



Universities across the U.S. utilize Hereford cattle to educate and to inspire upcoming generations of beef industry leaders.

by *Brooke Roberts and Rachel Dotson*

When children are taught to ride a bike, the first thing they are taught is to take hold of the handlebars and to start pedaling. After falling down a few times, the child eventually perfects the skill. It might be difficult at first, but it is impossible to learn to ride a bike without getting out of the house, hopping on the seat and giving it a try.

Now consider college students pursuing agricultural degrees in the same context. Oftentimes, these students attend universities in large cities, learning the ins and outs of the industry from black-and-white textbooks and computer screens. Rarely do they set foot on a plowed field or walk pens in a feedlot. Confining students within a classroom might seem a bit counterproductive considering the industry itself, which primarily exists and operates outside urban environments. Fortunately, several universities across the country provide students with a bit of red-and-white education outside the walls of a classroom.

University Hereford herds and beef facilities allow for real-world, hands-on learning opportunities, providing students with skills and knowledge only acquired from experience, and set the stage for successful careers in the beef industry.

From South Carolina to California, universities across the country find value in maintaining herds of Hereford cattle within their respective operations. Commonly, these university-owned farms or ranches employ students as interns or part-time employees, welcome classes with hands-on learning experiences

and incorporate current students in the management, promotion and execution of annual production sales. Some even exhibit university-bred cattle at local, state and national levels of competition.

Shane Werk, manager of Kansas State University's (K-State) Purebred Beef Unit, applauds the universal benefits of student interactions with collegiate cattle herds. "It's a great learning opportunity, ranging from those who have not had a lot of experience to those with extensive experience," Werk says. "There's always something they can see and learn."

While popular areas of study, school mascots, department sizes and Hereford herds themselves may vary among schools, university beef-herd managers unanimously agree having cattle on or near campus is a valuable addition to a collegiate degree in agriculture.

KANSAS STATE
UNIVERSITY

A century of Herefords

More than 100 years of Hereford breeding and a continued dedication to the animal science department have steered the K-State purebred beef unit to its current position. In 1888, the university purchased and established its first Hereford herd of primarily horned cattle and has since evolved to incorporate more polled genetics.

"The herd has historically been focused on balanced-trait cattle that can go out and work in the commercial sector," Werk notes. "Just practical, well-balanced cattle that are good phenotypically, genetically and on paper." Beyond that, the herd excels in other aspects, such as added balance and look, all while keeping expected progeny differences (EPDs) in mind.

Herefords work well in K-State's range-based operation. "They're useful, hardy cattle that do well in that ranch-based, grass-based scenario," he explains. "They're efficient in terms of maintaining their body condition and their fertility is good. A lot of the historically strong traits for Herefords make them useful." Since K-State's largest herd is Angus, having Hereford cattle provides a useful heterosis opportunity for customers.



Cattlemen have the opportunity to get their hands on K-State genetics through an annual student-run production sale where Hereford cattle, along with Angus and Simmental seedstock, are offered for sale. “Going through the sale and the process of putting on the sale is obviously a big teaching and learning experience for students,” Werk says. Students can find employment with the beef unit and can enroll in classes that include hands-on learning with the herd.

K-State is also the proud home of the Beef Intake Facility, which offers students a rare, realistic experience of working in the industry. By running cattle in a real-world setting, the purebred beef unit teaches the process of managing a purebred operation. “They get exposure to everything that raising purebred cattle entails, which is, of course, a lot of record-keeping and management,” Werk explains.

As a past National Junior Hereford Association president, Werk recognizes the value of networking. “A big thing about working in this industry, and probably the biggest benefit of going to school, is being able to network with people that will be future contacts,” he says.

Attending college can take a young cattleman’s working opportunities to another level. “Obviously what you learn is really important, but you have an opportunity to build relationships with people that you’re going to deal with throughout your whole life,” Werk advises. “That can be really, really valuable as well.”

Missouri State
UNIVERSITY

More than a number

With the largest Hereford outfit in Missouri, Missouri State University (Missouri State) maintains approximately 400 head of registered cows. Motivated by a genuine love for Hereford cattle, Leo Journagan and family gifted a 3,800-acre ranch to Missouri State in 2010. “Leo thought it was really important that young people have a place to experience agriculture,” says Marty Lueck, manager of Journagan Ranch.

Hired in 1981, Lueck has witnessed firsthand a change in demand for Hereford cattle. “When I first got here, Hereford bulls were hard to sell. Angus was king,” he explains. “But that’s switched around now and we’re getting a bigger market share for our bulls.”

Now, the ranch finds itself selling increasing numbers of Hereford bulls into black-hided herds. “It’s like they’ve rediscovered crossbreeding,” Lueck laughs.

Ultimately, the herd strives to produce cattle to survive in the region’s climate and environment. “We just want a good cow that will work well here, raise a calf and breed back,” he explains. “Fertility and production are very important to us.”

Lueck also believes the Hereford disposition proves valuable in an aging population of farmers and ranchers. “Yes, we have a younger generation coming



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— Marty Lueck

up, but when we get out into the real ranching world, we still have an older, aging culture,” he notes.

The benefits Herefords bring to the table also make the breed an economical choice. “The cost of our materials goes up while our commodity as beef goes down,” Lueck explains. “We have something that I call the denominator and that’s Hereford cattle. They have a better chance of making you profitable.”

The herd has found success in producing multiple American Hereford Association Dams of Distinction each year and is geared toward cattle that can work and function in the real world. But cattle are not the sole focus of Journagan Ranch — Missouri State students are presented with a multitude of opportunities to become involved with a large-scale, high-caliber operation.

Students can apply for summer or semester internships, enroll in beef production classes and even take a show and sale class to exhibit cattle at various shows, including the Missouri State Fair, the American Royal and the National Western Stock Show (NWSS). The class goes well beyond working show cattle and teaches students to market cattle and to interact with potential customers. “The actual marketing — greeting and meeting people — is still something that is very important,” Lueck notes.

University herds prove especially beneficial to agricultural students who do not come from farming backgrounds. Lueck points out calving time as a particularly eye-opening event for students. “To watch that experience in their eyes and facial expressions as they’re seeing life brought into the world, it’s just awesome.”

He encourages students to make the most of their college experiences. “You have to take initiative to walk through those doors when they’re presented to you and not be afraid,” he advises. “You can always read about it, but experience is going to teach you a lot more.”

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Where the rubber hits the road

On the West Coast, a small herd of 25 registered Hereford cows is one of four herds to call the University of California-Davis (UC Davis) home. The herd's original genetics came from California, and the university herd now serves both teaching and research purposes. With more than 1,400 undergraduate animal science students, 130 graduate students and a veterinary school, multiple classes make use of the herds. As a land-grant university, UC Davis incorporates the herd heavily in research projects.

"It all ties into the research aspect," says Don Harper, animal resource manager at UC Davis. "We have known genetic lines, so when we conduct research we actually treat our commercial herd as we would a registered herd." By collecting daily calving records and birthweights and identifying the cows, additional insight can be gathered from research projects involving the commercial herd.

Instead of focusing on show string "curb appeal," Harper looks for cattle with predictable EPDs and a strong phenotype. "For California, a really nice, moderate frame score and good disposition are all the things the breed is known for," he says. Due to varied weather conditions throughout the year, feed abundance can be highly inconsistent. As a result, cattle must be moderate in order to survive and to breed back during times of minimal feed availability.

Harper notes the herd is developing more interface with the private sector. "What we want to have is a really good Hereford base that represents the kind of bulls that would be used in California," he explains. "We want to conduct research that is relevant, so we want to use the Northern California type of cattle in our breeding programs."

With cow-calf herds, a feedlot and a meat lab, the university is unique in its birth-to-harvest capabilities. UC Davis students have an extensive engagement process available for them to become involved. Highly competitive student residency positions permit four students to live at barns on campus during the academic year. Students can also intern or volunteer with the herd and can enroll in beef management curriculum directly involving the cattle.

The teaching herd helps the university produce more effective future leaders by providing them with relevant industry experiences. "A lot of times with college kids, they're so focused on school and studying that they don't get the experience to go out and apply that," Harper observes. "It really is about putting the education to work. It's the rubber hitting the road."



cross cow," says Brandi Karisch, Mississippi State University (Mississippi State) Extension beef cattle specialist and Milton Sundbeck Endowed professor. Demand for the black baldy (Angus x Hereford cross) cow is not far behind, as more producers seek to incorporate a white face and outcross genetics. "That baldy cow, even if she doesn't have Brahman influence, is still one of the most highly sought-after commercial cows in our environment," Karisch notes.

Mississippi State's Hereford program produces seedstock geared toward both crossbred and registered programs. "Across the board, we need cattle that adapt to the environment," Karisch says. "Cattle need to be moderate and able to survive in the weather conditions here in the Southeast."

Other than three full-time employees, the university's labor force is comprised of student workers and interns. The farm is located on campus and thanks to a new southern entrance road, is the first part of campus many visitors see. It is used extensively for teaching and research. In addition, the beef department markets cattle through the Mississippi Beef Cattle Improvement Association's sale each year.

Having grown up actively involved in junior livestock associations herself, Karisch encourages young people to reach out to mentors and contacts made during their years with a junior association. "Those mentors are going to be the people you can call on," she explains. "They're going to give you their best advice about what your next step might be — whether that's going to a university or getting out in the field and applying what you learn."

The College of Agriculture and Life Sciences is the fastest growing college at Mississippi State, and like many others across the country, many of its students have minimal livestock experience. "We've got a lot of kids who might not have grown up on a farm or had an agricultural background but kind of fall in love with it here," Karisch says. "They get so many opportunities for hands-on activities to get out there and apply what they've learned in a textbook."



The queen of cow country

In the Southeast, the most sought-after commercial females all share one common characteristic — Hereford genetics. "Here in the Southeast, the queen of cow country is the F1 [first generation] tigerstripe Hereford and Brahman



Small herd, big impact

Each year, approximately 18,000 people visit the recently renamed E. Carroll Joyner Beef Education Unit. Between demonstrations, undergraduate classes, vet school laboratories, judging contests, camps and more, the modest herd radiates a widespread influence on the university's students and the region's producers.

The herd is used entirely for teaching and demonstration purposes. Students, either employees or volunteers, are responsible for all of the laborious

tasks. Students work with the herd in practical beef education courses, where they learn about topics such as management, reproductive physiology and nutrition. They are also given opportunities to show university-bred cattle at the North Carolina State Fair, where the university exhibited the 2017 grand champion bull.

In North Carolina, small producers value the hardiness and disposition of Herefords. “The Hereford cow herd continues to impress me in their ability to perform even with the heat and variation in forages during the North Carolina summers”, says Matt Morrison, manager of the E. Carroll Joyner Beef Education Unit at NC State.

A select number of the university’s cattle are sold through a small sale in April as part of a marketing class. Students conduct the entire sale process from start to finish. Calving the Hereford and Angus herds in the spring and the fall, respectively, allows students in both spring and fall semester courses the opportunity to work young calves.

The magnitude of student involvement with the NC State E. Carroll Joyner Beef Education Unit is certainly impressive but also increasingly necessary, Morrison adds. “As agriculture students continue to have less and less of a cattle background the unit provides them with actual real world hands on experience. It gives the students a chance to truly be immersed in the workings of a cattle operation,” Morrison says. “We live in a time that very few people understand animal agriculture, the E. Carroll Joyner Beef Education Unit serves as a gateway, allowing not only students, but also the public and consumers to have a positive animal agriculture experience.”



A maternal history

Colorado State University (CSU) boasts a Hereford heritage more than 100 years in the making. The Hereford herd began in 1903 and has evolved considerably over the years. Dr. Robert Taylor founded the “Advertising and Merchandising of Breeding Cattle” program at CSU, and this inaugural group of students hosted the first CSU annual bull sale in 1977. Herd genetics have evolved over time and currently, CSU continues to be a source of altitude-tested genetics for commercial cattlemen.

The primary role of the CSU cow herd is to provide hands-on, experiential learning opportunities for students. This opportunity can provide students with the chance to collect performance data, practice animal handling skills, evaluate beef cattle, study reproduction and nutrition related management strategies, prepare animals for exhibition and sale and gain marketing experience.

“Each year, the Seedstock Merchandising Team will exhibit cattle raised at CSU in The Yards during the National Western Stock Show in Denver,”

“Any time a student spends on a university teach farm could lead to a future career, an internship or an industry networking opportunity.”

— Samantha Cunningham

says Samantha Cunningham, Ph.D., CSU assistant professor. “This same group of students is involved in preparing and marketing cattle through an annual production sale.”

The CSU Seedstock Merchandising Team is responsible for leading discussions and activities involving the sale animal selection, sale data management, catalog layout, pictures and videos, as well as sale facility setup. The cattle managed on the farm are also utilized in research and outreach. Cunningham says the cattle perform well in the Colorado environment because of their ability to adapt to many different production environments; including drier, more arid climates and higher elevations.

Cunningham adds there are several ways students can become involved. CSU provides students with the chance to join judging teams, student organizations, volunteer programs and teaching opportunities. There is a growing need for students to gain practical hands-on experience, according to Cunningham. These experiences not only bring an understanding of science, but they also provide confidence and perspective to students from any background.

“Any time a student spends on a university teaching farm could lead to a future career, an internship or an industry network opportunity,” Cunningham says. “These university beef herds are also an important part of the Land Grant Mission, and they allow us to not only reach students but to reach stakeholders and communities.”

The red-and-white education

The benefits of Hereford cattle make the breed valuable to producers across the country and prove just as valuable for students pursuing agricultural degrees at universities across the nation. Beef units are beneficial, and increasingly necessary, to incorporate into agricultural curriculum to prepare students for careers in the industry. As students pursuing agricultural degrees become increasingly removed from the farm, providing opportunities for hands-on learning is simply the best way to provide knowledge that once only growing up on a farm can provide.

Like learning to ride a bike, there are some things that can only be learned outside through hands-on experience. Learning how to manage beef cattle in real-world environments is no different. University Hereford herds are evidence that a little red-and-white influence can provide a vital component to a collegiate degree in agriculture — firsthand experience. **HW**