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How Does an 1163 pound Steer End Up Weighing 362 Pounds?

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This spring, High Sierra Beef worked with the University of Nevada- Reno’s Wolfpack Meats to develop some detailed cut-out data on carcass yield. This type of information can be difficult to find and thought it would be useful for you to see. Please note that the data is specific to the set of steers processed at Wolfpack Meats and your results could vary. The information in this article was presented at four High Sierra Beef Producer Outreach meetings held this summer.

During the months of May and June, a total of 16 steers were harvested and processed at Wolfpack Meats. Graduate student Brian Santistevan, working under the supervision of Facility Manager Bob Butler, developed detail carcass yield information on the steers. We will start out with typical carcass data you would expect to see when steers are harvested at USDA plant:

Category	Average for 16 steers
Harvest Weight	1163 lbs
Hot Carcass Weight	730 lbs
Dressing Percentage	62.7%
Backfat thickness	.28 inches
Maturity	A
Kidney, Pelvic, Heart Fat	2.5%
Ribeye Area	12.7 sq inches
Yield Grade	2.6
Quality Grade	4 Choice, 4 Select+, 4 Select

Dressing %

The steers were finished on irrigated pasture, alfalfa hay, and some ryegrass hay in Sierra Valley. Results were higher than expected for dressing percentage. Grass-fed beef dressing percentages will tend to run in the 55-58% range. Wolfpack Meats wanted steers to arrive one day prior to harvest. Upon arrival, steers were kept in a dry lot overnight and weighed prior to harvest. This weight was minus any fill that the steers had from grazing on irrigated pasture. This gave more of a true weight prior to slaughter. While more animals will need to be harvested before you could plan for that high a dressing percent, it was a pleasant surprise.

You Can Reach Choice Grade with Grass-fed Beef

Many people questioned High Sierra Beef about whether you could reach a Choice grade strictly on grass. These results show that it can be done. Select marbling scores are slight while choice marbling scores are small. Marbling scores run from 0-100. Marbling is the fleck of fat you can see in the rib-eye muscle cut between the 12th and 13th rib.

Of the 4 Select + steers, 3 of them had a marbling score of slight 90. A couple of weeks more on productive irrigated pasture may have pushed at least 3 of the Select + steers into the Choice grade. Given the amount of snow the steers endured in Sierra Valley this winter (up to 11 ft drifts) this is a great accomplishment.

Backfat and Yield Grade

The average backfat was .28 inches. There had been concern whether there would be enough fat cover over the carcasses to be able to age the carcasses for 14 days or more. Less than .2 inches means you can only age around 7-10 days as the lack of cover will result in a lot of trim loss. These steers had more than adequate cover and were aged at least 14 days.

Yield grade average 2.6, which is above average. Yield grades run from 1-5 and provide an estimate of the amount of closely trimmed retail cuts from the rib, chuck, loin, and round. A yield grade 4 or 5 is undesirable because of extra fat to trim off.

How Does 730 lbs Become 362 lbs of Sellable Meat?

It's amazing that the only 49.6 of the hot carcass weight ended up being sellable product. Let's explore what happened to the other 50.5% of the carcass.

Item	Amount	% of HCW
Hot Carcass Weight	730 lbs	100
Aging 14 days	48 pound loss	6.5
Bones and fat	192.3 pound loss	26.4
Necks, Shanks	32.2 lb loss	4.4
Total Loss	272.5 lbs	37.3
Amount Left	457.5	62.7

The carcass is still not done being processed. First it has to get broken down into wholesale primals and then into closely trimmed retail cuts. Here is the breakdown.

Item	Amount (lbs)	% of HCW
Wholesale weight of primals	311	42.6
Wholesale trim	74	10.1
Retail cuts in the box trimmed weight	236	32.3
Retail trim	52	7.1
Total trim (wholesale plus retail)	126	17.3
Unaccounted for pounds	20	2.8

Once I have the meat in the box and ready to ship, I have 236 lbs of closely trimmed retail cuts and 126 lbs of trim (ground beef). It doesn't get any easier. Here is a breakdown on the amount of retail product which can be expected to command a premium price.

Item	Amount (lbs)	% of Retail Weight of 362 lbs
Full Tenderloin	8	2.2
Ribeye	18	2.5
Strip Loin	14.7	2.0
Tri-tip	4.3	1.2
Flank	2.5	0.7
Total for premium cuts	47.5	13.1
Retail cuts from the shoulder and round	188.5	51.9
Total trim (ground beef)	126	34.8

As you can see, very little of the carcass can be expected to easily command a premium price. A person or company must constantly seek ways to add value to less desirable cuts and convert trim into other products in order to maximize carcass value. Anyone can sell the middles. The challenge is selling the fronts and backs and developing value-added products.