

ASA Efficiency Research, Year 2

by Marty Ropp

The most recent addition to the ASA research program is a foray into the evaluation of genetics for the improvement of feed conversion. We know that there is a substantial genetic component affecting the efficiency of conversion of feedstuffs to animal proteins. We also know that genetic improvement for feed conversion could be worth hundreds of millions of dollars to the beef business. Feed costs in the beef industry have been conservatively estimated at around 60% of the total cost of finishing cattle and 40% or more of the total for maintaining a cow.

We have now completed our second year of progeny testing for intake and conversion in cooperation with our Montana research herds, The University of Illinois, and Montana State. The University of Illinois with its 11 million dollar research facility located just south of Champaign, Illinois, is currently evaluating multiple strategies to reduce feed cost including genetic improvement. This facility utilizes state of the art technology developed by Grow Safe Systems Ltd. of Alberta Canada to electronically measure and record the daily feed consumption and feeding behaviors of up to 1,600 test animals at once.

In all 840 steers, representing the progeny of 47 Simmental, SimAngus and Angus sires have been evaluated and harvested through two years of research. The genetic makeup of these cattle is primarily 50% Simmental, 50% Angus. Included in this second year project were several highly proven, benchmark sires to begin the process of tying pedigrees more closely together for genetic evaluation. The following is a brief summary of data collected through years one and two, with a third group of cattle slated to be delivered in late October.

	2007 436 Steers	2006 404 Steers
In Weight	705	701
Out Weight	1281	1342
Days on Feed	145	180
Feed Conversion	5.88	6.05
ADG	3.8	3.6
Carcass Weight	817	862
Dressing %	64%	64.3%
Fat Thickness	.48	.53
Ribeye Area	13.4 in ²	14.99 in ²
Average YG	2.9	2.7
Choice or higher	70.0%	73%
YG 1 and 2	56%	63%
YG 4	4%	3.4%
No Roll	.25% (1 Head)	.69% (3 head)
Death Loss	1.5%	.69%

When compared to 2006, the largest differences were as a result of greater days on feed. This is especially evident in the reduced ADG and Feed Conversion figures and higher Carcass Weights and REA values. This Days on Feed increase was primarily due to a high ratio of carcass price to cost of gain that had been pre-negotiated making increased weight, a significant advantage for profitability. Even at a higher end weight there were fewer YG 4s; and, the average Yield Grade of the group was actually lower. Feed ingredient makeup was also significantly different between years with most of the 2007 project fed high by-product rations with significant distillers grains inclusion. In almost every case, the Illinois project steers again excelled industry averages and pushed toward industry ideals for USDA Yield and Quality Grades. These data show again that when you combine the highest carcass value Continental breed with the highest carcass value British genetics and incorporate selection for superior sires, industry end product targets are well within reach.

With sustained, sire identified data collection, the implementation of existing efficiency computer modeling programs and available input provided by genomics testing, a cutting edge genetic evaluation complete with selection tools for genetically improving efficiency need to be in the ASA's future. ♦

