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How Much Meat to Expect from a Carcass

A CONSUMER'S GUIDE TO PURCHASING FREEZER MEATS

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Consumers who buy freezer meat should understand the difference between the paid weight and the amount of meat they will put in the freezer. To avoid misunderstandings, meat processors should be able to explain to customers the approximate amount of meat to expect from a beef, pork, or lamb carcass, the best ways to have meat wrapped for the freezer, and the amount of freezer space necessary to store large amounts of meat.

This guide provides the information you need to estimate the amount of meat you will receive from a carcass of beef, pork, or lamb.

Dressing Percentage

The "dressing percentage" is the amount of the live weight that will enter the cooler in the form of a carcass. The dressing percentage can be calculated as:

(hot carcass weight ÷ live weight) x 100

The dressing percentage of each species of livestock animal will differ (Table 1).

Many factors can affect the dressing percentage of an animal. Anything that adds to the live weight but does not appear on the carcass will decrease the dressing percentage, including:

- Mud and/or manure caked on the hide
- Gut fill
- Horns
- Unshorn wool
- Abscesses or excessive bruises that must be cut off the carcass before it enters the cooler

Table 1. Average dressing percentages for the four major livestock species.

Species	Average dressing percentage (%)
Beef (grain-fed)	60 – 63
Beef (grass-fed)	56 – 58
Pork (skin-on)	70 – 73
Sheep (shorn)	50 – 53
Goat	45 – 50

Some factors can increase the dressing percentage, such as:

- Excessively fat animals
- Empty digestive tracts or stomachs
- Freshly shorn wool

Dressing percentage also can be affected by the time between when the live weight was taken and when the carcass weight was recorded. Some meat processors do not weigh live animals, so they must be weighed at the farm prior to shipping. A lengthy time between recording the live weight and weighing the carcass will allow more time for the digestive tract to empty. Commonly, cattle that are not fed 24 hours prior to harvest can lose 50 to 100 pounds, pigs 10 to 15 pounds, and sheep and goats 5 to 10 pounds. On such animals the dressing percentage will be lower than expected. Animals weighed immediately prior to slaughter, however, will have a higher than average dressing percentage.

Cooler Shrink

Fresh meat is approximately 70 to 75 percent water, making carcasses very susceptible to evaporative cooling loss in the first 24 hours. Most coolers are designed to circulate air around the carcasses to facilitate rapid cooling, and carcasses can lose 3 to 5 percent of the hot carcass weight during the first 24 hours of chilling. Carcasses with moderate to excessive fat cover will have less cooler shrink, and trimmer carcasses with less fat cover will experience more evaporative cooler shrink. Goat carcasses can shrink as much as 10 percent during the first 24 hours.

How much meat will I take home?

Several factors affect the amount of meat you will take home from the meat processor. These factors include:

- **Carcass fatness and the amount of external fat remaining on the retail cuts.** Typically ¼ inch of external fat is left on retail cuts; however, some consumers prefer less fat left on their cuts. A fatter carcass will yield less meat.
- **Bone-in verses boneless cuts.** The skeletal system can be 15 to 20 percent of the carcass weight. Therefore, less total poundage can be expected with boneless cuts.
- **Carcass muscularity.** Heavily muscled carcasses will yield more retail cuts.
- **Bruising, abscesses, and/ or other carcass abnormalities.** Although these abnormalities are not common, if they do occur they have to be removed from the carcass, greatly reducing the amount of take-home meat.
- **Type of ground beef.** Lean ground beef will require more fat to be removed, thus lowering the amount of take-home product.
- **Aging beef carcasses.** Aging beef carcasses increases the tenderness of the retail cuts. The optimum aging time is between 14 to 21 days; however, the longer a carcass is aged the higher the cutting loss. As a beef carcass dry ages, the surface becomes dehy-

drated; the dehydrated surface has to be removed, which lowers the yield. Furthermore, trimmer carcasses (less than 0.3 inch of fat) are more susceptible to surface dehydration, further lowering the yield.

Number of Steaks/ Chops and Roasts

Tables 2 through 4 detail the total amount of meat to expect from the average carcass. The actual number and amount of steaks/chops, roasts, and ground product will vary from meat processor to meat processor, and how the customer wants the carcass fabricated. Communicate with the meat processor about what you want and understand that some retail cuts are fabricated from others. For example, you cannot expect to get beef Top Loin and Tenderloin steaks (Filet Mignon), if you want T-bone or Porterhouse steaks. Top Loin and Tenderloin steaks are boneless versions of T-bone and Porterhouse steaks.

How many pounds will my freezer hold?

Make sure you have plenty of freezer space. Most freezers will hold between 30 to 40 pounds of meat per cubic feet. You may need to allow more room for odd shaped cuts.

Packaging

Frozen meat will not last forever in the freezer. The average beef carcass will produce over 500 meals. It would be very difficult for the average American to consume a carcass in a timely fashion. Freezer burn, the dehydration of the frozen meat surface, is a major concern in long-term freezer storage. The type of packaging will help reduce the incidence of freezer burn. Although it may cost more, vacuum packaging retail cuts will help reduce the incidence of freezer burn. Refer to Table 5 for the recommended storage time for frozen meats.

Table 2. Average amount of meat from a 1,200-pound beef carcass.

Cuts	Trim (inches)	Ground beef		Approx. amt. of freezer meat (lb)
		Lean (%)	Fat (%)	
Boneless steaks and roasts	1/8	90	10	425
Bone-in steaks and roasts	1/4	80	20	500
Mixture of bone-in and boneless steaks and roasts	1/8	80	20	490
Boneless steaks and roasts from very fat beef animal	1/8	90	10	348
Boneless steaks and roasts from Holstein (dairy animal)*	1/8	90	10	396

Source: South Dakota State University. Note: Estimations may vary by 25 pounds or more.
*A Holstein steer was used in the examples to show how a light-muscled animal will affect the amount of take-home product.

Table 3. Average amount of meat from a 250-pound pig carcass.[1]

Cuts	Trim (inches)	Sausage		Approx. amt. of freezer meat (lb)
		Lean (%)	Fat (%)	
Bone-in chops and roasts	1/8	80	20	133
Boneless chops and roasts	1/8	80	20	118
Boneless chops and roasts from very fat pig	1/8	90	10	93

[1] Skin-on carcasses.
Source: South Dakota State University. Note: Estimations may vary.

Table 4. Average amount of meat from a 120-pound lamb carcass.

Cuts	Fleece condition	Ground lamb		Approx. amt. of freezer meat (lb)
		Lean (%)	Fat (%)	
Bone-in chops and roasts, shorn fleece	Shorn	80	20	46
Bone-in chops and roasts from a very fat lamb	Long	80	20	118

SOURCE? Note: Estimations may vary.

Table 5. Recommended storage time for refrigerated or frozen meat.

Meat	Refrigerator 38° to 40°F (days)	Freezer 0° or colder (months)
Beef	3 to 4	6 to 12
Ground beef (hamburger)	1 to 2	3 to 4
Pork	2 to 3	6
Fresh pork sausage (without antioxidants)	3 to 4	1 to 2
Lamb and goat	3 to 4	6 to 9
Bacon	7	1
Smoked ham	7	1 to 2

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