%. This is calculated as the (hot carcass weight / live weight) x 100. The hot carcass weight is calculated after the head, hide, and internal organs have been removed. For example from a 1,300 lb steer with a 63% dressing percentage we would expect a hot carcass weight of 819 lbs. Most beef producers are familiar with this number, and often there is confusion that this is the amount of packed beef they should expect from a carcass. It is important to remember that hot carcass weight includes bone, excess fat, and moisture loss that will not end up in the final packaged beef.

Dressing percentage is affected by a number of factors. The weight of the hide, horns, gut fill, and mud and manure on the hide will all impact dressing percentage. In addition, animal type, breed, and even how an animal is finished will have an effect on the dressing percentage. For example, we expect grass finished cattle to have a lower than average dressing percentage, while we might expect an animal that has been over-finished (fat) to have a higher than average dressing percentage.

The next step in the process is to chill the carcass. Chilling will affect carcass weight because of moisture loss from water evaporation. After the carcass is chilled, it will be further processed into cuts. First the carcass will be split in half, and then each half will be split into quarters. Often when selling to consumers, a family may not want to purchase a whole animal on their own, and may go on halves or quarters with others. From this point the quarters are then fabricated to primal often referred to as wholesale cuts. The round, loin, rib, and chuck are the major primal cuts. From here the primals are further broken down into sub-primals based on the preferences of the consumer.

The amount of final packaged meat is impacted by factors such as fat, bone, aging, and muscularity of the carcass. Carcass fat has the greatest impact on the amount of product from the carcass. If an animal has more external fat, this results in more trim that will be lost. Improved carcass muscularity will actually increase the percent retail product of a carcass. For example, dairy type animals will have decreased product compared to beef type animals. However, it is important to note that carcass fat has a greater impact on decreasing final product than muscle has on increasing retail product. Cutting directions will also impact the amount of product from a carcass. If more boneless cuts are selected, expect the amount of retail product to decrease. Trimming of retail cuts will also lead to decreased yield as well as decreased fat in ground beef. Aging will also have an impact on yield. While aging is desirable to improve tenderness and

increase beef flavor, longer aging periods result in increased moisture loss from the carcass due to increased water evaporation. In addition, increased dry aging results in increased dehydration of the surface of the carcass, which can lead to dry leathery areas that need to be trimmed off. Loss from longer aging is increased in carcasses with little external fat.

From the hot carcass weight, the expected yield of retail cuts is 55 to 75%. This can vary based on their factors discussed in the above paragraph. For example, a 750 lb carcass with a 1/2 in fat over the ribeye, average muscling with a 12-13 in ribeye, will yield about 65% of the carcass as retail cuts and lean trim. To take that all the way through from start to finish: we have a 1,200 lb steer with a 63% dressing percentage. That gives us a 750 lb carcass. From that 750 lb carcass, we get about 65% of boneless trimmed beef or 490 lbs. Looking at that percent from the live animal we started with that's close to 40%. If we break that 490 lbs down into cuts we get approximately:

- 185 lbs lean trim or ground beef
- 85 lbs of round roasts and steaks
- 90 lbs of chuck roasts and steaks
- 80 lbs of rib and loin steaks
- 50 lbs of other cuts (brisket, flank steak, skirt steak, short ribs)

It's also important to remember that choosing one cut when filling out your cutting card will affect your ability or how much you receive of another cut. For example, the flat iron is a has become quite popular since it's introduction several years ago, and comes from the chuck shoulder clod top blade roast. So selecting this cut will mean a decreased amount of chuck roasts available. Also selecting to receive filet mignon and strip steaks means that you will not receive porterhouse and T-bone steaks.

Hopefully we've shed a little light on the often confusing world of navigating what to expect from your beef. The most important thing to remember is if you're unsure about options or cuts, ask your butcher on their recommendation. If you have questions about finishing an animal, feel free to give the beef Extension team a call or email, and we'll be glad to answer your questions. There's nothing more satisfying any time of the year than pulling that delicious home grown steak from your grill.

For more information about beef cattle production, contact an office of the Mississippi State University Extension Service, and visit [extension.msstate.edu/beef](http://extension.msstate.edu/beef).