

Profiting from Piedmontese-cross on 'the Grid'



On August 10, 2022, 373 head of 1-copy Piedmontese cross cattle from a single producer were harvested at the Tyson plant at Dakota City, Nebraska.

These cattle were born in Montana, all from the Paul Descheemaeker program running Naturalean Piedmontese 2-copy bulls on their predominantly British-cross cow herd.

Descheemaeker calves in March through April and then sells his weanlings to Lone Creek Cattle Company.

This group shipped to Menno, South Dakota on September 15, 2021 for backgrounding, and then on to Phelps County Feeders at Holdrege, Nebraska at the end of December for traditional feedlot finishing.

The goal for this single-producer group of steers and heifers was to market them on "the Grid" and gather information on carcass performance.

There were 225 steers and 148 heifers in total from Paul and his son Nathan's herds. 200 head were an average age of 16 months + 20 days of age at slaughter, and 173 head were 15 months + 25 days of age at slaughter.

Above is part of the Descheemaeker ranch in Montana, pictured during a Piedmontese Field Days held there.

Their average live weight at slaughter was 1316 pounds, and average dressing percent was 64.77% which was 1% greater than the plant average for that week. (That Tyson plant capacity is some 40,000 beef per week.) The Pied-crosses hot carcass weight averaged 852 pounds.

Carcass Dressing Yield percent is calculated by the actual numbers, using live weight, less 3% shrink, and hot carcass weight.

The other big factors affecting value of a carcass are decided by Quality and Yield Grades, which are camera-scored (rather than human-scored) at this Tyson plant.

Quality grades are assigned to beef carcasses based on relationships between marbling and the age of an animal. Marbling is the fat dispersed within the muscle. Prime meat comes from young animals with at least slightly abundant marbling. Choice meat comes from young animals with moderate, modest or small marbling. Select comes from young animals with slight marbling.

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There are eight grades of beef:
 Prime
 Choice
 Select
 Standard
 Commercial
 Utility
 Cutter
 and Canner.
 Mainly three are used for marketing: Prime, Choice and Select.

The Carcass Quality Grade is essentially an “estimate of palatability” based primarily on fat marbling and maturity and, to a lesser extent, on color, texture and firmness of lean.

Yield Grade or Cutability – indicates the proportionate amount of saleable retail cuts obtained from a carcass. There are 5 categories of Yield Grade, from the best high-yielding #1 to the lowest rating at #5. Yield Grades 1 or 2 will generate premiums, Yield Grade 3 is revenue neutral, and Yield Grades 4 or 5 are discounted.

Profiting from Piedmontese-cross on ‘the Grid’ means YIELD + GRADE

Carcass Dressing Yield can generate premium dollars, but Quality Grade and Yield Grade together can add even more profit.
 (Remember, Dressing Yield was 64.77% on this group, and Yield Grade is the amount of saleable meat on the carcass.)

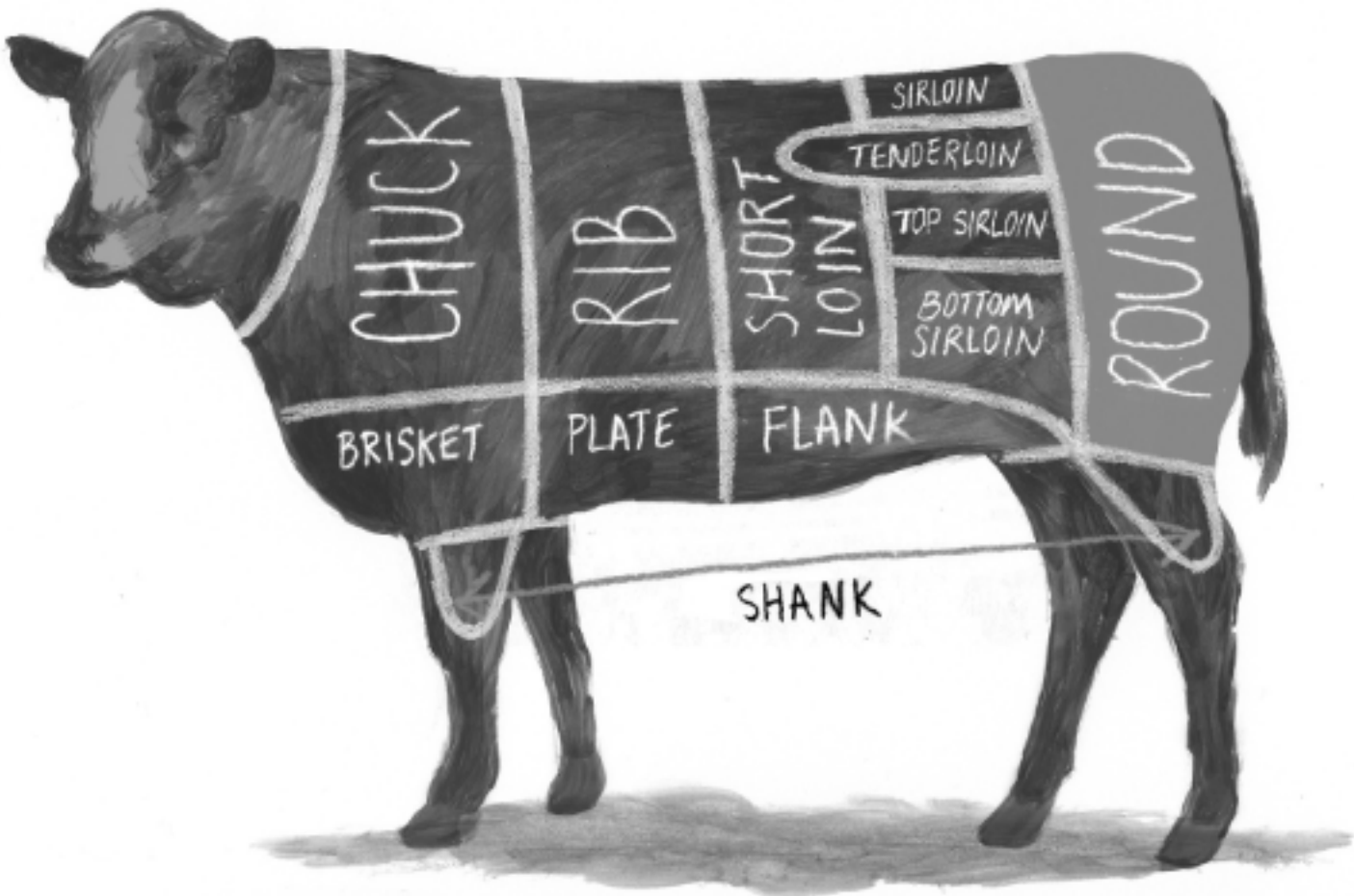


Chart One below gives the overall Yield Grade and Quality Grades garnered by the 373 Piedmontese-cross animals.

Chart One:

	YIELD GRADE on 373 Pied-cross	
	# of animals	% of total
Yield Grade 1	114	30%
Yield Grade 2	189	51%
Yield Grade 3	66	18%
Yield Grade 4 & 5	4	1%

QUALITY GRADE on 373 Pied-cross	
# of animals	
1	Prime
259	Choice
109	Select
4	Other

303 animals (81%) fall into the premium-generating Yield Grade 1 and 2 categories, and 260 animals (69.7%) fall into the premium-generating Prime and Choice Quality Grades.

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Looking closer at **only** the Choice Grade animals, Chart Two below gives the Yield Grades garnered by just those 259 head grading Choice as compared to the overall industry Yield grades within the Choice Quality grade from the last National Beef Quality Audit (NBQA).

Chart Two:

	259 Choice Grade Piedmontese-cross		Nat'l Beef Quality Audit Data (NBQA)
	# Pied animals	% of 259 head	Industry av.% YG in Choice Grade
YG 1	62	24%	4.06%
YG 2	139	54%	23.61%
YG 3	55	21%	29.94%
YG 4	3	1%	9.31%
YG 5	0	0	1.86%

Note: 78% YG 1&2 Choice Grade from Piedmontese cross, compared to 27.67% YG 1&2 Choice as an industry average.

This incredible improvement to Yield Grade is all due to the Piedmontese breed-specific inactive myostatin gene. These crossbreds carried 1-copy or allele of the gene, which ANYONE can produce in one crossbreeding season simply by using a good 2-copy (homozygous) Piedmontese sire on non-Piedmontese cows.



Above: a powerful visual of the impact of the Piedmontese inactive myostatin gene on carcass yield. These carcasses were all harvested at the USDA Meat Animal Research Center (US-MARC) as part of their breed research. The 1-copy crossbred carries 1 allele & the 2-copy carries 2 alleles of the breed-specific myostatin gene compared to an animal without the gene.

Profiting from Piedmontese-cross on 'the Grid' - Makes Sense!

Calculating the actual bonuses paid on 'the Grid' requires adding together all of the premium points, like Dressing Yield, YG 1 and 2 and QG Prime and Choice, and then deducting any discount points, like over or under-weight carcasses, YG 4 and 5, QG Select and lower. Thanks to Hiram Lambert for reviewing this data and calculating the premiums that these high yielding Pied-cross calves would have received based on the pricing at the time they were sold.

With all discounts applied:

Carcass Dress Yield added \$8.52 per animal;

Yield Grade values added \$14.31 per animal;

Quality Grade values added \$20.01 per animal.

6 head were discounted for over / under wt carcasses (5 above wt and 1 below) costing \$3.28/animal.

Overall, these 373 animals would have racked up \$39.56 per head premium **over the high bid** from the plant that week.

Our compliments to Paul Descheemaeker on a fine set of animals. These 373 were his total calf crop that year – none were sorted off!



Above: Billy Swain with some of the Certified Piedmontese Beef marketing team standing in the Descheemaeker cow herd in supernatural Montana.

They finished quickly on feed (230 days on feed through a particularly tough winter in that region) and they really performed on the rail.

It is easy to see that there can be real profit in raising and feeding out your 1-copy Piedmontese cross to market them on 'the Grid', especially using a British-based cow herd to add some fat-genetics (Quality Grade) to the incredible muscle-genetics (Yield Grade) of the 2-copy Piedmontese herd sire. ●

Flexibility in Days-On-Feed with Piedmontese-cross

Piedmontese have long been noted as an extremely high yielding, lean breed – due to the unique gene for in-active Myostatin - as supported by years of USDA MARC research. The Piedmontese also have a strong tendency to marble without producing excess waste fat.

Determining the ideal marketing time for finished cattle is not always a straightforward process. Market conditions (both slaughter and feeder cattle prices), feed costs, pen conditions, and cattle performance all influence end-point decisions.

Grid marketing adds a further wrinkle, as extended days on feed results in greater carcass weight and potentially improved Quality grades, but at the risk of discounts for heavy weight carcasses and - for *non-Piedmontese* influenced cattle - of discounts for Yield grades due to excess fat.

As seen in the data from the 373 head of Pied-crosses sold on 'the Grid' reported in this issue, the cattle spent 230 days on feed and were just at the 16 month old age.

If the market happened to be 'down' at the time, those Pied-crosses could have been held longer on feed and definitely could have improved Quality grades realized, but at little-to-no risk of adding more discount Yield grades due to excess fat! (The Pies just keep growing muscle, as opposed to excess fat.) A small penalty for heavy weight carcasses is more than off-set by added premiums for Quality plus Yield grades.

Flexibility in days on feed can allow you to catch markets highs. ●

Taste Fat With LESS Waste Fat

Intramuscular fat or marbling is considered 'taste fat' while the back fat (subcutaneous fat) seam and internal fat is considered 'waste'.

The average (non-Piedmontese) bovine will gain 10 pounds of 'waste fat' for every pound of 'taste fat' gained in the finishing phase.

Increase beef value with
Marbling + Muscle

Piedmontese terminal sires
on British breed cows will
Yield + Grade

And even better than the advantages in Yield, the Piedmontese gives consistent improvement to beef TENDERNESS in every cut - due to the unique inactive myostatin gene variant C313Y.



**Piedmontese beef
pitchfork fondue**



Data below from *Certified Piedmontese Beef* includes nutritional & tenderness information from 1-copy Piedmontese grain-fed raised specifically for their branded beef program

Serving size 3.5 ounces	Ribeye		Top Sirloin		Strip Loin	
	Certified Piedmontese	USDA Prime	Certified Piedmontese	USDA Prime	Certified Piedmontese	USDA Prime
Calories (kcal)	238.7	304.9	125	183.1	179.1	271.3
Total Fat (g)	17.43	26.11	3.39	10.3	10.3	21.47
Saturated Fat (g)	8.88	12.8	1.66	5.17	4.48	10.2
Protein (g)	18.9	16.7	22.83	20.8	21.61	18.0
Tenderness (WBSF*kg)	2.50	2.74	2.99	3.06	2.84	3.04

WBSF measures the pounds of force required to cut meat - lower values indicate tenderness; shear force values below 3.2 are considered "very tender". Nutritional data courtesy of Certified Piedmontese, tests from Midwest Labs, Omaha, NE; shear force data from University of Nebraska Lincoln. (circa 2016)

Low Fat - High Protein - Eats Like PRIME

for further information contact

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