



# Beat The Heat & FESCUE with Brahmans

By Ashley Charanza

Cool-season fescue grass, a main grazing forage in the southeastern United States, was introduced more than 100 years ago because of its hardiness. The grass was popular for its ability to be productive under stressful conditions like grazing pressures, parasites and droughts. However, soon after the grass was introduced, some problems were noticed with cattle.

The root of the problem is chemical compounds, produced by a fungus in the plant, that disrupts breathing, heat dissipation and temperature control, and is sometimes fatal. In cows, the fescue fungus decreases milk production.

The fungus and fescue share a symbiotic relationship; both the plant and the fungus benefit from each other. Fescue provides an environment for the fungus to grow, and the fungus protects fescue, which results in strong and healthy plants.

## RESEARCH ON FESCUE TOXINS

The summer months are hard for most cattle, and grazing fescue during these months causes an increase in heat sensitivity. These hard months are known as the “summer slump.”

All breeds are

affected by fescue toxins, but heat-tolerant breeds like Brahmans do not show as many signs of elevated heat stress as other breeds. Brahmans are not immune to the toxins; rather they can handle the heat stress caused by the toxins better than other breeds.

In a study of Brahman and Hereford steers injected with compounds of the same classification of chemicals produced by the fescue fungus, Richard Browning Jr., associate professor of animal science at Tennessee State University (TSU), found that Brahmans showed fewer signs of heat stress than other breeds.

“Perhaps heat-tolerant genetics, such as Brahman genetics,” he says, “might be able to provide some relief.”

Herefords, Browning reports, showed signs of exaggerated heat stress like heavy breathing, standing in ponds and lying in mud puddles and water troughs to cool off. When cattle cannot properly dissipate heat, it stays in the core of the animal, which could lead to death.

## PREVENTING FESCUE TOXICITY

Fescue toxicity cannot be cured or treated. Therefore, farmers and ranchers



must prevent it by using basic management practices.

Browning says one of the first solutions to prevent fescue toxicity involves eliminating the fungus. However, productivity of the new entophyte-free fescue, decreases and the grass becomes weak.

Another way to handle the toxicity, according to Browning, is to rotate animals between fescue and forages like bermuda grass and clover. Alternative summer and cool season forages help lower the amount of chemical compound consumed by animals.

Within the last decade, a new type of fescue with a modified fungus has been introduced, which produces a different chemical compound, one that benefits cattle. This fescue is expensive to plant due to the costs incurred from developing the new cultivar, Browning believes.

“It has some application, but right now it is fairly limited,” Browning says. “It is questionable whether the added cost is more than made up for with extra performance in animals.”

Browning says many producers remember the effects of the fungus-free fescue and are hesitant to adopt it. Because of the needs expressed by producers, Browning says, TSU looked into the possibility of using a breed with heat-tolerant genetics.

“[It would] give the producers the opportunity to keep the old fescue and still have their cattle being productive,” says Browning.

Most forages lack nutrients that can be supplemented by minerals. Mineral supplements promote strong immune systems and proper forage digestion, which balance the diet so “efficient animal production can be possible,” says Dan Puckett, product and pricing manager for Nutrition Plus. Fescue Plus CTC 1.4, a mineral with a mix of copper, zinc, selenium and other nutrients, could also be used in addition to grazing management to prevent fescue toxicity, Puckett says.

*Photos complimentary of Myra Neal Morrison of Morrison Farm & Richard Browning Jr. of Tennessee State University.*



## BRAHMAN BREEDERS IN FESCUE REGIONS

Myra Neal Morrison, North Carolina cattle breeder and owner of Morrison Farm, says her cattle graze fescue, eat fescue hay and are supplemented with minerals year round which prevents her cattle from having elevated heat stress.

“I think the biggest problem [with fescue toxicity],” she says, “is not giving cattle other feeds and not feeding enough high-magnesium mineral.”

Dobbins Brahmans in Rutherfordton, North Carolina, uses mineral supplements throughout the year in its Brahman operation. Owner James Dobbins said he doesn't see problems with his cattle being sensitive to high temperatures because of fescue. The only problem, he says, is the loss of a few tail switches.

Cattle consuming fescue toxins usually lose outer extremities like tail switches and hooves during harsh winters, known as “fescue foot,” a symptom caused by decreased blood circulation.

Terry McPherson, owner of Tiara Farms in Graham, North Carolina, has had a few cattle lose tail switches, but doesn't have major problems associated with fescue toxicity and Brahmans, but had problems with Simmentals.

McPherson said the Simmentals couldn't handle the heat, and the farm stopped breeding them and now raises Brahman and Angus cattle.

## POTENTIAL FOR BRAHMANS

Although most Brahmans are found in the southern and coastal regions of the United States, Browning believes an increase in Brahman and heat-tolerant breeds in the southeastern area has the potential to overcome the toxic problems with fescue.

“It's something that producers will probably have to experience themselves,” Browning says. “For me, it seems to be a fairly easy step to introduce heat-tolerant genetics into some of the fescue producing areas.”

Because the chemical compounds in fescue affect milk production, Browning believes that more research on fescue toxicity should be done on the cow-calf side of production, particularly on weaning weights of Brahmans and Brahman-influence calves.

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