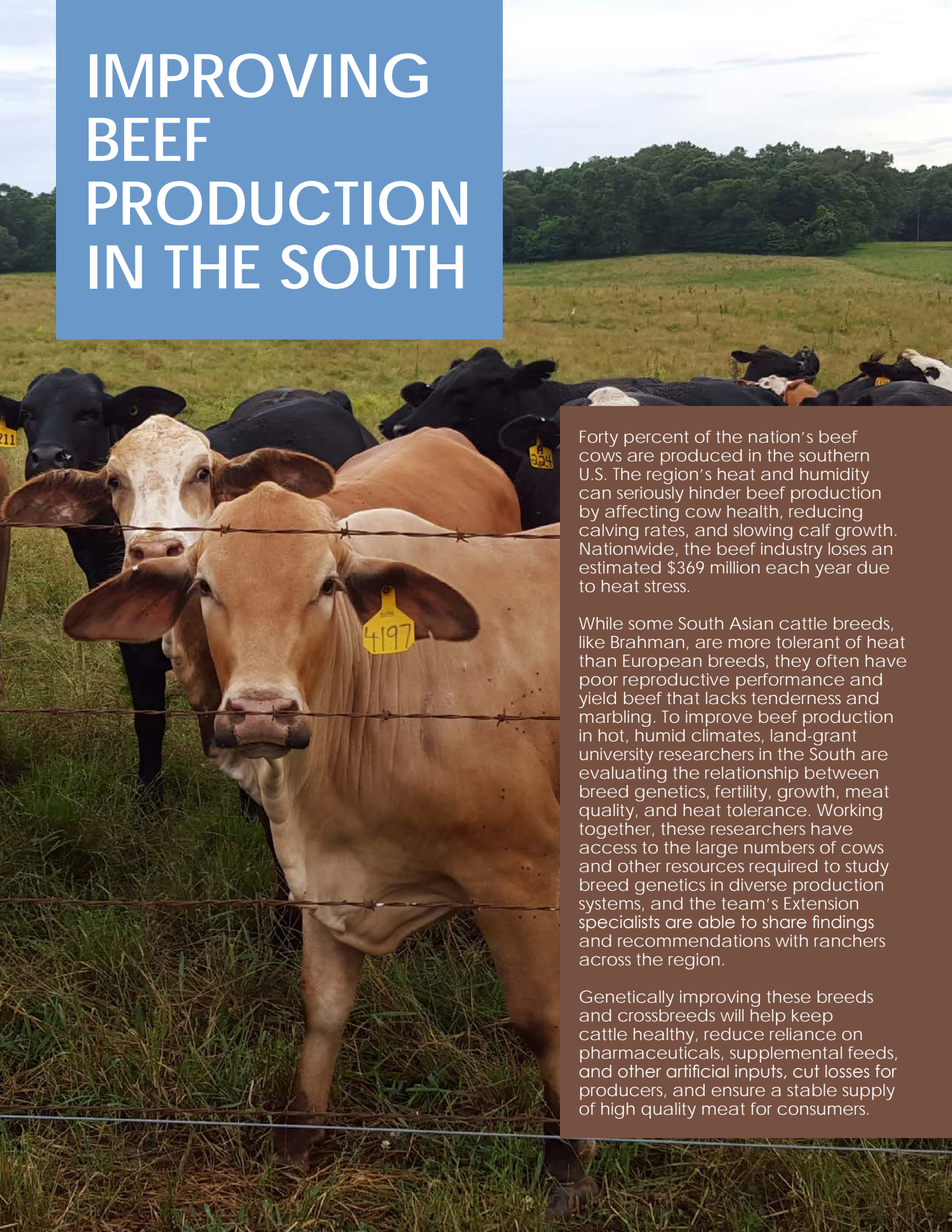


IMPROVING BEEF PRODUCTION IN THE SOUTH



Forty percent of the nation's beef cows are produced in the southern U.S. The region's heat and humidity can seriously hinder beef production by affecting cow health, reducing calving rates, and slowing calf growth. Nationwide, the beef industry loses an estimated \$369 million each year due to heat stress.

While some South Asian cattle breeds, like Brahman, are more tolerant of heat than European breeds, they often have poor reproductive performance and yield beef that lacks tenderness and marbling. To improve beef production in hot, humid climates, land-grant university researchers in the South are evaluating the relationship between breed genetics, fertility, growth, meat quality, and heat tolerance. Working together, these researchers have access to the large numbers of cows and other resources required to study breed genetics in diverse production systems, and the team's Extension specialists are able to share findings and recommendations with ranchers across the region.

Genetically improving these breeds and crossbreeds will help keep cattle healthy, reduce reliance on pharmaceuticals, supplemental feeds, and other artificial inputs, cut losses for producers, and ensure a stable supply of high quality meat for consumers.



Researchers improved the accuracy of fertility predictions for crossbred cows by 27%. Better predictions help breeders and ranchers make smarter selection decisions.

Scientists collected data on Brahman cattle herds in Florida and established a DNA bank that will enable faster, more selective genetic improvement of Brahman cattle.

Research showed that cattle with higher percentages of Angus genes have lower heat tolerance. This information will help guide efforts to improve these breeds.

University of the Virgin Islands and University of Florida scientists showed that male Senepol calves grow more each day and weigh more at weaning than females. With this knowledge, ranchers can forecast calf growth and manage their herds efficiently.

University of Arkansas, Mississippi State University, and Texas A&M University studies indicated that coat retention is associated with lower milk production and less maternal instinct. Studies also showed early-shedding cows gave birth to heavier calves and had higher pregnancy rates compared to late-shedding cows. Using this information to select cattle for breeding could increase beef production in tropical areas by 10%.

Researchers at the University of the Virgin Islands and Oklahoma State University are breeding cattle with resilience to insect bites, which can raise a cow's internal temperature and cause heat-related stress. Data from other studies showed that Senepol cow tick load has no effect on calf tick load or growth in tropical conditions, demonstrating that ranchers don't need to select for tick resilience.

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