



How much meat should a lamb yield?

Dressing Percentage

To better understand the amount of edible product expected from a grain finished lamb, the first step is understanding the difference in live weight compared to carcass weight. When a lamb (male or female sheep under one year of age) is harvested, certain parts of the animal such as the pelt (hide and wool), feet, blood, and viscera (internal organs) are removed. The post-harvest hanging weight, known as the hot carcass weight, includes the lean (meat), adipose tissue (fat), and bone. Dressing percentage is the difference between live animal and carcass weight and is influenced by factors such as muscle, fat cover and size, to name a few. These factors help determine how much meat the carcass may yield (Table 1).

Table 1. Dressing Percentage Factors

Factor	Dressing Percentage (%)
Conventional fed	44-56
Shorn lambs	Average 54
Unshorn lambs	Average 52
More finish	Higher
Grass fed	Lower
Heavier muscled	Higher

Carcass Fabrication

During carcass chilling and fabrication, some carcass weight will be lost from the hanging, boning and trimming. The percentage of carcass weight remaining is the “take-home” or retail meat cuts and is called the carcass cutting yield.

Carcass cutting yield is variable and depends on the carcass’s fat thickness (leaner carcasses increase yield), muscling (greater increases yield), and the amount of bone-in versus boneless retail cuts (boneless decreases yield). (Table 2).

Table 2. Average Carcass Cutting Yield

Cut Type	Average Cutting Yield
Bone-in regularly trimmed retail cuts	65-75%
Boneless closely trimmed retail cuts	43-50%

Requesting closely trimmed and boneless steaks and roasts and/or trimmed, lean ground lamb will result in less pounds of take-home product. This may be advantageous depending on available freezer space and eating preferences. It is important to understand that the amount of edible lean will be the same regardless if the retail cuts are boneless or bone-in. The primary difference will be the inclusion of bone and sometimes some additional fat removal. Choosing to bring home organ meats such as liver, heart, and tongue will also influence the pounds of take-home meat product and increasing the cutting yield.

Primal vs Retail Cuts

A whole lamb carcass is first divided into six distinctive primal cuts (Figure 1). Each primal cut is then further fabricated into a variety of different retail cuts. Discuss with the meat processor prior to harvest the desired retail cuts (including thickness and number per package). The rough amount of each primal cut (% of the whole carcass) and the possible retail cut choices (from each primal) are displayed in Table 3. Note: selecting one type of cut may impact the ability to select a different retail cut coming from the same primal cut. For example, selecting a bone-in leg roast and center slice leg steaks from one of the lamb legs would not allow the option of getting two whole bone-in leg-of-lamb.

Figure 1. Lamb Primal Cuts

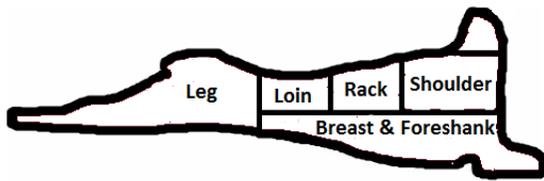


Table 3. Percentage of Primal cuts and their retail cuts

Primal Cut	%	Possible Retail Cuts
Shoulder	23	Arm/Blade Chops Shoulder Chops Square Cut Shoulder Roast Boneless Shoulder Roast Ground Lamb Kabob & Stew Meat
Rack/Rib	15	Bone-in Rib Chops Bone-in Rib Roast French or Crown Rack
Loin	21	Bone-in Loin Chops/T-bone Loin Roast Tenderloin
Leg	33	Sirloin Chops Bon-in Leg Roast Boneless Leg Roast (BRT) Leg Shank Roast Center Slice Leg Steaks Bone-in Leg-of-Lamb (Frenched or American) Boneless Leg-of-Lamb Kabob & Stew Meat
Foreshank & Breast	12	Foreshank Ground Lamb Denver Style Ribs

Further processed products such as bratwursts and other types of fresh and cooked sausages may also be an option to be included in your order. However, since a small amount of trimmings are generated during lamb fabrication, other lamb cuts and/or non-lamb trimmings (such as pork) are typically added to achieve a desired quantity. Ask your meat processor about any additional products available.

Example Meat Yield Calculations

- Live Wt. x Typical Dressing Percent = Hot Carcass Wt.
130 lb x 54% = 70 lb
- Hot Carcass Wt. x (100 – shrink) = Chilled Carcass Wt.
70 x (100% - 3%) = 68 lb
- Chilled Carcass Wt. x Carcass Cutting Yield % = Retail Cuts “take-home meat”
68 lb x 70% = 48 lb

Review

- A carcass is comprised of lean (meat), fat (adipose), and bone
- The head, hide, feet, blood, and viscera are not parts of a carcass
- Carcass cutting yield is just one factor that influences the amount of take-home product

Important Note: Water Loss

Hot carcass weight is the weight of a carcass prior to chilling. A beef carcass consists of 70 to 75% water. As the carcass chills and ages, water will be lost through evaporation. In just the first 24 hours a carcass can lose up to 2 to 5 % of its initial weight.

For More Information

Contact your local Extension Educator; Wisconsin Department of Agriculture, Trade and Consumer Protection; for recipes and nutritional information on lamb visit the American Lamb webpage.

References

- Aberle, E.D., Forest, J.C., Gerrard, D.E. & Mills, E. W. (2001). Principles of meat science. Dubuque, IA: Kendall Hunt Publishing Company.
- American Lamb. (n.d). Cuts of Lamb. <https://www.americanlamb.com/cuts>
- K-State Research and Extension. (2018, February). Lamb processing options for consumers. <https://www.asi.k-state.edu/research-and-extension/meat-science/Lamb.pdf>
- Melchior, R. J. (n.d.). Lamb and goat marketing – Dressing percentages of slaughtered lamb & goat carcasses. Cornell University. <http://sheepgoatmarketing.info/education/dressingpercentages.php>
- Schweihofer, J.S. (2011, May 9). Carcass dressing percentage and cooler shrink. Michigan State University. https://www.canr.msu.edu/news/carcass_dressing_percentage_and_cooler_shrink