

Buying Forequarters and Hindquarters of Beef

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Consumers often want to buy a quarter of beef to reduce meat costs. However, two quarters of the same hanging weight can yield much different amounts of cut and wrapped beef. Buying a quarter of beef can be a "money-saving" or a "money-losing" proposition, depending upon retail yields and purchase cost.

Percent retail yield is how much take-home meat is in the quarter of beef. Yields should be computed on a percentage basis since hanging weights of quarters can vary from 100 to 200 pounds, depending upon the size of the carcass.

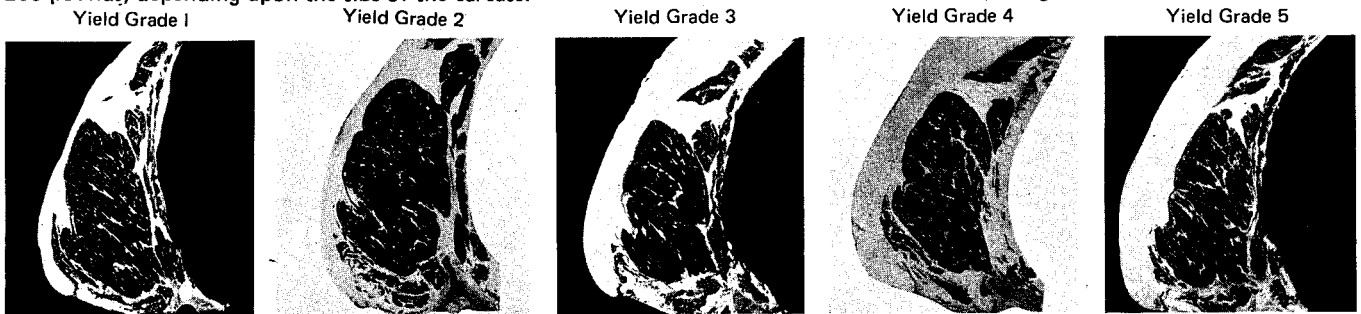


Figure 1. Examples of yield grades 1 through 5 (photos courtesy of John Pierce, USDA)

Yield grades predict the percent retail yield of a quarter before that quarter is cut and wrapped. Table 1 reveals that quarters of different yield grades have different percent retail yields.

Yield Grade	Forequarter % Retail Yield	Hindquarter % Retail Yield
1	84.0	79.9
2	79.8	74.9
3	75.6	69.9
4	71.4	64.9
5	67.2	59.9

How to compare costs vs. yields

Forequarters (1) are lower priced, (2) yield more total meat, (3) yield more roasts (moist heat) and hamburger and

$$\text{Percent retail yield} = \frac{\text{weight of trimmed and packaged cuts}}{\text{weight of the hanging quarter}} \times 100$$

$$\text{Example} = \frac{105 \text{ lbs. take home meat}}{150 \text{ lbs. hanging side}} \times 100 = 70\% \text{ retail yield}$$

Yields

Yield of saleable meat from a quarter varies with the fatness of the carcass. This fatness is measured by the USDA Yield Grade. (Keep in mind that USDA Yield Grading is a voluntary service and thus all quarters may not be yield graded. For a more complete discussion of yield grades, obtain Animal Science Fat Sheet No. 18, "Buying a Side of Beef.") Figure 1 illustrates the five different yield grades.

(4) yield less steaks (dry heat) than hindquarters. The purpose of this fact sheet is not to recommend forequarters over hindquarters or vice versa. The purpose is to compare the costs of buying in bulk vs. buying retail cuts.

Yield grade 1 or 2 quarters will cost more per pound hanging weight than would quarters of yield grade 4 or 5. Expect a higher retail yield from yield grade 1 or 2, but they cost more than do yield grade 4 or 5. So calculate how much more yield you get for the extra price. Each total percent retail yield for each yield grade remains constant (except for variation in cutting and trimming procedures), but price per pound of hanging weight varies from day to day with the wholesale price of beef. Make the following calculation each time you shop for a quarter of beef, using retail prices per pound from your favorite retail grocery store.

Table 1. Estimated yield of retail cuts as a percent of hanging weight for choice beef by yield grades *

FOREQUARTER	Yield grade 1	Yield grade 2	Yield grade 3	Yield grade 4	Yield grade 5
Retail cut**					
Blade chuck, bone-in	19.1	18.1	17.1	16.1	15.1
Rib, short cut (7"), bone-in	12.1	11.9	11.7	11.5	11.3
Chuck, arm boneless	12.4	11.8	11.2	10.6	10.0
Brisket, boneless	4.8	4.4	4.0	3.6	3.2
Lean trim (stew and/or cube steak)	17.1	16.1	15.2	14.2	13.2
Ground beef	18.5	17.5	16.4	15.4	14.4
TOTAL PERCENT RETAIL CUTS**	84.0	79.0	75.6	71.4	67.2
FAT	4.6	9.1	13.6	18.1	22.6
BONE	11.4	11.1	10.8	10.5	10.2
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%
HINDQUARTER	Yield grade 1	Yield grade 2	Yield grade 3	Yield grade 4	Yield grade 5
Retail cut**					
Rump, boneless	7.7	7.3	6.9	6.5	6.1

Table I. (continued)

Top round, boneless	10.2	9.4	8.6	7.8	7.0
Bottom round, boneless	10.0	9.6	9.2	8.8	8.4
Round tip, boneless	5.6	5.4	5.2	5.0	4.8
Sirloin steaks, bone-in	18.9	18.1	17.3	16.5	15.7
Short loin (Club, T-bone, Porterhouse), bone-in	11.0	10.8	10.6	10.4	10.2
Flank steak	1.0	1.0	1.0	1.0	1.0
Lean trim (stew and/or cube steak)	7.2	6.1	5.0	4.0	2.9
Ground beef	7.7	6.6	5.5	4.3	3.2
Kidney	.6	.6	.6	.6	.6
TOTAL PERCENT RETAIL CUTS**	79.9	74.9	69.9	64.9	59.9
FAT	11.8	17.0	22.2	27.4	32.6
BONE	8.3	8.1	7.9	7.7	7.5
Totals	100%	100%	100%	100%	100%

*Courtesy of E. Curtis Green, USDA, Agricultural Marketing Service, Livestock Division, Standardization Branch, Washington, D. C. 20250,

**External fat in excess of 1/2 inch and seam fat in excess of 1/4 inch was removed.

To figure total retail value per 100 pounds of hanging weight, multiply the average retail price of the various cuts (including sale-priced items) times each cut's percentage of the

hanging weight for a particular yield grade (table 1). Then add the values. An example retail value calculation for a yield grade 3 forequarter is:

EXAMPLE CALCULATION

Forequarter	Yield grade 3		
	Retail price per pound (Get from local store)	Percent of Foreq. X From Table 1)	Retail value per 100 lbs. = hanging weight
Retail cut			
Blade chuck, bone-in	\$1.09	X 17.1%	= \$18.63
Rib, short cut (7"), bone-in	2.16	X 11.7%	= 25.20
Chuck, arm boneless	1.53	X 11.2%	= 17.13
Brisket, boneless	1.83	X 4.0%	= 7.32
Lean trim (stew and/or cube steak)	1.21	X 15.2%	= 18.39
Ground beef	.92	X 16.4%	= 15.09
Fat	.02	X 13.6%	= .27
Bone	.01	X 10.8%	= .11
Retail value of this Foreq. of beef			= \$102.14 per 100 lbs. hanging (or \$1.02/lb.)

YOUR CALCULATION

Forequarter	Yield grade		
	Retail price per pound (Get from local store)	Percent of Foreq. X (From Table 1)	Retail value per 100 lbs. = hanging weight
Retail cut			
Blade chuck, bone-in	\$ _____	X _____%	= \$ _____
Rib, short cut (7"), bone-in	_____	X _____%	= _____
Chuck, arm boneless	_____	X _____%	= _____
Brisket, boneless	_____	X _____%	= _____
Lean trim (stew and/or cube steak)	_____	X _____%	= _____
Ground beef	_____	X _____%	= _____
Fat	_____	X _____%	= _____
Bone	_____	X _____%	= _____
Retail value of this Foreq. of beef			= \$ _____ per 100 lbs. hanging (or \$ _____/lb.)

The same price comparisons can be made for hindquarters using the figures from Table 1.

EXAMPLE CALCULATION

Hindquarter	Yield grade 3		
	Retail price per pound (Get from local store)	Percent of Hindq. X From Table 1)	Retail value per 100 lbs. = hanging weight
Retail cut			
Rump, boneless	\$2.02	X 6.9%	= \$13.93
Top round, boneless	2.21	X 8.6%	= 19.01
Bottom round, boneless	2.03	X 9.2%	= 18.68
Round tip, boneless	2.13	X 5.2%	= 11.08
Sirloin steaks, bone-in	2.27	X 17.3%	= 39.27
Short loin (Club, T-bone, Porterhouse), bone-in	2.68	10.6	28.41
Flank steak	2.48	X 1.0%	= 2.48
Lean trim (stew and/or cube steak)	1.21	X 5.0%	= 6.05
Ground beef	.92	X 5.5%	= 5.06
Kidney	.58	X .6%	= .35
Fat	.02	X 22.2%	= .44
Bone	.01	7.9	.08
Retail value of this hindquarter of beef			= \$144.84 per 100 lbs. hanging (or \$1.44/lb.)

YOUR CALCULATION

Hindquarter	Yield grade		
	Retail price per pound (Get from local store)	Percent of Hindq. X (From Table 1)	Retail value per 100 lbs. = hanging weight
Retail cut			
Rump, boneless	\$ _____	X _____%	= \$ _____
Top round, boneless	_____	X _____%	= _____
Bottom round, boneless	_____	X _____%	= _____
Round tip, boneless	_____	X _____%	= _____
Sirloin steaks, bone-in	_____	X _____%	= _____
Short loin (Club, T-bone, Porterhouse), bone-in	_____	X _____%	= _____
Flank steak	_____	X _____%	= _____
Lean trim (stew and/or cube steak)	_____	X _____%	= _____
Ground beef	_____	X _____%	= _____
Kidney	_____	X _____%	= _____
Fat	_____	X _____%	= _____
Bone	_____	X _____%	= _____
Retail value of this hindquarter of beef			= \$ _____ per 100 lbs. hanging (or \$ _____/lb.)

Quality Considerations

Within each yield grade can be variations in quality of the lean as designated by quality grades of Prime, Choice, Good, and Standard. Quality grade is also voluntary and is determined at the same time as is the yield grade. Marbling or specks of fat within the lean primarily determines quality because marbling contributes to flavor and juiciness. Prime has more marbling than does Choice, and Choice has more than does Good.

If the price of the quarter of beef quoted to you is more than its calculated retail price for its yield grade, buy the cuts from the retail store as you need them. If the quoted price is less, you would be ahead to buy that quarter. If you don't get the kidney, fat, and bone, subtract that value from the total retail value. Remember, a quarter can be fatter than yield grade 5, although 5 is as high as the official grades go.

Cutting, wrapping, and freezing costs are usually included in the quoted price per pound. Ask though, to make sure. Frozen locker storage cost is almost always extra.

There are at least 15 combinations of USDA yield and quality grades:

Yield Grade 1—Prime high yielding, usually excellent flavor	Yield Grade 1—Choice	Yield Grade 1—Good high yielding, usually lower flavor
Yield Grade 2—Prime	Yield Grade 2—Choice	Yield Grade 2—Good
Yield Grade 3—Prime	Yield Grade 3—Choice average in yield and flavor	Yield Grade 3—Good
Yield Grade 4—Prime	Yield Grade 4—Choice	Yield Grade 4—Good
Yield Grade 5—Prime low yielding, usually excellent flavor	Yield Grade 5—Choice	Yield Grade 5—Good low yielding, usually lower flavor

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