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Brewery byproducts as feed supplements in US beef production

Common and potential alternative feeds in the beef industry are reviewed in a recent series in Applied Animal Science

Champaign, IL, January 3, 2023—Byproduct feeds are a significant feed source for livestock in the United States. “Byproduct Feeds in Southeastern Beef Cow-Calf Operations” was the topic of the July 2021 Bill E. Kunkle Interdisciplinary Beef Symposium, and articles that resulted from presentations at the symposium appear in the October and December issues of [Applied Animal Science](#). “Use of alternative feedstuffs for beef cattle is the umbrella topic of four articles about the feeding characteristics and management of a number of byproducts, including soy hulls, sweetpotatoes, whole cottonseed, and cotton harvest residue and about increased opportunities to use byproduct feedstuffs as supplements from the bourbon distillery and craft brewery industries. Otherwise, these feed byproducts might be wasted or put in landfills,” said David K. Beede, PhD, Editor in Chief of *Applied Animal Science*.

One of the [invited reviews](#) from the symposium discusses the use of craft brewery byproducts as feed supplements in cattle production systems. Editor in Chief Beede pointed out, “The rise in the number of craft brewers nationwide provides additional opportunity to incorporate wet brewers grains into beef cattle systems. This invited review addresses on-farm management strategies and opportunities for use of wet brewers grains given the inherent variability in moisture and nutrient contents among brew batches over time within brewery and from different breweries. Opportunities and management strategies are highlighted in the article from experiences in North Carolina, especially for small- to medium-sized beef operations.”

Lead author Deidre D. Harmon, PhD (Department of Animal Science, North Carolina State University, Raleigh, NC, USA), remarked, “Craft beer has become a part of local communities, and craft breweries, taprooms, and brewpubs have become gathering places for locals and a way for visitors to immerse themselves in the taste and culture of local areas.” In addition, local beer production represents potential for area cattle farms to make use of wet brewers grains as a feed supplement.

Harmon elaborated: “Wet brewers grains are often an inexpensive or no-cost feed for beef cattle producers located near craft breweries. The high concentrations of crude protein and digestible fiber

make it a byproduct of interest for many beef cattle production systems”—provided some challenges can be met. “Moisture is the greatest limitation,” observed Harmon, “and additives for improved fermentation may be needed during storage of this high-moisture feed.”



Caption: With the growing number of craft breweries, wet brewers grains are an increasingly available supplement for beef cattle (Credit: D. Harmon).

Studies have shown that brewers grains are a suitable feedstuff for cattle across the lifecycle, including as a feed additive for pregnant and lactating cows, and may be supplemented to mixed rations or forage-based diets. In addition to reduction of physical waste from beer production, some evidence has suggested that feeding brewers grains may reduce methane production by cattle. Given the pressing nature of concerns surrounding climate change, further research into the possibilities of reducing greenhouse gas emissions by feeding this otherwise-wasted byproduct is surely warranted.

The article appears in the December issue of *Applied Animal Science*.

The other articles that resulted from presentations given at the Bill E. Kunkle Interdisciplinary Beef Symposium, “Byproduct Feeds in Southeastern Beef Cow-Calf Operations,” Southern Section of ASAS annual meeting, Louisville, KY, July 2021, appeared in the October issue of *Applied Animal Science* and include the following:

“Invited Review: Using whole cottonseed and cotton harvest residue in southeastern US beef cattle diets: Quality, intake, and changes in feed characteristics” by M. K. Mullenix, R. L. Stewart Jr., J. L. Jacobs, and D. L. Davis. 2022. *Appl. Anim. Sci.* 38(5):447–455. <https://doi.org/10.15232/aas.2022-02301>.

“Invited Review: Rise of craft distilleries in the southeastern United States increases bourbon-distillery feedstuffs as supplement for beef cattle” by J. W. Lehmkuhler and E. S. Vanzant. 2022. *Appl. Anim. Sci.* 38(5):456–465. <https://doi.org/10.15232/aas.2022-02299>.

“Invited Review: Use of byproduct feeds in southeastern US beef production systems,” by M. H. Poore. 2022. *Appl. Anim. Sci.* 38(5):441–446. <https://doi.org/10.15232/aas.2022-02307>.

Notes for editors

“Invited Review: Rise of craft breweries in the southeastern USA increases supplement availability for beef cattle,” by Deidre D. Harmon and Kendra P. Phipps (<https://doi.org/10.15232/aas.2022-02315>), *Applied Animal Science*, volume 38, issue 6 (December 2022), published by FASS Inc. and Elsevier.

This article is openly available at <https://doi.org/10.15232/aas.2022-02315>.

Full text of the article is also available to credentialed journalists upon request; contact Brittany Morstatter at +1-217-356-3182 ext. 143 or ARPAS@assoqh.org to obtain copies. To schedule an interview with the author(s), please contact Deidre D. Harmon at ddharmon@ncsu.edu.

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