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# Popular grazing grass poisons cattle

**Brad Haire**  
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Cattlemen like tall fescue grass because it has many of the qualities they like for cattle feed. There's just one problem: it can also poison cattle. But there are alternatives.

Tall fescue grass is tough, grows well and tolerates a wide-range of environmental conditions, says John Andrae, a crop and soil scientist with the University of Georgia College of Agricultural and Environmental Sciences.

A fungus called endophyte lives inside tall fescue. This fungus produces compounds that make tall fescue drought tolerant and able to handle heavy grazing -- qualities prized by cattlemen.

But this fungus also produces compounds toxic to grazing animals like cattle.

The biology is complicated. The toxin meddles with hormones in the cattle. It lowers birth rates and milk production in beef cattle. And cattle that eat it don't gain weight as fast as cattle that don't.

The toxin also interferes with cattle's ability to cool off. It restricts blood vessels. In the heat of summer, cattle may need to find shady places and ponds to cool down, Andrae said. But cattle shouldn't need these cooling places in mild springs or even in mild summers.

"Many cattlemen have just grown used to seeing cattle standing in shade or ponds," he said. "But in many cases it's not extreme heat but

the toxin preventing the cattle's natural cooling abilities."

When cattle are trying to cool off, they're not grazing or gaining weight, the opposite of what a cattleman wants, he said.

In times of extreme cold, cattle can also lose hooves and tips of tails due to poor blood circulation from the toxin, he said.

"Many cattlemen don't really know how bad this problem is," Andrae said. "They believe that many of these things are normal."

The overall toxic quality and presence of the endophyte in the fescue can vary from pasture to pasture. Lower levels aren't as damaging. But high levels of the toxin in pastures can hurt a cattleman's bottom line.

Farmers have some viable options.

Tall fescues called novel endophyte-infected fescues that don't produce toxins that hurt cattle have been developed.

"And the novel endophyte-infected fescues retain the good qualities wanted in a good grazing grass," Andrae said.

One variety, marketed under the name Max Q, was developed by Joe Bouton, retired UGA CAES crop and soil scientist, and Gary Latch, a scientist with AgResearch in New Zealand.

It can be costly to replace the old tall fescue pastures with these new varieties, said Curt Lacy, livestock economist with the UGA Extension Service.

It cost about \$200 per acre to plant the newer, non-toxic varieties, Lacy

said.

Recent years of drought have made cattlemen wary of planting any non-irrigated pastures. It's hard to predict the weather and when and when not to plant. But with current strong cattle prices, Lacy said, cattlemen should think of planting the novel tall fescue varieties now.

"Cattlemen have to look at improving pastures as an investment, much like investing in a better bull or upgrading other parts of their operation," he said.

Lacy figures a novel endophyte-infected fescue would pay for itself in five years. The cattleman who switched to a non-toxic variety would, in 10 years, make about \$150 more per acre than a cattleman who remained with the old, toxic fescue.

Tall fescue grass is a cool climate grass. Introduced in the mid-1900s, it's estimated that about 30 million acres of tall fescue grows in the Southeastern United States.

Georgia has between 800,000 and 2 million acres of tall fescue, primarily in the northern parts of the state.

South Georgia cattlemen grow bahia and Bermuda grasses for their cattle. These grasses don't contain the endophyte fungus.

*(Brad Haire is a news editor with the University of Georgia College of Agricultural and Environmental Sciences.)*