

Direct Marketing of Beef

Direct marketing of beef can be a profitable venture; however, it can be very involved, and has food safety regulations and implications that you need to be aware of. Meat Inspection is Not Voluntary; it is Mandatory for any meat product that is sold. In Ohio, we have both State Inspected meat processing plants, which are regulated by the Ohio Department of Agriculture's Meat Inspection Division (<http://www.agri.ohio.gov/divs/meat/meat-index.aspx>). 'The Division of Meat Inspection is responsible for regulating 296 meat and poultry establishments statewide. Of those, 227 are fully-inspected facilities and provide slaughtering and processing operations for resale. The remaining 69 establishments operate under a "custom exempt" status and provide a "not-for-sale" service to individuals who wish to have their own animals slaughtered. Meat inspection staff is responsible for verifying that each establishment produces safe, wholesome, and properly labeled products in a sanitary environment.' (Source: <http://www.agri.ohio.gov/divs/meat/meat-index.aspx>). In addition to the State Inspected facilities, Ohio also has Federally Inspected meat processing facilities that are inspected by the United States Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) (<http://www.fsis.usda.gov/>). The level of food safety standards is the same under each inspection service. Both State and Federally Inspected processing facilities must have Hazard Analysis and Critical Control Points (HACCP) plans. They are science-based production control systems that provide chemical, biological, and microbiological control systems for the food industry which help assure safe food production.

The laws regarding labeling claims for meat and poultry are extensive. The USDA web site for information is: http://www.fsis.usda.gov/Regulations_&Policies/Labeling_Guidance/index.asp

The Federal Meat Inspection Act, and Statutes can be found at:

http://www.fsis.usda.gov/Regulations_&Policies/Federal_Meat_Inspection_Act/index.asp

There are two areas that may affect beef marketing options, even though they do not fall under the strict 'Direct Marketing' definition. Beef that is harvested and processed under State Inspection cannot be sold outside the State of Ohio. For instance, this would impact a producer in Ohio who had their beef processed at a State Inspected facility in Ohio, and wanted to market their beef through a retail outlet in another State. Also, many cooked product kitchens come under Federal Inspection, and State Inspected product cannot be cooked and sold in these facilities. The regulations concerning meat inspection and sales to foodservice are different in each state, because some states do not have State Inspection. Therefore, as a beef marketer, make sure that you know the laws that apply in your state.

In Ohio, there are many "Custom Exempt" meat processing facilities which provide a "not-for-sale" service to people who wish to have their own live animals harvested and processed. If you are selling a live animal directly to another individual who wishes to have their animal

processed, after the legal sale of that animal to them, then they can have the animal harvested and processed at a “Custom Exempt” facility. However, the beef producer could not have the animal processed at the “Custom Exempt” facility and then sell the product to another individual.

There are two good online sources for direct marketing information:

Beef Marketing Alternatives is a publication from the National Sustainable Agriculture Information Service, and is managed by the National Center for Appropriate Technology (www.attra.ncat.org), funded under a grant from the USDA’s Rural Business Cooperative Service. This free ATTRA publication covers the importance of having a marketing plan, market research, niche marketing, value added marketing, pricing, promotion, and includes a list of further resources. <http://attra.ncat.org/attra-pub/PDF/altbeef.pdf>

How to Direct Market Your Beef, by Jan Holden is the second online resource. It is from the Sustainable Agriculture Network, the national outreach network for the Sustainable Agriculture Research and Education (SARE) program, of the U.S. Department of Agriculture. www.sare.org/publications/beef/beef.pdf

If you’re going to direct market your beef, it’s important to accurately estimate how many pounds of meat or various retail cuts you’re going to have to sell after slaughtering and processing an animal. To estimate the amount of product you will have for sale:

- a) dressing percentage x live weight = expected carcass weight, and
- b) expected carcass weight x expected lean meat yield (cutability).

These factors are described in more detail below.

Dressing Percent

Dressing Percentage is the percentage of live weight that results in carcass weight.

Dressing Percentage = (hot carcass weight ÷ live weight) x 100

A general rule of thumb is that increasing anything that will stay with the carcass will increase dressing percent (i.e. muscle and fat), and more of anything from the live animal that won’t remain with the carcass will decrease dressing percent (i.e. mud, horns, gut fill, etc.).

Dressing Percentage is affected by the following factors:

Fatness: A fatter animal will have more weight in back fat, and seam fat than a leaner animal, which results in a higher dressing percentage.

Muscling: A heavy-muscled animal will have a higher dressing percentage than a light-muscled animal at a similar backfat.

Gut Fill: An animal that has been fasted for 24 hours will have a 2-5% higher dressing percentage than an animal that has had access to feed up to the time of harvest. Animals should have free access to water at all times, however, animals are often fasted several hours prior to slaughter to help empty out the digestive tract which

reduces the risk of microbial cross-contamination while removing the viscera during the slaughtering process.

Hide Cleanliness (a.k.a. 'tag'): A hide with a lot of mud attached will result in a lower dressing percentage. This can significantly reduce the dressing percentage in the winter when cattle can have long hair coats.

Breed: Beef steers generally have a dressing percentage between 60% to 64%, with the higher dressing percentages largely due to more muscle and fat. Dairy steers generally have a dressing percentage between 56% to 59% due to being lighter muscled than beef breeds and not depositing as much back fat or seam fat.

Feeding Program: Grass-fed cattle will tend to have a slightly larger organ mass than those fed high concentrate diets, resulting in a greater weight of the viscera and a slight reduction in dressing percent.

Example: 1200 pound beef steer with a 720 pound carcass.

$$\begin{aligned}\text{Dressing percentage} &= (720 \div 1200) \times 100 \\ &= 60\%\end{aligned}$$

Lean Yield (cutability):

The USDA Yield Grade is an estimation of the cutability, or percent of the carcass that will result in boneless closely trimmed roasts and steaks from the round, loin, rib, and chuck. The USDA Yield Grades and the corresponding cutabilities are shown below:

YG1 > 52.3% cutability

YG2 = 50 – 52.2%

YG3 = 47.7 – 49.9%

YG4 = 45.4 – 47.7%

YG5 < 45.4%.

See the section on Grading for an in-depth explanation of Yield Grade.

Determining Lean Meat Yield:

Example 1: An 1150 pound grass-finished beef steer with 0.2 inches of backfat would have a predicted Yield Grade of 2.5. Assuming that based on average muscling, it will have a Dressing Percentage of 61%.

$$1150 \times 0.61 = 701 \text{ pound carcass}$$

$$701 \times 0.51 \text{ (middle of YG2)} = 357 \text{ pounds of boneless lean meat}$$

Example 2: A 1050 pound grass-finished dairy steer with .15 inches of backfat would have a predicted Yield Grade of 2.5. Assuming that based on average muscling, it will have a Dressing Percentage of 58%.

$$1050 \times 0.58 = 609 \text{ pound carcass}$$

$$609 \times 0.50 \text{ (lower end of YG2)} = 305 \text{ pounds of boneless lean meat}$$

If you are direct-marketing your beef, the actual pounds of saleable product will be determined by such factors as:

Carcass Fatness: The more trim fat an animal has, the lower the lean yield.

Muscling: Heavier muscling will result in a higher lean yield.

Meat Cuts Sold: The largest fat deposit in the carcass, by weight, is seam fat, not back fat, so cutting methods for marketing purposes greatly affects the amount of saleable product.

Bone-In versus Boneless: Bone-In products will result in more saleable pounds than boneless.

Leanness of Ground Beef: Selling a 90% lean ground beef versus an 80% lean ground beef will mean using less fat trim in the ground product. However, consumers generally like a leaner ground product.

Closeness of Trim: Closely trimming steaks and roasts will result in a lower yield due to more fat trim that needs to be used in other products.

Value-Added Products Produced: Having the ability to make some sausage products, hot dogs, etc. will greatly increase the ability to use fat trim.

The following page contains some specific examples of how the combination of dressing percent and lean meat yield can influence the amount of saleable meat from a beef carcass.

Other factors to consider when direct marketing beef are length and type of aging and packaging. Both the type of aging and the type of packaging (paper wrap vs. vacuum packaged) will be somewhat dependent on the processor's capabilities. There are two types of aging: dry aging and wet aging (meat is aged while it is sealed inside a vacuum bag). Dry aging will result in a greater loss of weight. For more information on aging see the section on aging within the tenderness section.

Selection of packaging materials will depend on availability, type of product (cooked and processed or fresh), size of cut, and bone-in vs boneless. The primary responsibilities of packaging are:

- 1) to protect the product against spoilage, physical, or chemical change, and
- 2) present the product in an attractive manner.

If you prefer a particular type of packaging then you will need to visit with your processor to determine the availability and costs as packaging can have a considerable influence on your price or profit margin. For more information on packaging visit:

http://www.fsis.usda.gov/Factsheets/Meat_Packaging_Materials/index.asp

Table 1. Dressing percent and lean meat yield from predominantly grass-fed cattle of various breed types at differing levels of finish.

Breed Type	Brown Swiss	Holstein	Crossbred	Limousin
Side view here				
Back side and ribeye here				
Live Wt.	1217 lbs.	1108 lbs.	1145 lbs.	1249 lbs.
HCW	688 lbs.	660 lbs.	658 lbs.	839 lbs.
Dressing %	56.5%	59.6%	57.5%	67.0%
Backfat	0.22 in	0.20 in	0.68 in	0.40 in
Ribeye Area	11.2 in ²	9.6 in ²	10.0 in ²	16.7 in²
% KPH	2.5%	2.5%	3.0%	1.5%
Yield Grade	2.6	3.0	4.1	1.6
BCTRC	273 lbs. (40%)	262 lbs. (40%)	220 lbs. (33%)	355 lbs. (42%)
Trim Wt.	133 lbs. (19%)	128 lbs. (19%)	121 lbs. (18%)	211 lbs. (25%)
Fat Wt.	105 lbs. (15%)	90 lbs. (14%)	178 lbs. (27%)	132 lbs. (16%)
Bone Wt.	162 lbs. (23%)	150 lbs. (23%)	127 lbs. (19%)	126 lbs. (15%)
Shrink*	36 lbs. (3%)	44 lbs. (4%)	34 lbs. (3%)	25 lbs. (2.0%)

HCW = Hot Carcass Weight

KPH = Kidney, Pelvic, and Heart Fat

BCTRC – Boneless closely trimmed retail cuts

Shrink* = Combination of weight loss associated with dry aging for seven days and cutting loss during fabrication.