

The boxed beef report is released twice per weekday, at 11:00 a.m. Central Time under report number [LM_XB402](#) and at 3:00 p.m. under report number [LM_XB403](#). The morning report covers market activity since 1:30 pm of the prior business day until 9:30 am of the current business day. The afternoon report is cumulative, including all market activity in the morning LM_XB402 plus all additional transactions between 9:30 am and 1:30 pm. A data friendly [CSV](#) version of the afternoon report is available, and free historical data is on the USDA [DataMart](#) website. The report is also available via [e-mail delivery](#). The boxed beef report can be divided into 2 major sections; (1) individual beef item sales (2) beef cutout values and current volume both derived from individual beef item sales.

(1) INDIVIDUAL BEEF ITEM SECTION

Reported sales of these items meet the following criteria:

- All beef transactions are original sales from cattle slaughtering firms regulated by [MPR](#) (Mandatory Price Reporting) to first time buyers.
- Sales are negotiated, with the product delivering within 0-21 calendar days to the domestic market.
- Prices are quoted in U.S. dollars per 100 pounds. (cwt)
- Beef cut items are from non-dairybred steer and heifer beef, and are referenced according to the [Institutional Meat Purchase Specifications](#) (IMPS) when possible. Cut items are no older than 14 days from the date of manufacture, and are limited to the [USDA Choice and Select](#) grades. Branded product (Certified Angus Beef for example), is excluded.
- Ground beef and beef trimmings are from both dairybred and non-dairybred steer/heifer beef, and are no older than 7 days from the time of manufacture.
- Sale prices of all beef items are quoted on an F.O.B. plant basis (delivered price minus freight cost).

Since the inception of MPR in April 2001, [confidentiality guidelines](#) have prevented Market News from publishing certain individual beef items in the report. While these particular beef items are not released to the public, their information is still used in calculating cutout values and the current volume.

(2) BEEF CUTOUT VALUES AND CURRENT VOLUME

Major points to keep in mind regarding the beef cutout value:

- The boxed beef cutout (BBC) represents the estimated gross value of a beef carcass based on FOB prices paid for individual beef items derived from the carcass.
- Two cutouts are calculated daily, Choice and Select.
- The cutout values do not include packer revenues from the sale of hide and offal products removed during slaughter, however AMS estimates this value on the [NW_LS441](#) report.
- Costs fabricating carcasses into individual beef items is not deducted from the cutout values.

BACKGROUND INFORMATION –

When beef carcasses first enter the fabrication portion of the plant, they are broken into primal units. These primals then move to the cutting tables where they are fabricated into the various sub-primal styles. In the process, various by-products (known as credit items) are created. These credit items vary in type and quantity depending on the sub-primal style being produced and include such items as trimmings, bone, fat, etc. The potential value of these sub-primals varies depending on how much work is done on the cut (boneless cuts often require more fabrication and so cost more to produce than bone-in cuts) , which muscle groups are removed, how much fat trimming is done, and other similar factors. Ideally, processors produce cuts to fill already existing orders. However, when this is not possible, they will produce styles for which there is regular demand and will stockpile them for eventual sale. Because of this, there tends to be larger quantities of these styles traded and, consequently, they have more impact on the processor's overall cutout. The processor's overall cutout is determined by the relationship between the value and the volume of sub-primal styles being produced and sold. The processor looks at this overall cutout as an indication of their performance.

The BBC provides an overall performance indicator for the fabricated beef industry. Its formulation replicates that used by firms when calculating their own cutouts. Styles produced and sold in larger volume will have more influence on the BBC, just as they do within the industry.

Boxed Beef Report - Industry Application

WHAT DOES IT TELL US?

Careful study of the relationships between the various BBC calculated values and reported load counts can tell the user much about the current state of the marketplace. It is these relationships between the figures and not the numbers themselves which are important. Many people overlook this fact and are therefore unable to fully utilize all of the information available in the report.

THE BOXED BEEF CUTOUT VALUES AND CHANGES –

The cutouts represent the estimated value of a beef carcass from the represented grade for a given day based on prices being paid for boxed beef cuts and credit items. The change in value from the previous day is shown immediately below each cutout value.

Comparing the cutouts to one another can tell us a lot about the current market. The spread between the Choice and Select cutouts is a good indicator of the relative supply for each grade. A narrow spread indicates that cattle are grading better and that there are fewer Select cattle available. A widening spread indicates that the incidence of cattle grading Select is increasing. Seasonal demand patterns for either Choice or Select product can also influence the spread. Demand for Choice middle meats through the Christmas season often leads to increases in the Choice cutout not shared by the Select cutout.

The daily change in cutout values is a good indicator of the overall marketplace as well. The magnitude of the change in either direction indicates some measure of imbalance in the supply/demand situation. For example, a sharp decline in the Select cutout when compared to the Choice cutout would be an indication of either increasing supplies of Select, decreasing demand for Select relative to Choice, or a combination of both. However, you should keep the reported load count in mind when looking at the changes as these two factors influence one another.

REPORTED LOAD VOLUMES –

The total reported load counts provide some important insights into the market situation - especially when compared to the daily changes in the cutout. Many people tend to look only at the load volume or only at the change which often leads to a misinterpretation of the market trend. A larger than normal movement of boxes could indicate at least two things depending on what the cutout values are doing. If cutout values are declining, a large movement could indicate that sellers are moving their prices lower in an effort to get their supplies under control. If the cutout values should happen to be increasing, it could indicate that buyers are eager to fill their needs while price increases are still workable. A smaller than normal movement of boxes in conjunction with higher trending cutout values could indicate resistance in the marketplace to higher asking prices. It could also be an indication of an inability to move product at the retail counter possibly due to consumer resistance to higher prices. A small movement usually indicates a backing up of product in the distribution pipeline. If it happens in conjunction with declining boxed beef prices, it is usually an indication of lack of buyer interest at current price levels. This happens when the market is in transition as prices move lower and sellers seek price levels which will renew buyer interest.

The volume of fresh 50% beef trimmings provides another piece of information regarding the health of the marketplace. Larger than normal volumes could be an indication of an increased supply of over-finished cattle, although smaller than normal volumes could indicate the opposite. The volume of grinds could increase when certain cuts are not moving well. An over-supply of lean chucks in the summer could force processors to resort to grinding in an effort to better merchandise their supplies.

PRIMAL VALUES –

Another part of the BBC which provides valuable information is the reported primal values. It is from these values that the cutouts are calculated. Therefore, if you want to know what is driving the value of a particular cutout one way or the other, look at the primal values. For example, let's say that the Choice cutout closes sharply higher one day. At first thought, it would appear that the market is taking off. However, the reported load volume is relatively light which leads us to think that maybe the market is beginning to stall out. On further inspection, we see that the value of primal ribs has increased from the value reported for the day before. In fact, we find that the rib is the only primal which saw an increase and that this has been the driving influence behind the Choice cutout's increase. When we look at the individual beef item section, we find that only one of the rib cuts saw good movement at higher prices. At this point we must ask ourselves whether the market is in such great shape after all. In addition, what is causing the apparent strength in the rib market? Later, after some

inquiry, we learn that Korea has placed a tender for a large volume of bone-in Choice rib cuts. This has created an imbalance in the Domestic supply of these cuts and the market reacted. Had we gone with our initial reaction to the higher Choice cutout, our assumptions about the marketplace would have been wrong. But by taking a closer look at what the BBC was telling us, we were able to learn enough about the market to make appropriate inquiries which resulted in being far more informed.

HOW DOES THE INDUSTRY USE IT? –

The boxed beef report is used differently by the different parts of the beef industry (producers, packer/processors, and retailer/distributors). Producers look to see if boxed beef is moving well at higher prices which could provide them leverage in their negotiations with the packer. Retailers do the same thing but they look for a sluggish market with declining prices to provide them leverage. The packer/processor is caught in the middle but also looks for a negotiating advantage against the producer and the retailer. In short, all segments of the industry look to the cutout when they are trying to further their position in the marketplace.

Companies utilize the report as a standard to gauge their overall performance, as well as that of their individual employees. If they can do better than what the average of the industry is, then they view that as a measure of success. The opposite is also true. Finally, some segments of the industry use the report as an impartial starting point on which to base formulations and contracts.

Some packers utilize the BBC for determining their Quality grade [discounts and premiums](#) when buying cattle on a grade and yield basis. Each week, the spread between the Choice and Select cutouts is factored against the actual grading percentage at each plant from the previous week.

The Chicago Mercantile Exchange utilizes the BBC in calculating its Live Cattle contracts. The spread between the Choice and Select cutouts is factored against a standard 63% yield with the result serving as the basis for discounts or premiums.

Because the boxed beef market is largely composed of negotiated trades, the boxed beef report continues to enjoy the broadest basis of support of nearly any beef or cattle report. As packers and producers continue to look for ways to contract more and more cattle, many are looking to the cutout to provide a pricing basis. Therefore, the role of the beef cutout may become even more integral to the industry as time goes on. If this becomes the case, it is important that all interested parties gain a thorough understanding of how the cutout is calculated.

HOW DOES IT WORK? –

The BBC calculations begin with determining a current 2 day weighted average price for each beef item. The current reported prices in the individual item section of the report are combined with the reported prices from the previous day to arrive at a 2 day weighted average price for each item. These item prices and average of industry cutting yields are used to calculate sub-primal style values which are then combined into primal values. These primal values are factored against their yield from the carcass and the resultant values are combined into the final carcass cutout values. These steps and their accompanying calculations are best illustrated through a sample calculation.

STEP 1: DETERMINING A PRIMAL VALUE FROM A SUB-PRIMAL CUT -

A Choice chuck individual primal style #6 is used here for an example of how the cutout is calculated. As pointed out earlier, when a sub-primal cut is produced from a primal, you not only get the sub-primal style but you also end up with other components or credit items. When a style #6 chuck is produced, you end up with various components of the primal chuck (see Figure 1). Combined, these components make up 100% of the original primal. Another factor to keep in mind is shrinkage. When meat is cut surface area is exposed, therefore allowing moisture loss (shrink). This loss, although minor, does account for a certain percentage of the original primal. This non-recoverable loss is absorbed by the packer.

Chuck Sub-Primal Styles

#6 - 116A Chuck roll

Item Components	#6	Item	#6
	yield	Price	revenue
114A Trimmed Clod	16.11%	\$188.64	\$30.39
114F Clod Tender	0.68%	\$279.59	\$1.90
116A Chuck Roll n/o	19.82%	\$250.26	\$49.60
116B Chuck Tender	2.70%	\$199.12	\$5.38
130 Chuck ShortRib	2.97%	\$292.42	\$8.68
Pectoral Meat	1.89%	\$258.56	\$4.89
50% Trimmings	4.92%	\$43.03	\$2.12
73% Ground Beef	9.67%	\$106.45	\$10.29
81% Ground Beef	3.23%	\$148.02	\$4.78
90% Ground Beef	3.16%	\$213.16	\$6.74
Chuck Trim (Ground Chuck)	5.26%	\$161.74	\$8.51
Shank Meat (Ground Chuck)	5.11%	\$161.74	\$8.27
Fat	8.82%	\$21.25	\$1.87
Bone	15.24%	\$4.50	\$0.69
Shrink	0.42%		
Total Percentage	100.00%		\$144.11

Figure 1

Each component makes up a physical portion of the original and each component adds some value to the overall potential value of the primal. The potential value of the primal varies depending on what you produce from it. To determine the value of a Choice primal chuck when producing a style #6 chuck, you need to determine the value of each of the component parts of that primal chuck. In Figure 1, the IMPS 114A Shoulder Clod portion of the style #6 chuck accounts for 16.11% of the primal chuck. Today's Choice IMPS 114A's are 2.0 loads with a \$189.00 weighted average price. The previous day's value for 114A's was 2.0 loads with a \$188.28 weighted average price. That makes the current 2 day weighted average for 114As \$188.64 per cwt. so 16.11% of this price is \$30.39, which is the value the 114A carries back to the primal chuck. The same calculation is done for each of the other component parts to determine their value back to the primal chuck.

The process detailed in Figure 1 fixes a value to a primal depending on the individual primal style produced from it. For each primal, this step includes using several different individual primal styles. The next step combines the individual primal values from each individual primal style into one composite primal value.

STEP 2: CALCULATING A COMPOSITE PRIMAL VALUE –

Once a primal style value has been calculated for each of the major sub-primal cut items produced from that primal, these primal style values are combined into a composite value for the primal (see Figure 2). There are two major chuck primal styles routinely produced from a 600-900# carcass. Each of these returns a value for the primal chuck and each is a part of the overall, composite primal chuck value.

This composite primal chuck value is a weighted average calculated from the two chuck primal style values using the number of loads of each sub-primal cut item listed in the individual item section as the weight. This allows those cuts produced in largest quantity to have the most effect on the cutout, which is as it should be and is in actual practice in the industry. These steps are occurring for each composite primal within each grade category of the cutout as trades are being reported.

Chuck Styles	Weight	Price
#3 - 113C Semi-Bnls Nck-Off Chuck	2.0	143.00
#6 - 116A Chuck roll	5.0	144.11
Composite Chuck Primal Value		143.79

Figure 2

Step 3: Composite Primal Values to Carcass Cutout –

In step 3 (see Figure 3), the composite primal chuck value calculated in step 2 along with similar values calculated for the other primals in step 2 are combined into their respective cutout (the Choice 600-900# in this example). Each primal is a percentage of the entire carcass and this yield factor or percentage is multiplied by the composite primal value for each primal. These products are then summed and the result is the carcass cutout for that grade category.

COMPOSITE PRIMAL VALUES				
Rib	337.05	X	11.40%	= \$38.42
Chuck	143.79	X	29.62%	= \$42.59
Round	153.32	X	22.32%	= \$34.22
Loin	228.91	X	21.26%	= \$48.67
Brisket	151.93	X	4.95%	= \$7.52
Short Plate	108.38	X	7.10%	= \$7.69
Flank	85.61	X	3.35%	= \$2.87
Carcass Cutout Value			=	181.98

Figure 3

Primal yield information for all styles produced as follows:

Rib Primal Styles			
#4 - 109E Bone-in Lip-on Ribeye			
#5 - 112A Boneless Lip-on Ribeye light			
#6 - 112A Boneless Lip-on Ribeye heavy			
Components	#4	#5	#6
109E 1 Bone-in Lip-on	39.19%	-	-
112A 3 Bnls Lip-on 12/dn	-	32.37%	-
112A 3 Bnls Lip-on 12/up	-	-	32.37%
123B 3 Short Rib	9.77%	9.77%	9.77%
124 4 Back Rib	-	6.92%	6.92%
Cap and Wedge Meat	9.51%	9.51%	9.51%
50% Trimmings	14.75%	15.52%	15.52%
Fat	13.83%	13.80%	13.80%
Bone	12.45%	11.56%	11.56%
Shrink	0.50%	0.55%	0.55%
Total Percentage	100.00%	100.00%	100.00%

Components		#3	#6
113C 1 Semi-Boneless		57.07%	-
114A 3 Special Trmd Clod		-	16.11%
114D 3 Top Blade		-	-
114E 3 Clod Heart		-	-
114F 5 Clod Tender		-	0.68%
116A 3 Chuck Roll n/o		-	19.82%
116B 1 Chuck Tender		-	2.70%
Chuck Roll, retail ready		-	-
130 4 Short Rib		2.97%	2.97%
Pectoral Meat		1.89%	1.89%
50% Trimmings		2.36%	4.92%
73% Ground Beef		2.24%	9.67%
81% Ground Beef		0.74%	3.23%
90% Ground Beef		3.03%	3.16%
Chuck Trim (Ground Chuck)		7.18%	5.26%
Shank Meat (Ground Chuck)		5.11%	5.11%
Fat		5.70%	8.82%
Bone		11.41%	15.24%
Shrink		0.30%	0.42%
Total Percentage		100.00%	100.00%

Round Primal Styles		
#6 - IMPS 168 commodity		
#7 - IMPS 168 trimmed		
Components	#6	#7
167A 4 Knuckle	10.99%	10.99%
168 1 Top Inside Round	26.40%	-
168 3 Top Inside Rd, trmd		25.56%
171B 3 Outside Round (Flat)	16.22%	16.22%
171C 3 Eye of Round	6.74%	6.74%
Heel (Ground Round)	5.23%	5.23%
Shank Meat (Ground Round)	6.62%	6.62%
73% Ground Beef	2.94%	2.81%
81% Ground Beef	0.98%	0.94%
Fat	8.49%	9.50%
Bone	14.87%	14.87%
Shrink	0.52%	0.52%
Total Percentage	100.00%	100.00%

Loin Primal Styles

#4 - 174 Short Loin 0x1

#8 - 175 Strip Loin 1x1

#14 - 180 Strip Loin 0x1

Components	#4	#8	#14
174 3 Short Loin	24.78%	-	-
175 3 Strip Loin 1x1	-	18.95%	-
180 3 Strip Loin 0x1	-	-	14.61%
184 3 Top Butt	15.32%	15.32%	15.32%
185A 4 Flap	4.56%	4.56%	4.56%
185B 1 Ball Tip heavy	3.37%	3.37%	3.37%
185C 1 Tri Tip	4.03%	4.03%	4.03%
189A 4 Tenderloin heavy	-	7.64%	7.64%
191A 4 Peeled Butt Tender	3.62%	-	-
Steak (Loin) Tail	1.70%	1.70%	1.70%
Hanging Tender	1.12%	1.12%	1.12%
50% Trimmings	10.13%	9.79%	8.21%
73% Ground Beef	2.61%	2.38%	3.89%
81% Ground Beef	0.87%	0.79%	1.29%
Kidney	1.01%	1.01%	1.01%
Fat	21.29%	21.47%	21.77%
Bone	5.14%	7.42%	10.96%
Shrink	0.45%	0.45%	0.52%
Total Percentage	100.00%	100.00%	100.00%

Brisket, Flank and Plate Primal Styles

#1 - 120 Brisket

#2 - 193 Flank

#5 - Short Plate

Components	#1	#2	#5
120 1 Brisket	64.83%	-	-
193 4 Flank	-	15.71%	-
121D 4 Inside Skirt	-	-	10.55%
Outside Skirt	-	-	7.04%
50% Trimmings	8.71%	26.86%	34.08%
65% Trimmings	-	2.02%	17.98%
73% Ground Beef	2.72%	2.41%	2.12%
81% Ground Beef	0.91%	0.80%	0.70%
Cap and Wedge Meat	-	-	3.67%
Fat	10.00%	51.65%	7.68%
Bone	12.34%	-	15.47%
Shrink	0.49%	0.55%	0.71%
Total Percentage	100.00%	100.00%	100.00%

Primal to Carcass Yields

Rib	Chuck	Round	Loin	Brisket	Short Plate	Flank
11.40%	29.62%	22.32%	21.26%	4.95%	7.10%	3.35%