

Simplot Livestock Co. Research Project



“With this project we are using young and unproven Hereford sires,” Raymond explains. “We are excited about the project because it is allowing us to sample sires that may or may not have a lot of numbers behind them. We are able to utilize them in a controlled setting to see how they do in our environment and follow them through the entire production system.”

During the first year of the project, eight Hereford sires were bred to nearly 500 virgin heifers. The first set of calves was born during the spring

Calving ease and neonatal vigor are two significant traits in the cattle industry. A live calf that is born unassisted and gets up and nurses right away is important in any calving environment but is critical in a heifer program.

Simplot Livestock Co. retains, develops and breeds more than 4,500 heifers each year.

Dr. Randall Raymond, Simplot Livestock Co. director of research and veterinary services, says, “Of critical importance to our heifer program is calving ease and neonatal vigor.”

With this in mind, in 2011 the American Hereford Association (AHA) and Simplot partnered on a research project to document the benefits of using calving ease Hereford sires in a large-scale predominately Angus heifer program.

of 2012. Simplot collected birth weights (BW), calving ease (CE) scores and calf vigor scores. The calf vigor score represents how long it takes a calf to get up and start nursing or if it needed assistance (see Table 1).

According to Raymond the actual average birth weight of the Hereford-sired calves was 78.5 lb. and the average birth weight of the Angus-sired calves was 75. He says the average CE and calf vigor scores were virtually the same. Table 2 shows results from the first calf crop born at Simplot.

“We have had no increased incidence of dystocia with the sires we have chosen and calf vigor has been acceptable,” Raymond says. “We are anxious to evaluate weaning weights, feedlot performance and carcass quality on the crossbred calves.”

Table 1: Calf vigor score

1	Up and suckling within 30 minutes, vigorous.
2	Up within 1-2 hours, suckling without assistance.
3	Suckling with assistance.
4	No suckle reflex. Drench needed.
5	Unwilling to rise. Dead shortly after birth.

Table 2: Simplot 2012-born calves

Sire name	Reg. No.	Avg. BW	CE	Vigor
Bar JZ Traditions Legend 463S	42693193	77	1.06	1.00
UPS Domino 3027	42426386	80	1.00	1.00
Huth P093 Progressive U001	42914977	79	1.32	1.18
KCF Bennett 9126J S100	42681148	81	1.08	1.00
TH 49U 719T Sheyenne 3X	43101191	76	1.08	1.04
TH 122 71I Victor 719T	42800895	74	1.07	1.15
/S 3027 Domino 8502U	42907988	80	1.11	1.00
Huth R002 Puckerator W002	43022870	81	1.27	1.12
		79	1.12	1.06
Angus sire				
Tender Ten, ABS bull		75	1.08	1.05

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In addition to data at birth, Simplot will collect weights at weaning, yearling and will measure feed intake on the steers and collect slaughter data. The females will be kept as replacements to look at long-term heterosis effects in the cow herd.

“Our long-term goal is to populate our cow herd with moderate-framed, efficient, crossbred cows that match our tough desert environment and have reproductive efficiency and longevity,” Raymond explains. “A combination of Angus and Hereford genetics provide heterosis that is relatively easy to manage and a large enough genetic database to allow us to select for economically important traits. This project has allowed us to critically evaluate proven and non-proven Hereford sires for their fit in our long-term program.”

Watch for more results, including future calf crops and weaning and yearling data, in future *Hereford World* issues an online at Hereford.org.

Project specifics:

- In 2011 eight Hereford sires were bred to nearly 500 virgin heifers.
- Average birth weight (BW) expected progeny difference (EPD) of the Hereford bulls used was -1.1 and the average calving ease (CE) EPD was +8.
- One Angus sire was used in the project for comparison. This Angus sire has a BW EPD of -3.8 and a CE EPD of +15. Using the U.S. Meat Animal Research Center (USMARC) across-breed adjustments it would have a Hereford equivalent BW EPD of -6.5.
- The actual average birth weight of the Hereford-sired calves in the first calf crop was 78.5 lb. and the average birth weight of the Angus-sired calves was 75 lb.
- CE and calf vigor scores were virtually the same.

About Simplot:

With ranches in four Western states, Simplot Livestock Co. has two large commercial feedlots and 14 commercial cow-calf operations. The company manages about 28,000 mother cows and its feedlots have a one-time capacity of 200,000. For eight years the Simplot management team has been breeding its heifers based on phenotype. The program is set up to breed all black and red solid-colored heifers to Hereford bulls and all whitefaced or brockle-faced heifers to Angus bulls. All heifers are bred utilizing artificial insemination (AI).

With the Simplot cow herd, Dr. Randall Raymond, Simplot Livestock Co. director of research and veterinary services, says, the breeding program is based on a three-prong approach focusing on reproductive efficiency, high growth and carcass quality. “Our goal is to moderate cow herd size and maximize heterosis for reproductive efficiency and longevity. We are trying to make cattle that fit our environment.” Hereford and Angus bulls are used to build a maternal herd at Simplot. Charolais bulls are utilized as a terminal cross.

With a bull battery of nearly 1,400 head, Simplot looks for bulls with good feet and legs. They also want bulls that will sire females with good udders, have moderate milk and are moderate framed. “We look for moderate Hereford bulls that will do well in our desert environment,” Raymond says. Hereford herd bulls run in common with Angus and Charolais sires.

For more about the Simplot program, see the January 2011 *Hereford World* cover story or visit Simplot.com.

About AHA:

The American Hereford Association, with headquarters in Kansas City, Mo., is one of the largest U.S. beef breed associations. The not-for-profit organization along with its subsidiaries — Certified Hereford Beef (CHB) LLC, Hereford Publications Inc. (HPI) and American Beef Records Association (ABRA) — provides programs and services for its members and their customers, while promoting the Hereford breed and supporting education, youth and research. For more information about the Association, visit Hereford.org.

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