



PHOTO BY AMY COWAN

# Believing in Heterosis

*John and Mark Lacey are presented the AHA Hereford Industry Innovator Award for their years of service to the beef industry and their cooperation in the Harris Ranch heterosis project.*

by Angie Stump Denton

**T**hird and fourth generation cattlemen, John and Mark Lacey, are true leaders in the beef industry. The father-son team, based in Independence, Calif., raise cattle and horses.

"John and Mark Lacey have been faithful servants to the U.S. beef industry for decades," says Craig Huffhines, American Hereford Association (AHA) executive vice president. "John has held the top level leadership role of our industry as president of the former National Cattlemen's Association back in the 1990s."

Since 2005 Lacey Livestock has been cooperating with AHA, Harris Feeding Co. and Harris

Ranch Beef Co. in a research project studying the value of heterosis. The objective of the project is to conduct a controlled crossbreeding system comparing progeny sired by Hereford and Angus bulls under commercial conditions, emphasizing economic differences at the ranch, feedlot and packing plant.

"When we asked John and Mark if they would be willing to work with us on the Harris Ranch study, they both jumped at the opportunity," Huffhines says. "They have always been loyal to the industry first. They have strived to protect our ranching rights, and they have never turned down an

opportunity to evaluate those things that can make commercial cattlemen more profitable."

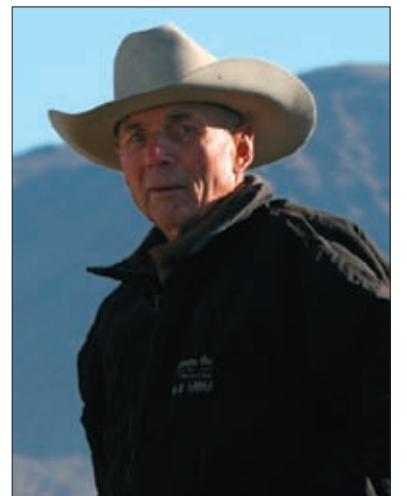
The AHA recognized the Lacey family in Denver by presenting them with the AHA Hereford Industry Innovator Award for their years of service to the beef industry and their commitment and cooperation with the Harris Ranch heterosis project.

## Ranching tradition

The Lacey family has been ranching in California since 1870. After settling in the Owens Valley, Mark B. Lacey and his son expanded the operation to include 15,000 acres of city of Los Angeles lease land that increased their carrying capacity to 1,000 head. The ranch began with Hereford and Shorthorn cattle. In 1960 Angus cattle were introduced to replace the Shorthorns.

Mark B. Lacey passed away in 1964, leaving John and his wife, Dee, along with their children, Mark and Nicki, to continue to manage Lacey Livestock. John and son Mark still ranch most of the original Lacey outfit. They have divested themselves of all federal lands and have added 40,000 acres more to the Owens Valley Ranches. Altogether, Lacey Livestock is 60,000 acres with approximately 2,000 cows.

Today the Lacey family ranch is a cow-calf and stocker operation. They also raise Quarter Horses, and in 2003 Lacey Livestock earned the title of American Quarter Horse Association Remuda of the Year.



John Lacey says he is happy with the research project results. "We reaffirmed the value of heterosis and saw an improvement in weaning weight, health and feed conversion," he says. "We believe the project was done in a real-world commercial setting and others should experience the same results."

The Lacey family owned several ranches in San Luis Obispo County that they sold in 2000 to purchase the historic Dressler Ranch in Bridgeport, Calif. This ranch has 7,000 acres and annually is home to 8,000 steers. Lacey Livestock purchased this ranch with David Wood under the Centennial Livestock partnership. The partners completed an easement with the American Land Conservancy and the California Rangeland Trust. This ranch will be preserved for perpetuity. Centennial Livestock also leases 230,000 acres of the historic Tejon Ranch, south of Bakersfield, which is home to about 7,000 head.

## Heterosis study

Huffhines says the Harris research project is becoming a landmark study defining what genetics can do for the industry



PHOTO BY AMY COWAN

Prior to the early 1990s, the Laceys had a 3-way breeding program based on Angus, Hereford and Continental breeds. Then, in 1997, they started using solely Angus bulls in their program.



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— Mark Lacey



PHOTO BY KELLI TOLEDO

when used properly in a real-world commercial setting.

Mark says, prior to participating in the project, his family had been part of the Harris Partnership for Quality (PQ) program since 1997. To participate in the PQ program, producers have to follow Harris' guidelines, which include specific genetic criteria and prescribed best management and animal health practices.

Mark says producers don't know the value of heterosis in a cow herd until they lose it. Then they are really caught because it takes too long to re-establish especially when you keep and develop your own replacement females.

“Heterosis is invaluable,” he says. “From my observations at the ranch, as we lost heterosis, we were seeing more health issues and the weaning weights just held their own.

“It was our opinion that we couldn't continue to just breed to Angus indefinitely and continue to lose heterosis in our herd. Harris agreed to allow the trials of other breeds to see if they could meet the company's carcass requirements. The Hereford Association stepped up and was willing to participate. My dad has always been a Hereford fan, so it was a perfect fit for us.”

To start the project, 400 mature Angus-based cows were sorted and identified with electronic ear tags in the Lacey Livestock program. Cows were randomly mated to 10 Hereford or 10 Angus bulls, selected based on rigorous genetic parameters (expected progeny differences [EPDs]) for overall merit. The project is being conducted for a three-year period, the typical lifespan of a bull under Western range conditions. To have more numbers for the project in year two and three, Lacey Livestock increased the number of cows to 600 and the number of Hereford bulls to 16.

Year one results showed a \$78 advantage for Hereford-sired calves compared to Angus-sired calves in a real-world commercial setting. The second calf crop has been harvested and the third crop is at the feedlot in Coalinga, Calif.

“I was pleasantly surprised by the Hereford cattle's feedlot performance,” Mark says. “They were very efficient and lived up to their billing. As far as grade, I expected them to be lower, but the first calf crop was a little lower than expected.”

Data on the second group of calves are still being reviewed, but early results show that the

Hereford-sired calves narrowed the quality-grade gap in 2008.

“It is evident they are efficient,” Mark says about the Hereford-sired calves. “They do it in the feedlot, and in general I think the Hereford-sired females are showing the same efficiency on the range.”

The study is also tracking the productivity of the females. Females from the first calf crop have weaned their first set of calves and are at the feedlot. The effect of maternal heterosis will be determined by tracking productivity of the replacement heifers that were retained and identified to a sire. The objective is to attempt to determine lifetime productivity and profitability differences between sire groups.

“The baldie females are the biggest pay off for us participating in the project,” Mark says. “It is allowing us to get some heterosis back in our cow herd.”

Mark says he and his father are anxious to see the improvements in fertility, longevity and health. “In the cattle business, fertility and longevity is what make us money,” Mark says.

The female data showed that the baldie females had a 7% advantage in pregnancy rate in 2008. As more data are compiled and reviewed, the Laceys expect to see even more value with the Hereford-sired females and their calves. Mark says the heterosis is giving them increased calf survivability and a better weaning percentage.

“By and large the project has gone as expected,” Mark says. “We're not breaking new ground. What we were hoping is that Harris would find the beef to be a product that would fit the PQ program. Harris has been impressed with the dollar advantage, but trying to figure out how to market the beef is the issue.”

#### The future

As the project comes to an end, Mark says the Laceys will continue to use the Hereford bulls that remain in their bull battery. This year he also artificially inseminated his black replacement heifers, nearly 250, to two calving-ease Hereford bulls.

“We want to continue to produce more baldie females,” Mark says. “As range cows go, I think the Hereford female is a superior range cow and makes a great mother.” **HW**



Year one results of the heterosis project showed a \$78 advantage for Hereford-sired calves compared to Angus-sired calves. The second calf crop has been harvested and the third crop is at the feedlot in Coalinga, Calif.



In early December the Lacey calves were shipped from the backgrounding lot in Smith Valley, Nev., to the feedlot in Coalinga, Calif. Mark Lacey says their 2008 calf crop had one of their highest weaning weight averages in recent years. He attributes the increased pounds to crossbreeding as well as improved feed sources.