

Simmental Genetic Trends (1993-2013)



By Jackie Atkins, Ph.D., Director of Science and Education

As we look to rebuild our cattle inventory and increase food resources for the mushrooming population growth, it's an important time to review genetic trends of the Simmental breed. In the February 2014 edition of *BEEF*, a survey asked a group of producers, "What was the breed makeup of the last bull(s) you purchased?" The top five breeds were Angus, Hereford, Red Angus, Simmental, and SimAngus™ (66.8, 17.2, 11.9, 8.8, and 8.1%, respectively). If we consider Simmental and SimAngus together, we rank third in the poll (16.9%). The percentage Simmental and SimAngus increased from the 2010 *BEEF* poll with only 4.6 and 5.5% respondents buying Simmental and SimAngus, respectively. According to the NAAB website (12/3/2013), the top five beef breeds for semen sales in 2012 were Angus, Simmental, Red Angus, Polled Hereford, and Gelbvieh (74.1, 8.4, 6.0, 3.9, and 1.3%, respectively). It is comforting to see that SimGenetics are competitive in the market but we certainly have room to grow. Simmental cattle have improved in a number of economically important traits

Yearling Weight (YW), Carcass Weight (CW), Yield Grade (YG), Marbling (MRB), Back Fat (BF), Ribeye area (REA), and Shear Force (SF). As you can see, the myth that Simmental cattle are hard calvers is not true with today's genetics. We have increased our direct calving ease from 1.8 to 9.2%. We have also made progress in maternal calving ease and stayability while continuing to improve our growth and performance traits. Simmental cattle are known for producing desirable yield grade scores but we have also made huge progress in the marbling ability of our cattle (from -0.12 in 1993 to 0.12 in 2013).

For those of you who are more visual thinkers, here are two graphs to illustrate Simmental genetics are moving in the right direction. In Figure 1, you can see changes in a number of important traits in purebred Simmentals born in 1994 to 2013. Please note, the graph is not in actual EPD units. Rather, each trait has been standardized (divided by the standard deviation and set the 1994 EPD value to zero) so comparisons of relative changes among the nine EPDs can be made. Again, you

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Year of Birth	CE	BW	MCE	STAY	MW	MLK	MWW	DOC
1993	1.80	5.00	8.90	5.10	51.34	28.80	59.00	7.70
2003	6.50	3.30	9.60	16.20	83.49	24.40	54.50	9.30
2013	9.20	2.20	10.60	19.20	83.72	24.00	56.20	10.30

Year of Birth	WW	YW	CW	YG	MRB	BF	REA	SF
1993	60.60	81.80	25.30	-0.24	-0.12	-0.07	0.42	-0.07
2003	60.40	85.60	25.20	-0.28	-0.02	-0.06	0.57	-0.23
2013	64.40	93.40	28.60	-0.27	0.12	-0.06	0.75	-0.32

over the years leading to the current population offering high-quality genetics to an industry needing to bolster numbers and efficiency of cattle. There are many myths about Simmental cattle that hopefully can be dispelled by reviewing the following data.

The tables below provide the average EPD values for purebred Simmental cattle born in 1993, 2003, and 2013 for the following traits: Calving Ease (CE), Birth Weight (BW), Maternal Calving Ease (MCE), Stayability (STAY), Mature Weight (MW), Maternal Weaning Weight (MWW), Docility (DOC), Weaning Weight (WW),

can see that Simmental cattle have made improvements in each of these traits over the last 20 years especially in marbling and calving ease. The selection pressure in these economically relevant traits is reflected in the increase in the selection indices (API and TI; Figure 2) over the same time period. The average API has grown from roughly \$58 to \$118/exposure. While TI has not increased as sharply as API, TI has still improved from roughly \$53 to \$68/exposure in the last 20 years. This translates to an increase of \$60.40 and \$14.80 per cow exposed for API and TI, respectively.

The time is here to sell our story. These data showcase the high-quality genetics Simmental cattle have to offer. The industry is looking to expand and Simmental breeders, through wise selection, have built a product that can improve the efficiency, meat quality, and profitability of beef production. Simmental breeders should be proud of the progress they have made over the last 20 years. Keep up the good work!

Figure 1.
Genetic improvement in the average EPD of purebred Simmental cattle born in 1994 to 2013. The traits have been standardized in order to compare relative change between traits.

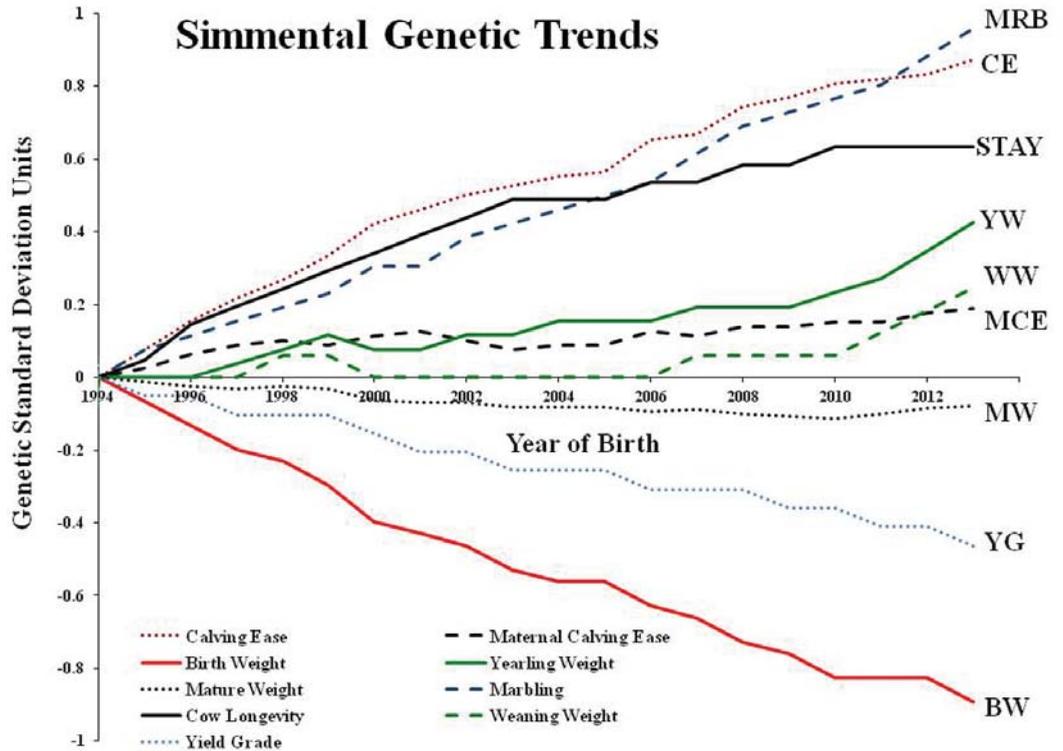
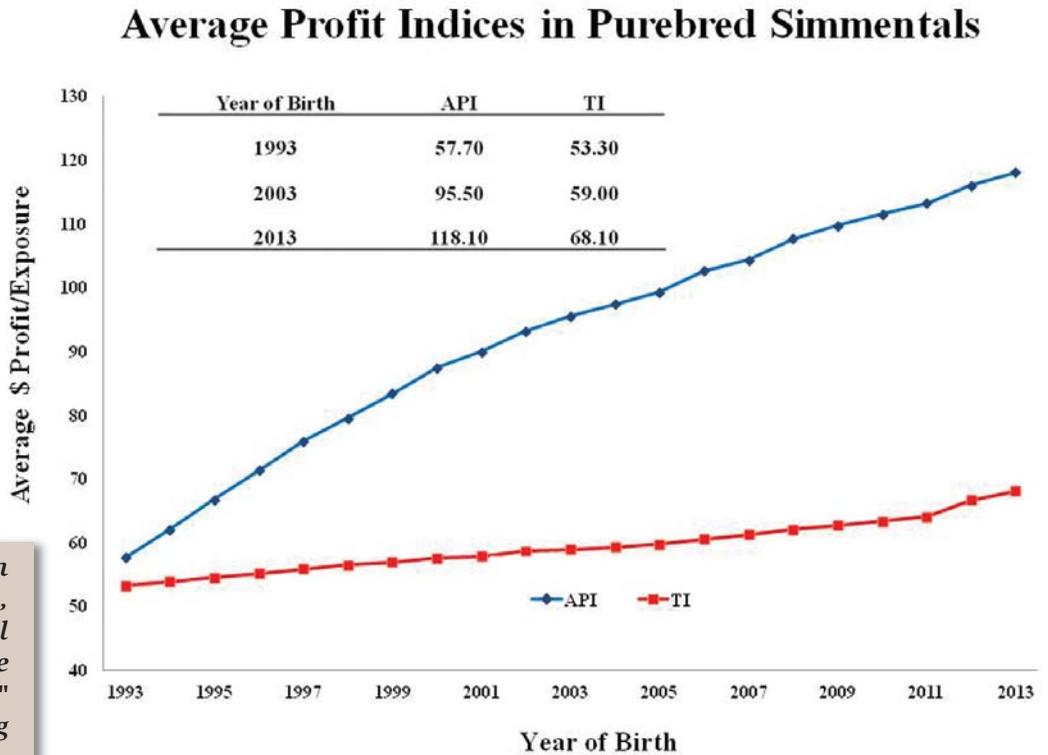


Figure 2.
Change in the average All Purpose Index (API; best if keeping replacement heifers) and Terminal Index (TI; best if all calves will be harvested) in purebred Simmental cattle born in 1993 to 2013.



For similar data on Fullblood, Simbrah, and hybrid Simmental genetics, check out the "Science and SimGenetics" page on the tREG blog <http://asasimmental.wordpress.com/>.

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