

What type of grass is best for beef cattle?

October 24 2022, by Adityarup Chakravorty



Part of the study monitored the weight gain of heifers grazing a variety of grasses. Switchgrass pastures grazed during summer proved to be the warm-season forage with the greatest productivity and returns. Credit: Patrick Keyser

On average, Americans eat more than 50 pounds of beef each year

(according to USDA estimates). But what do beef cattle eat? In the eastern United States, beef cattle often eat tall fescue, a "cool-season" grass. As the name suggests, cool-season grass grows best in temperate conditions: temperatures between 65 and 75 degrees Fahrenheit and abundant rainfall. But it's not always cool and wet in the eastern U.S., and come the summer months, cool-season grasses tend to not do well.

On the other hand, there are also "warm-season" grasses, like big bluestem or bermudagrass. These grasses grow well in warmer, drier conditions during summer in the eastern U.S. "Cattle farmers can benefit from having strong summer [forage](#) production from warm-season grasses," says Patrick Keyser, a researcher at the University of Tennessee, Knoxville. "Such warm-season grasses can help them remain in business."

Keyser is the lead author of a new study that assessed the strengths and weaknesses of five warm-season forage grasses. The study was published in *Agronomy Journal*.

Keyser and colleagues measured the [nutritional value](#) of different warm-season grasses. Three of the warm-season grasses evaluated in the study—eastern gamagrass, switchgrass, and a mix of big bluestem and indiagrass—were [native grasses](#). "We chose these native grasses because less research has been conducted on them," says Keyser. The native options may be less familiar to many [beef producers](#) in the eastern and southeastern U.S., but ended up being the most economically efficient.



Switchgrass can become stemmy when not grazed or cut for hay. However, with appropriate grazing management, it proves to be an effective summer food source for beef cattle. Credit: J. Henning, University of Kentucky

And the study showed that the native forage options had an unexpected benefit. Tall fescue often harbors a kind of fungus. This fungus lives in cooperation with the grass but can produce chemicals that are toxic to [cattle](#). Warm-season grasses do not harbor this fungus. All five warm-season grasses would reduce the risks associated with [tall fescue](#) toxicity. But the three native options would allow producers to move cattle off tall fescue up to 29 days sooner in spring than bermudagrass.

The team also monitored the weight gain of heifers eating the variety of grasses. "All the forages differed in important ways," says Keyser. Which warm-season grass to use as forage depends on the end goals of different cattle producers. For example, for cattle producers aiming for cattle to gain weight quickly—important for grass finishing—a combination of big bluestem and indiangrass would be the best forage option. On the other hand, for producers looking for sustained weight gain over the [summer months](#), switchgrass was a better option. "Ultimately, we want to help cattle producers make informed choices on which forage options fit their operations best," says Keyser.

Using heifers for the study allowed the researchers to rigorously assess different warm-season grasses. "Young animals—like heifers—are very sensitive to forage nutrition because they are growing quickly at this stage of their lives," says Keyser. For heifers, achieving target growth rates is important to ensure they become a productive part of the herd as soon as possible. "To meet these target growth rates, forage nutrition is critical," says Keyser. "These animals make a great "measuring stick" for warm weather grasses as summer forage."

The study also included an annual warm-season grass: crabgrass. "Crabgrass is a highly preferred forage," says Keyser. "Including it allowed us to compare benefits of both perennial forages and an annual."

One of Keyser's next steps is researching how some of the warm-season grasses work in the context of annual grazing cycles. "Specifically, we are evaluating complementing a tall fescue, cool-season forage base with some of these warm-season native grasses."

More information: Pat Keyser et al, Evaluation of five C 4 forage grasses in the tall Fescue Belt, *Agronomy Journal* (2022). [DOI: 10.1002/agj2.21195](https://doi.org/10.1002/agj2.21195)

Provided by American Society of Agronomy

Citation: What type of grass is best for beef cattle? (2022, October 24) retrieved 21 June 2024 from <https://phys.org/news/2022-10-grass-beef-cattle.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.