

# USDA Estimated Composite Pork Carcass Cutout – An Overview

As of January 8, 2018

## WHAT IS IT? -

The Pork Carcass Cutout (PCC) is an estimate of the value of a 53-54% lean, 205 lb. hog carcass based upon current wholesale prices being paid for sub-primal pork cuts. The PCC provides an indication of the overall supply and demand situation of the wholesale pork cuts market. A composite value is calculated each day for the various pork primals and these values are combined to reflect a single composite value of a pork carcass. These cuts reflect a standard cutting specification and must be traded on a negotiated basis to deliver within zero to ten days for combo product and within zero to 14 days for boxed product. (See Figure 1.)

## USDA ESTIMATED COMPOSITE PORK CARCASS CUTOUT

Based on FOB Plant Pork Prices and Industry Yields

### Calculations for a 205 lb. Pork Carcass 53-54% lean, 0.65"-.80" backfat at last rib

Date	Total Loads	Cutout	Loin	Butt	Pic	Rib	Ham	Belly
01/18	307.2	76.10	68.87	78.36	60.43	104.74	79.86	99.32
Change:		1.79	2.43	2.30	3.66	-0.40	2.12	1.21
01/17	260.1	74.31	66.44	76.06	56.76	105.14	77.74	98.11
01/16	350.4	73.32	64.31	77.04	54.09	106.35	76.85	97.47
01/15	456.9	73.88	66.95	78.10	58.89	107.34	73.18	97.96
01/14	191.7	74.81	65.71	79.13	58.23	104.93	77.47	99.69
Current Five Day Simple Average		74.48	66.46	77.74	57.68	105.70	77.02	98.51

NOTE: Value may change without adequate test.

*Figure 1*

## BACKGROUND INFORMATION -

As pork carcasses enter the fabrication portion of the plant, they are broken into primal units. These primals then make their way to the cutting tables where they are fabricated into the various sub-primal styles. Only one sub-primal style can be created from a given primal and in the process various by-products or credit items are created. These credit items vary in type and quantity depending on the sub-primal style being produced and may include such items as trimmings, bone, fat, etc. The potential value of these sub-primals depends on how much work is done on the cut (boneless cuts require more fabrication, and thus cost more to produce than bone-in cuts) i.e. 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 own performance.

The PCC provides an overall cutout or performance indicator for the pork cuts industry. Its formulation replicates the processes used by the industry when calculating their own overall cutouts. Styles produced and sold in larger volume will have more impact on the overall cutout; higher value sub-primals of equal volume compared to lower value sub-primals will have more impact. Seasonal shifts in the amount and types of cut styles being produced will be reflected as they occur since the PCC is driven by a broad base of cut styles.

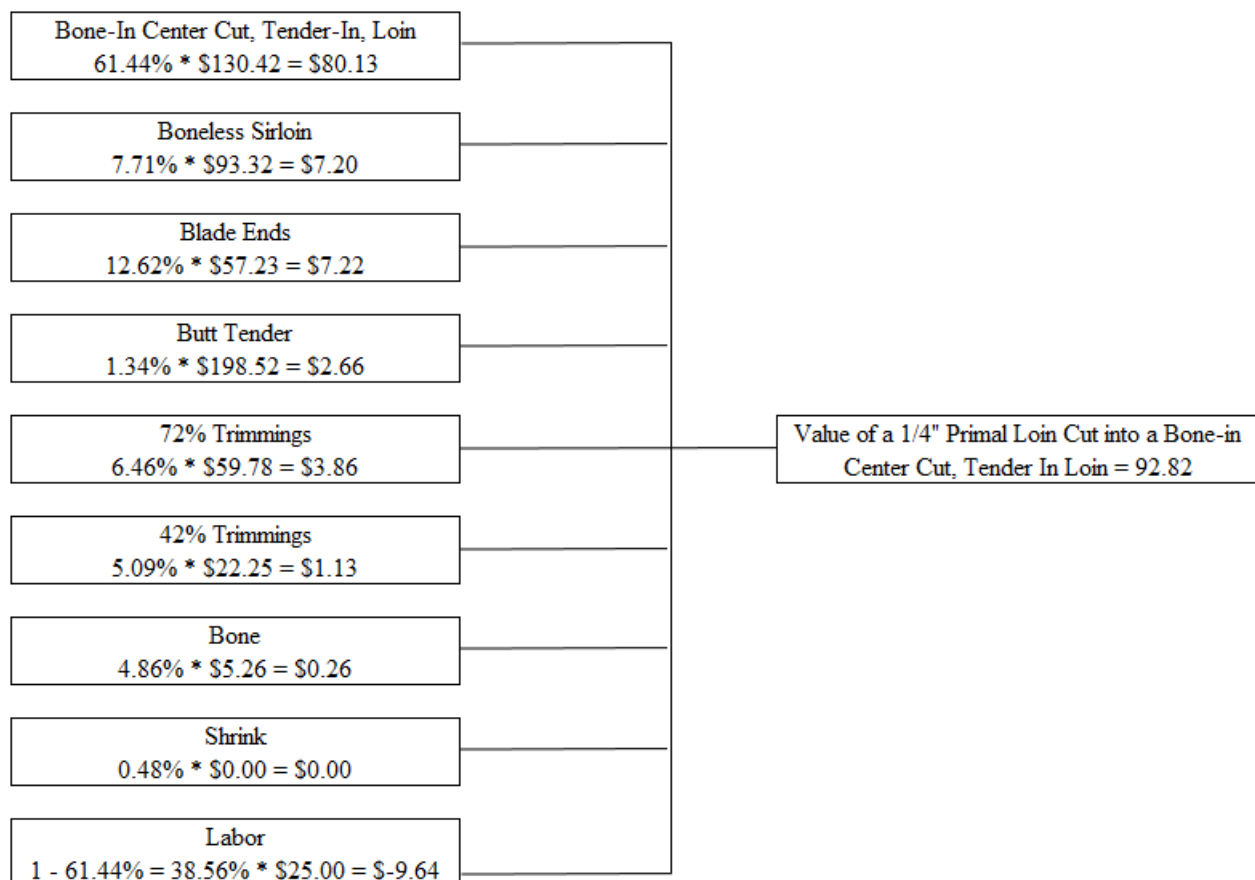
**HOW DOES IT WORK? -**

The PCC is a series of mathematical calculations through which current pork cut prices and industry cut yields are used to calculate primal values. These primal values are factored against their yield from the carcass and the resultant values are combined into the final carcass cutout value. These steps and their accompanying calculations are best illustrated through a sample calculation.

**STEP 1: COMPONENT CUTS TO SUB-PRIMAL VALUE –**

The process used to calculate the PCC is illustrated here using the bone-in center cut, tender-in loin style as an example. The same series of steps is followed for all of the other pork primals. When a sub-primal cut is fabricated from a primal, you are left with not only the sub-primal style, but also with various component parts or credit items such as trimmings and fat. Moreover, you have some weight loss which occurs when surface area is exposed to the air which is referred to as shrink. This shrink is shown as a percentage to get to 100% but no value is assigned.

**Step 1: Component Values to Primal Value**



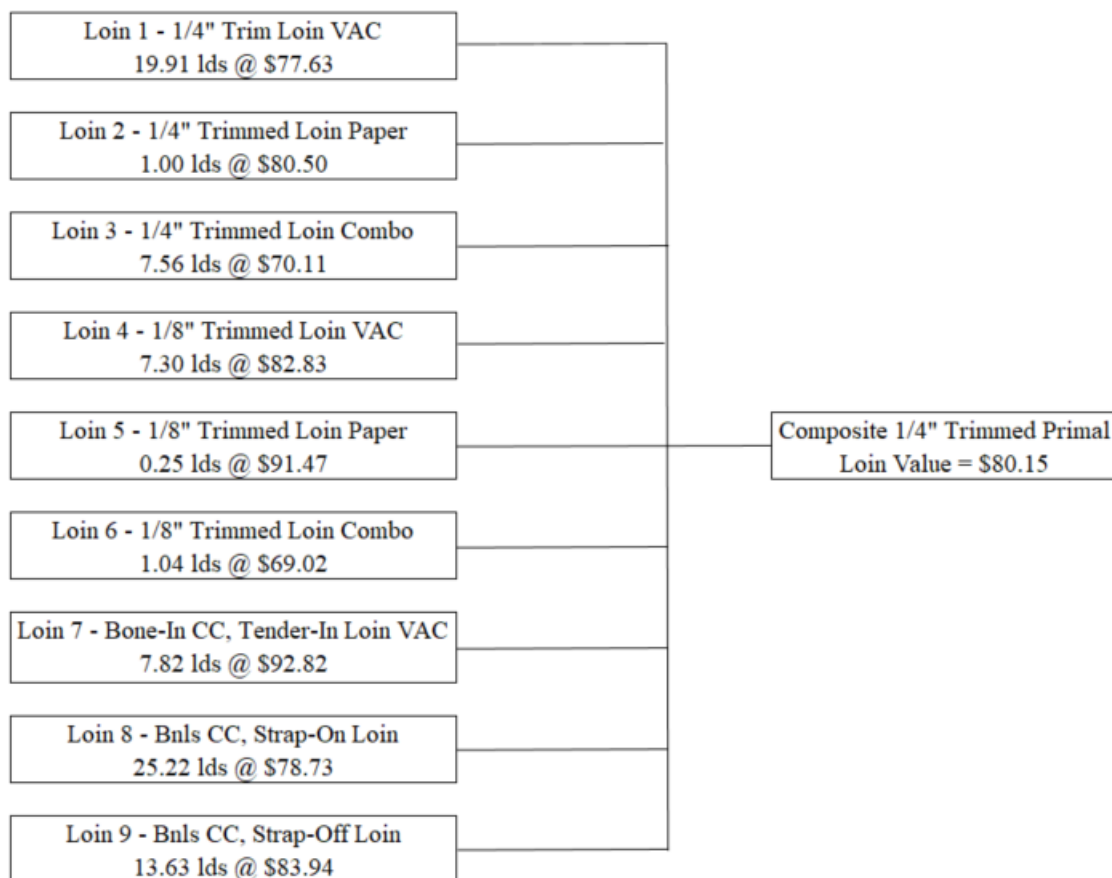
In order to determine a value for a primal based on the type of sub-primal produced from it, you must determine a value for each of the components of the sub-primal. This value is calculated by factoring the current price (minus any packaging costs) against the yield for each of the components. Once the value of the various components are added together into a composite value, an accounting must be made for shrink and labor costs which make up part of the composite value. The products are then summed into a single composite value for the primal (see Step 1 table).

Remember, we are trying to get back to the original primal and there were no labor costs at that point. The more labor intensive it is to produce a cut of meat the more labor costs are involved. To accurately calculate this cost, first determine the yield of the sub-primal cut from the primal cut. In our example, the sub-primal yield from the primal loin was 61.44% which means that 38.56% of the primal was left over. To calculate labor costs, factor 38.56% by an industry standard \$25.00 processing cost. This yields \$9.64 in labor costs which is subtracted from the composite value of the components to arrive at a labor-free value of the original primal.

Since the yields used for the various components are to a trimmed primal, the last step is to convert the “trimmed” primal value to an untrimmed or commodity primal value. The appropriate “Trimmed Primal to Untrimmed” table is used to determine this value (see Step 3 table).

The calculations outlined in Step 1 affix a value to a primal depending on the sub-primal produced from it. For each primal, this step is being done for several different sub-primal styles. The next step combines the primal values from each sub-primal style into one overall primal value.

#### Step 2: Sub-Primal Styles to Primal



## Step 2: Sub-Primal Styles to Primal –

Once a composite primal value has been calculated for each of the major sub-primal styles produced from that primal, these values must be combined into a single, overall composite value for the primal (see Step 2 table). There are five major loin styles routinely produced from a pork carcass. Each of these returns a value for the primal loin and each is a part of the overall, composite primal loin value. This composite primal loin value is calculated by taking the weighted average of the five loin sub-primal values using the number of loads of each sub-primal reported on the pork cuts report as the “weight”. This allows those cuts being traded in largest quantity to have the most affect on the cutout which is as it should be and is in actual practice in the industry. That is basically it for Step 2. Just remember, these steps are occurring for the loin, butt, picnic, and ham primals as trades are being reported.

## Step 3: Composite 1/4” Loin Primal To Untrimmed Primal –

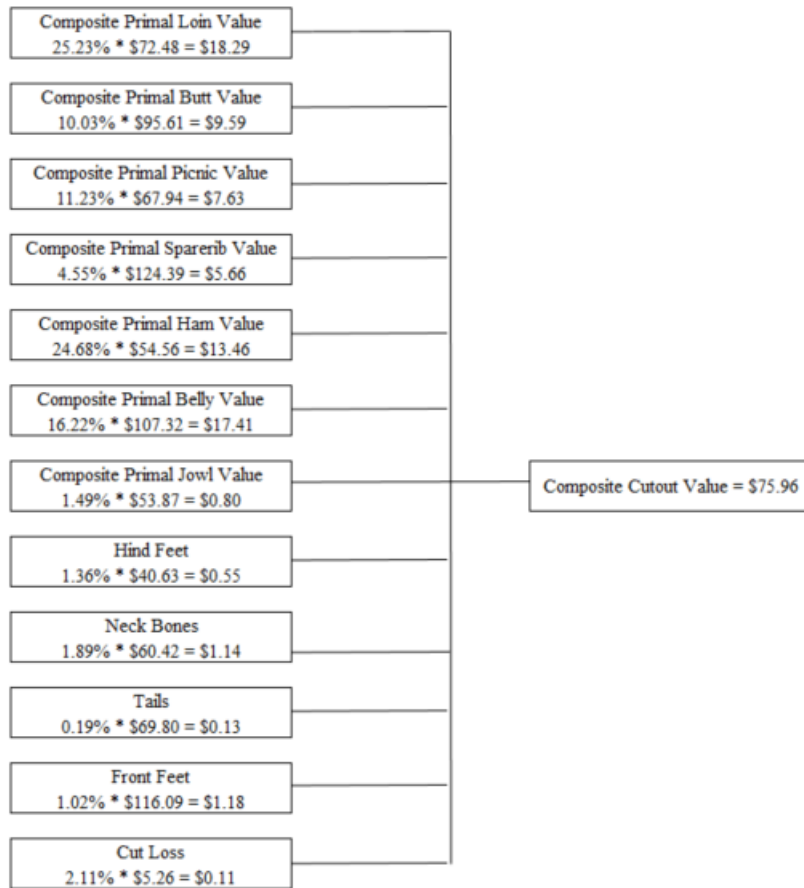
Because the 1/4” trimmed loin is used as the composite primal, it needs to be converted to an untrimmed primal value (see Step 3 table). This additional step is also required for Boston butts, spareribs, and bellies.

<b>Step 3: 1/4" Trimmed Primal to Untrimmed Primal</b>			
<b>Component</b>	<b>%</b>	<b>Value</b>	<b>Total</b>
1/4" Loin	84.82%	\$80.15	\$67.98
T/Trace	0.53%	\$79.64	\$0.42
Fat	10.82%	\$24.62	\$2.66
Skin	3.83%	\$36.75	\$1.41
<b>Drop Loin</b>	<b>100.00%</b>		<b>\$72.48</b>

## STEP 4: PRIMAL TO CARCASS CUTOUT –

In step 4 (see Step 4 table), we combine the composite primal loin value calculated in Step 3 along with similar values calculated for the other primals into the cutout. 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. Also, there is some cutting loss which occurs and this loss must also be taken into account. Cut loss is calculated by factoring the cut loss percentage by the rendered value. In addition, other carcass components that have not yet been accounted for must be calculated in this step. These components would include neckbones, tails, front feet, and hind feet. Once again, these component values are multiplied by their respective carcass yield. These primals, components, and cut loss, are then summed and the result is the pork carcass cutout.

Step 4: Component Values to Primal Value



## TABLES OF YIELD PERCENTAGES

Loin Primal Styles										
			#4 - 1/8" Trimmed Loin VAC				#7 - Bone-In CC, Tender-In Loin VAC			
			#5 - 1/8" Trimmed Loin Paper				#8 - Bnls CC, Stran-On Loin			
			#6 - 1/8" Trimmed Loin Combo				#9 - Bnls CC, Strap-Off Loin			
Components	Packaging Adjustment	#1	#2	#3	#4	#5	#6	#7	#8	#9
1/4" Trimmed Loin VAC	\$4.50	100.00%	-	-	-	-	-	-	-	-
1/4" Trimmed Loin Paper	\$2.00	-	100.00%	-	-	-	-	-	-	-
1/4" Trimmed Loin Combo	\$0.65	-	-	100.00%	-	-	-	-	-	-
1/8" Trimmed Loin VAC	\$4.50	-	-	-	96.22%	-	-	-	-	-
1/8" Trimmed Loin Paper	\$2.00	-	-	-	-	96.22%	-	-	-	-
1/8" Trimmed Loin Combo	\$0.65	-	-	-	-	-	96.22%	-	-	-
Bone-in CC, Tender in VAC	\$5.50	-	-	-	-	-	-	61.44%	-	-
Bnls CC Strap-on	\$5.75	-	-	-	-	-	-	-	39.23%	-
Bnls CC Strap-off	\$5.75	-	-	-	-	-	-	-	-	34.85%
Boneless Sirloin	\$4.25	-	-	-	-	-	-	7.71%	7.45%	7.45%
Bone-in Sirloin	\$4.25	-	-	-	-	-	-	-	-	-
Blade Ends	\$6.00	-	-	-	-	-	-	12.62%	-	-
Tenderloin	\$9.50	-	-	-	-	-	-	-	4.69%	4.69%
Butt Tender	\$5.00	-	-	-	-	-	-	1.34%	-	-
Backribs 2.0#/up	\$9.75	-	-	-	-	-	-	-	10.07%	10.07%
Riblets		-	-	-	-	-	-	-	1.47%	1.47%
72% trim	\$0.60	-	-	-	-	-	-	6.46%	15.27%	18.63%
42% Trim	\$0.60	-	-	-	-	-	-	5.09%	5.12%	6.14%
Fat		-	-	-	3.53%	3.53%	3.53%	-	-	-
Bone		-	-	-	-	-	-	4.86%	15.95%	15.95%
Shrink		0.00%	0.00%	0.00%	0.25%	0.25%	0.25%	0.48%	0.75%	0.75%
Labor		-	-	-	-	-	-	-	-	-
<b>Total Percentage</b>		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

	%	Packaging Value	
Bnls Sir	49.67%	\$4.25	\$108.78
42% Trim	11.33%		\$24.37
72% Trim	18.81%		\$63.44
Bone	20.19%		\$5.23
Bone-In Equivalent	100.00%		\$67.67
Bone-In Price		\$4.25	\$66.68
Bnls Equivalent			\$96.43
<b>Average Bnls Sirloin Price</b>			<b>\$100.61</b>

<b>1/4" Trimmed Loin Primal to Untrimmed</b>			
<b>Components</b>	<b>%</b>	<b>Value</b>	<b>Total</b>
1/4" Loin	84.82%	\$78.48	\$66.57
T/Trace	0.53%	\$23.96	\$0.13
Fat	10.82%	\$24.62	\$2.66
Skin	3.83%	\$36.75	\$1.41
<b>Drop Loin</b>	<b>100.00%</b>		<b>\$70.77</b>

<b>Butt Primal Styles</b>									
#1 - 1/4" Trimmed Butt VAC		#4 - 1/8" Trimmed Butt				#7 - Bnls Butt VAC			
#2 - 1/4" Trimmed Butt Paper		#5 - 1/4" Trimmed Steak Ready Butt				#8 - Bnls Butt Poly			
#3 - 1/4" Trimmed Butt Combo		#6 - 1/8" Trimmed Steak Ready Butt							
<b>Components</b>	<b>Packaging Adjustment</b>	<b>#1</b>	<b>#2</b>	<b>#3</b>	<b>#4</b>	<b>#5</b>	<b>#6</b>	<b>#7</b>	<b>#8</b>
1/4" Trim Butt VAC	\$3.50	100.00%			-	-	-	-	-
1/4" Trim Butt paper	\$2.00		100.00%						
1/4" Trim Butt combo	\$0.60			100.00%					
1/8" Trim Butt VAC	\$3.50	-	-	-	95.53%	-	-	-	-
1/4" Trim Steak-Ready Butt VAC	\$3.50	-	-	-	-	88.52%	-	-	-
1/8" Trim Steak-Ready Butt VAC	\$3.50	-	-	-	-	-	85.17%	-	-
1/4" Trim Bnls Butt, Vac	\$4.50							91.59%	
1/4" Trim Bnls Butt, Poly	\$2.00								91.59%
72% trim	\$0.60	-	-	-	-	11.16%	11.16%	0.97%	0.97%
42% trim	\$0.60				0.79%				
Fat		-	-	-	3.35%	-	3.35%	-	-
Bone								7.10%	7.10%
Shrink		0.00%	0.00%	0.00%	0.33%	0.32%	0.32%	0.34%	0.34%
Labor		-	-	-	-	-	-	-	-
<b>Total Percentage</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>99.96%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

<b>1/4" Trimmed Butt Primal to Untrimmed</b>			
<b>Components</b>	<b>%</b>	<b>Value</b>	<b>Total</b>
1/4" Butt	86.47%	\$99.57	\$86.10
T/Trace	1.89%	\$23.96	\$0.45
Fat	7.36%	\$24.62	\$1.81
Skin	4.28%	\$31.41	\$1.34
<b>Drop Butt</b>	<b>100.00%</b>		<b>\$89.71</b>

Picnic Primal Styles				
#1 - SS Smkr Trim Picnic VAC				
#2 - SS Smkr Trim Picnic Paper				
#3 - Picnic Meat Combo Cushion Out				
Components	Packaging Adjustment	#1	#2	#3
SS Smoker Trim Picnic VAC	\$5.00	75.12%		-
SS Smoker Trim Picnic Paper	\$2.00		75.12%	
SS Smoker Trim Picnic Combo	\$0.65			
Picnic Meat Combo Cushion Out	\$0.65	-	-	51.72%
Picnic Cushion Meat VAC	\$4.50	-	-	20.16%
72% trim	\$0.60	11.44%	11.44%	-
42% trim	\$0.60	1.34%	1.34%	-
Hocks		6.13%	6.13%	-
Fat		3.53%	3.53%	2.15%
Skin		2.05%	2.05%	9.70%
Bone		-	-	15.92%
Shrink		0.39%	0.39%	0.35%
Labor		-	-	-
Total Percentage		100.00%	100.00%	100.00%

Sparerib Primal Styles			
#1 - Trimmed Sparerib - LGT			
#2 - Trimmed Sparerib - MED			
Components	Packaging	#1	#2
Trimmed Sparerib - LGT	\$7.25	100.00%	-
Trimmed Sparerib - MED	\$7.25	-	100.00%
Shrink		0.00%	0.00%
Labor		-	-
Total Percentage		100.00%	100.00%

Trimmed Sparerib Primal to Untrimmed			
Components	%	Value	Total
Ribs	96.26%	\$124.11	\$119.47
Fat	3.74%	\$24.62	\$0.92
<b>Drop Rib</b>	<b>100.00%</b>		<b>\$120.39</b>



**Ham Primal Styles**

		#1 - Trmd Selected Ham 20-23#'s					#4 - 4 Muscle Ham to Blue			#7 - Insides	
		#2 - Trmd Selected Ham 23-27#'s					#5 - 5 Muscle Ham to Blue			#8 - Outsides	
		#3 - 3 Muscle Ham to Blue					#6 - Roll outs			#9 - Knuckles	
Components	Packaging	#1	#2	#3	#4	#5	#6	#7	#8	#9	
Trmd Selected Ham 20-23#	\$0.65	100.00%	-	-	-	-	-	-	-	-	
Trmd Selected Ham 23-27#	\$0.65	-	100.00%	-	-	-	-	-	-	-	
3 Muscle Ham to Blue	\$0.75	-	-	43.60%	-	-	-	-	-	-	
4 Muscle Ham to Blue	\$0.75	-	-	-	45.46%	-	-	-	-	-	
5 Muscle Ham to Blue	\$0.75	-	-	-	-	50.03%	-	-	-	-	
Roll out ham	\$0.75	-	-	-	-	-	60.69%	-	-	-	
Insides	\$0.75	-	-	-	-	-	-	16.26%	16.26%	16.26%	
Outsides	\$0.75	-	-	-	-	-	-	17.21%	17.21%	17.21%	
Knuckles	\$0.75	-	-	-	-	-	-	10.13%	10.13%	10.13%	
Lite Butt	\$0.75	-	-	1.86%	-	-	-	1.86%	1.86%	1.86%	
Inner Shank	\$0.75	-	-	4.57%	4.57%	-	-	4.57%	4.57%	4.57%	
Outer Shank	\$0.75	-	-	3.71%	3.71%	3.71%	3.71%	3.71%	3.71%	3.71%	
72% Trim	\$0.60	-	-	11.37%	11.37%	11.37%	4.23%	11.37%	11.37%	11.37%	
42% Trim	\$0.60	-	-	7.58%	7.58%	7.58%	4.00%	7.58%	7.58%	7.58%	
Fat		-	-	9.09%	9.09%	9.09%	9.09%	9.09%	9.09%	9.09%	
Skin		-	-	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	6.74%	
Bone		-	-	10.82%	10.82%	10.82%	10.82%	10.82%	10.82%	10.82%	
Shrink		0.00%	0.00%	0.66%	0.66%	0.66%	0.72%	0.66%	0.66%	0.66%	
Labor		-	-	-	-	-	-	-	-	-	
<b>Total Percentage</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

<b>Belly Primal Styles</b>			
#1 - Derind Belly 9-13#			
#2 - Derind Belly 13-17#			
<b>Components</b>	<b>Packaging</b>	<b>#1</b>	<b>#2</b>
Derind Belly 9-13#	\$0.65	82.09%	
Derind Belly 13-17#	\$0.65		82.09%
72% Trim	\$0.60	1.00%	1.00%
42% Trim	\$0.60	4.87%	4.87%
Fat		1.64%	1.64%
Skin		9.97%	9.97%
Shrink		0.43%	0.43%
Labor			
<b>Total Percentage</b>		<b>100.00%</b>	<b>100.00%</b>

<b>Trimmed Belly Primal to Untrimmed</b>			
<b>Components</b>	<b>%</b>	<b>Value</b>	<b>Total</b>
Belly	98.62%	\$111.46	\$109.92
42% Trim	1.38%	\$24.37	\$0.34
<b>Drop Belly</b>	<b>100.00%</b>		<b>\$110.26</b>

<b>Jowl Primal Styles</b>		
#1 - Skinned Jowl		
<b>Components</b>	<b>Packaging</b>	<b>#1</b>
Skinned Jowl	\$0.65	78.92%
Skin		20.38%
Shrink		0.70%
Labor		-
<b>Total Percentage</b>		<b>100.00%</b>

<b>"Trimmed" to "Untrimmed"</b>	
<b>Primal Conversion</b>	
Loin	84.82%
Butt	86.47%
Picnic	100.00%
Sparerib	96.26%
Ham	100.00%
Belly	98.62%
Jowl	100.00%

<b>Primal Yield to Carcass</b>	
Loin	25.23%
Butt	10.03%
Picnic	11.23%
Sparerib	4.55%
Ham	24.68%
Belly	16.22%
Jowl	1.49%
Neckbones	1.89%
Tails	0.19%
Front Feet	1.02%
Hind Feet	1.36%
Cut Loss	2.11%