

Cow-Calf Production at Lake City AgBioResearch Center

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Introduction

In the fall of 2010, the Lake City MSU AgBioResearch Center made a change in the type of cattle that were utilized for research. There were several major reasons for making this change. From a standpoint of orienting to the future, as an extension and research team, we felt that the future of beef production should be oriented towards lowering costs and relying more on forages. Thus the move was made to a type of beef cow that was believed to produce offspring that will be more efficient on forage without greatly sacrificing beef quality. As you look at these cattle they may look slightly different, they may not wean calves in the top 10% of the industry, but they are still stout, thick made cattle. Its also important to remember that being a low cost producer does not mean that you are selling a low quality product, we aim to continue to educate producers on the fine point of finishing the beef to a high quality on an all grass (and forbs) based diet.

Cow Herd Data

In the 2012 Beef Report, we stated that we were shooting for a frame score of 3-4 on our mature cowherd, and a mature weight of around 1100 pounds. For 2011, frame score measurements were taken on January 20, 2011, and the average frame score on our cowherd was 4.53, the measurements were taken again in March of 2013, and the average frame score was at 4.7.

Mature weights were taken on the cows in October of each year, and were post weaning. The average cowherd weights are as follows: 1187 pounds for 2011, 1279 pounds for 2012, and 1196 pounds for 2013. The weight range was 810 to 1475 pounds. The lightest cow was born in 2008,

so at 3 years of age she weighed 810 pounds, and in 2013 at the age of 5, she weighed 960 pounds.

The cows were also given a Body Condition Score (BCS) at the same time as the weights were taken. Those average BCS scores were: 5.7 for 2012, and 5.5 for 2013. No BCS measurements were taken in the fall of 2012.

There are two cows, 5L Lakota 1736-158, and 5L Sheila 2795-2988, which are serving as foundation females for our herd. Their pedigrees are listed in Figures 1 and 2.

We have also used PCC Jazz Boy 4064W, and 5L Tradesman 1715-6237 as A.I. sires for our herd. We feel that both of these sires fit the program that we are working on. Jazz Boy was born on 7/7/2009, had a birth weight of 60 pounds, and has a 3.5 frame score. He was also the highest selling bull in the 2010 Fall Bull Sale for Pharo Cattle Company. His EPD's are as follows: BW -3.4, WW +39, YW +50, and Milk +12. The 5L Tradesman 1715-6237 bull was born on February 2, 2007, and he has the following EPD's: BW -2.2, WW +50, YW +94, and Milk +16.

Starting with the 2013 Breeding season, the herd was closed, and we are using Sons of both of these bulls; our efforts are focused on homogenizing the herd. The Jazz Boy sired females are being bred to the Tradesman Sons, and the Tradesman sired females are being bred to Jazz Boy sired sons.

Conducting a pregnancy check each year-monitored conception Rates on the cows. There were 14 open cows in the cowherd (n=169) in 2011, there were 169 cows exposed. The cows were all checked on October 15, 2011. There were 42 head that were bred via AI on July 1, 2011; the breeding bulls were turned out on July 1, 2014.

There were 7 open cows in the herd (n=166) in 2012, there were 166 cows exposed. AI conception rate was around 17% in 2012, and breeding bulls were turned out on July 3, 2012,

and were taken back out on September 6, 2012. The cows were pregnancy checked on October 17, 2012.

In 2013, there were 22 open cows in the herd (n=127 exposed), 15 of them were mature cows, and 7 were open heifers that were roughly 18 months of age at the time they were pregnancy checked. They were pregnancy checked on October 3, 2013. We have been putting intentional breeding pressure on cows to increase long-term herd fertility. We do believe there is a high correlation between fertility, and the ability to finish on grass.

Calf Data

The average adjusted 205-day weaning weight for the 2011 Heifers (n=62) was 566 pounds. The average adjusted 205-day weight for the bulls (n=3) was 562 pounds. The steers (n=63) had an average weight of 598 pounds. The average 205 day weight for the 2012 calf crop was as follows, Heifers (n=57) were 552 pounds, steers (n= 35) were at 605 pounds, and the replacement bulls (n=8) averaged 615 pounds. On the 2013 calf crop, the adjusted 205-day weight for the calf crop was 573 pounds. This weight includes heifers, steers, and the replacement bull calves. If you split those groups into the different sexes, they showed averages that are as follows: 1) steers (n=28) averaged 590 pounds, heifers (n= 40) averaged 555 pounds, and the bull calves (n=7) averaged 601 pounds. These number do not represent the entire calf crops from these respective years, as some of them were below 180 day in age and we were not able to calculate their adjusted 205 day weight.

Conclusion

At the Lake City AgBioResearch Center, we are working to provide information that will help to answer questions many in the grass finishing businesses have. We are uniquely positioned, as

we are one of only a handful of facilities in the US conducting this type of research. Although the grass-fed beef industry may be small compared to the traditional feedlot beef system, it is well over a multi billion dollar industry today, and is continually growing. We are not in any way saying that the grain fed feedlot system should or will be replaced any time soon; we are only presenting grass finishing as an option for producers as it may have a special fit in Michigan. Further much of the work being conducted at the Center could be applied in any beef operation. We look forward to continually developing the new genetic base. We envision the continual increase of forages needed to make beef production profitable long term and hope our genetic work can help in this progression.

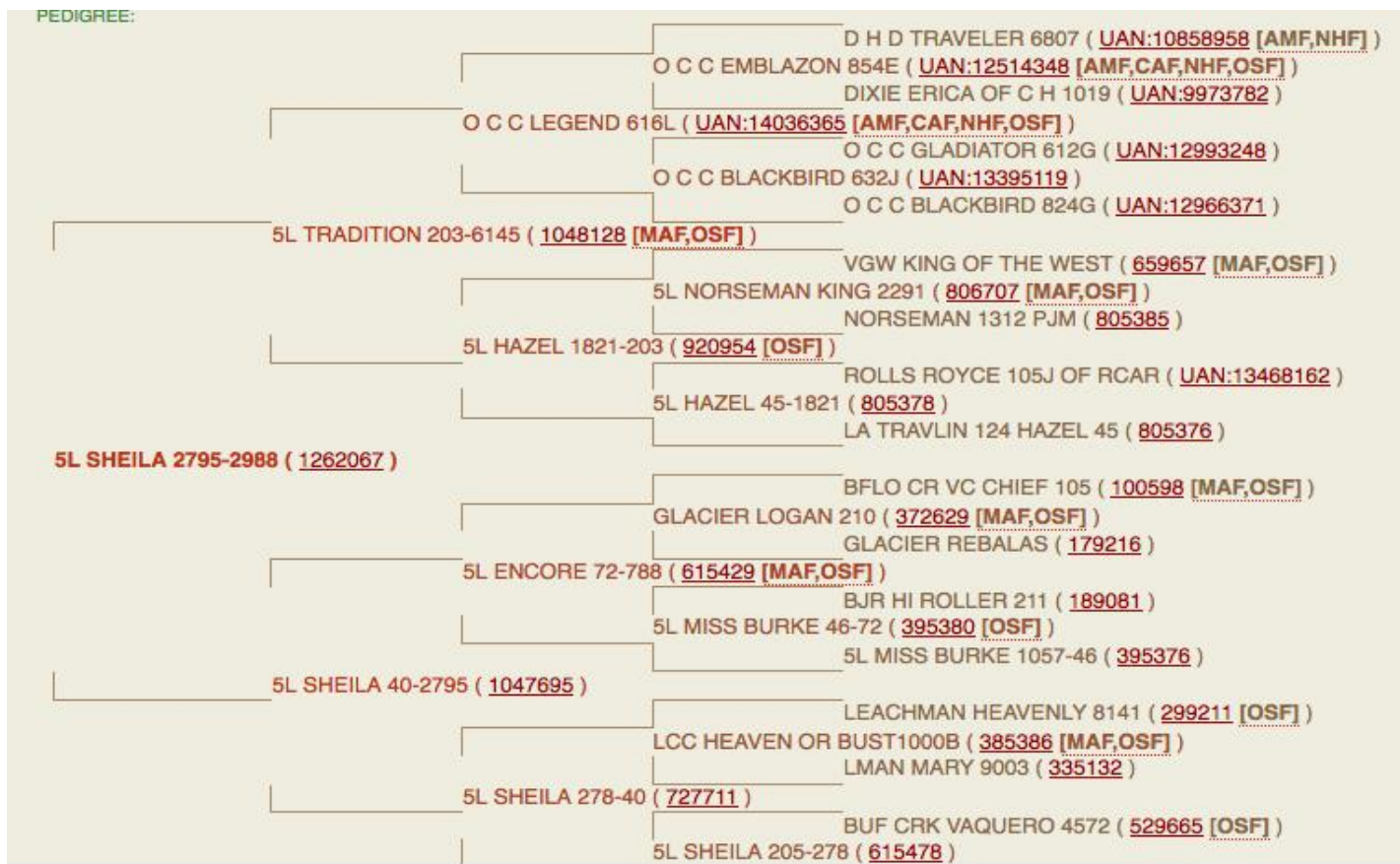


Figure 1. 5L Sheila 2795-2988

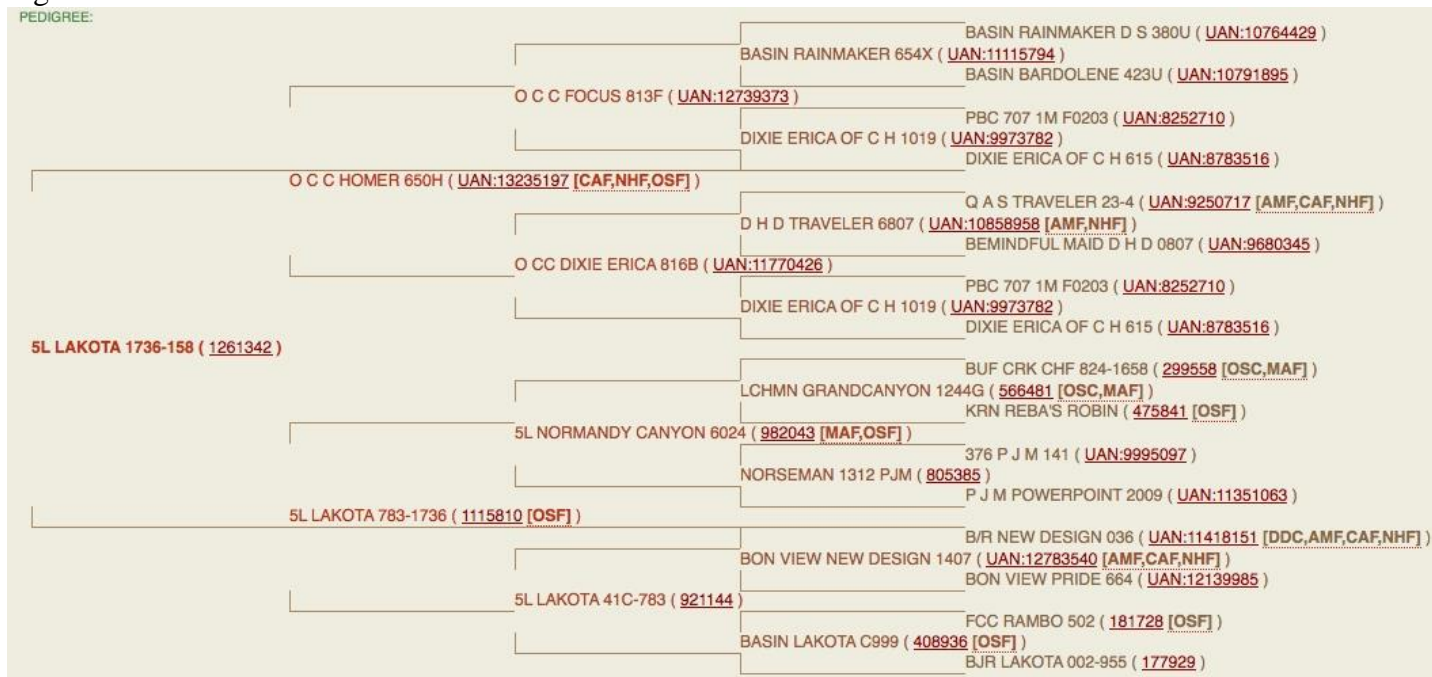


Figure 2. 5L Lakota 1736-158

Table. Mean LCRC Cowherd Expected Progeny Difference with Current Breed Rankings

Object	CE D	B W	W W	Y W	Mil k	MA T	M E	HP G	CE M	Stay	M A	Y G	C W	B F	RE A
2011	4	0	30	57	17	32	4	4	10	9	.05	- .0 3	34	0	.03
2014	4.4	-. .94	42	63	17	38	-. 6	9	7	11.2 5	.47	-. .0 7	6.4	0	.18
Rank (%)	50	58	80	82	55	75	7	60	25	30	35	25	80	45	40