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## WHAT DOES A SIRE THAT GENERATES 70:70 OFFSPRING LOOK LIKE?

Is he big, small, thick, fat, high birth weight, low milk, polled, blue, red or green? I have this question posed often these days, usually in a more logical format than the preceding. With interest growing in the 7070 beef marketing grid, I have put together data from our own carcass merit research program to help answer the 7070 sire question the best way possible, with information. In the past three years we have tested 1327 steers at the University of Illinois representing 77 sires. Summary of these 1327 steers in terms of % Choice, % Yield Grade 1 and 2, and “out” percentage was 74:60:3, not quite 70:70:0, but compared to industry averages of 57:52:22 it represents huge value enhancement for packers and feeders. If you dig into the data further, you begin to find significant sire group differences as we might expect.

Of the 77 sires evaluated 15 sired at least one year group of progeny that achieved 70:70:0. Together they sired a total of 287 steers. I have included the data on every calf sired by these 15 sires, even if a second calf crop did not quite hit the 70:70:0 goal. These sire’s progeny have been 82:73:1 compared to the group average stated earlier of 74:60:3. Compare both of these to the poorest 14 sires and their 195 progeny that compiled a 48:51:8 record and you begin to see the value of superior sires for end product traits. Just with a conservative \$8.00 Choice/Select spread and because growth and carcass weights were nearly the same between groups, the difference in grid value per head approaches \$50.00. If you add to that the cost of reduced efficiency caused by feeding cattle to a fatter endpoint and the actual difference in value a packer might realize by fabricating carcasses with greatly accelerated marbling and red meat yield and these 70:70 cattle create a huge difference in total profitability for the entire beef industry. It’s simple, more meat value and product uniformity produced for less cost!

So back to the original question, what traits or genetic values did the 7070 sires possess that the low value sires did not. First of all 9 of the 15 sires whose progeny qualified were purebred Simmental sires and 6 were SimAngus composites. None of the 12 high accuracy Angus sires evaluated had steer groups that qualified for 70:70:0, primarily because of insufficient Yield Grades and increased “outs” based on Yield Grade 4’s. Therefore, I purposely did not include any Angus bulls among the bottom 14 evaluated so that we might compare apples to apples. In total there have been 41 Purebred Simmental sires evaluated, 21 SimAngus, 3 three quarter Simmentals and 12 Angus bulls meaning that 29% of the SimAngus sires qualified, and 20% of the high percentage Simmental sires got the job done. Of the 14 sires that did the poorest for compliance, 13 were Purebred Simmental bulls and 1 was a SimAngus composite (30% vs. 5%).

The real question is how can these sires and more like them be found and utilized. The biggest differences between the top and bottom sires can be found predictably in their genetic evaluation. We expect the EPDs published by the ASA to serve as a powerful tool for improving cattle and they do. By simply evaluating the carcass EPDs of the sires at both ends of this value spectrum we can provide a clear picture of the genetic potential necessary to produce or exceed the goal of 70:70:0 harvest cattle and adding profitability to this industry. The illustration below shows the EPD averages for the 15 high value sires and the 14 low value bulls.



	YG EPD	Marb EPD	Fat EPD	REA EPD	Stay EPD	API	TI
<b>7070 Sires</b>	<b>-.10</b>	<b>+.35</b>	<b>+.01</b>	<b>+.29</b>	<b>+22.2</b>	<b>124</b>	<b>66</b>
<b>Poorest</b>	<b>+.02</b>	<b>+.10</b>	<b>+.02</b>	<b>+.13</b>	<b>+18.8</b>	<b>100</b>	<b>61</b>

As you can see from these averages, using sires with superior carcass EPDs really works when it comes to producing high value cattle that combine superior Yield and Quality Grades. The big differences appear in EPDs for Marbling, Rib Eye Area and Yield Grade. Of the 7070 group of sires, only one was below breed average for Marbling EPD and one other ranked below breed average for REA EPD. There's more good news! The high value carcass sires also posted significantly more valuable estimates for both Stayability EPD and All Purpose Index showing once again that selection for end product value does not mean you must sacrifice maternal traits.

So what about the original question, is he big, small, thick, fat, high birth weight, low milk, polled, blue, red or green? The answer is he ranks in the top 10% or higher for Marbling, REA and Yield Grade EPDs, he doesn't sacrifice calving ease and maternal genetics to promote end product value and in many cases he uses breed complementarity in addition to superior within breed genetics to help produce a product that brings both value and uniformity to the whole of the beef business.

For more information about advancing the genetic value of beef production or to access additional information about the 7070 Beef Marketing Grid go to [www.7070beef.com](http://www.7070beef.com) or call Marty Ropp ASA Director of Field Services at 406-581-7835.