ISSUE: Developing a heifer to replace a cull cow is one of the most expensive management decisions for cow-calf producers, which has major implications on the long-term profitability of the herd. Historically, producers have been encouraged to feed weaned heifers to reach 65 percent of their mature bodyweight before breeding to maximize pregnancy rates. Recent studies have shown that developing heifers to a lighter target bodyweight can reduce development cost without impairing reproductive function. These studies have compared traditional drylot systems with alternative approaches where heifers graze low-quality forage systems with additional supplemental protein. However, little is known about how these developmental systems affect profitability of heifer development on pasture in the Southeastern United States.

WHAT HAS BEEN DONE: Boyer and a team of animal scientists at the University of Tennessee determined the profitability of retaining a heifer to develop while grazing stockpiled cool- and warm-season grasses during the winter months to a comparable drylot system. Data comes from a grazing experiment in Tennessee where heifers grazed big bluestem and indiangrass combination; switchgrass; and endophyte-infected tall fescue pastures.

IMPACT: Heifers developed using forage-based systems had a higher profitability and shorter payback period than heifers developed in a drylot system. There was no difference in profitability across the forages, which supports previous research that warm-season grasses might be a profitable complement to tall-fescue grazing systems in the Southeastern United States. Overall, low-cost, forage-based heifer development systems improve long-term profitability for beef producers.