The inaugural Bill E. Kunkle Interdisciplinary Beef Symposium was held at the Southern Sectional meeting of the American Society of Animal Science in Dallas, TX, on February 3, 2014. The intent of the symposium was to share current perceptions associated with beef cattle welfare and recent research findings related to the impacts of environmental stressors on beef cattle immunity and performance.

The symposium was dedicated to William (Bill) E. Kunkle through the naming of the Interdisciplinary Beef Symposium, in honor of his commitment to the beef industry in the southeast. J. D. Arthington and M. H. Poore provided a historical review of Kunkle’s influence in the southeast before his untimely passing (Arthington and Poore, 2014). His leadership had significant impact on all those he interacted with during his 22-yr tenure as a faculty member at the University of Florida. The naming of the symposium in Kunkle’s honor will provide an annual remembrance of his leadership, dedication and contributions.

Consumers, producers, industry, and academia continue to increase their interest in learning additional details regarding animal welfare of species used for meat and fiber production. This year’s symposium focused on the current understanding of animal welfare and stress as it relates to beef cattle production today.

The first presentation discussed current animal husbandry practices and potential target areas that could be managed with respect to animal welfare. Lyles and Calvo-Lorenzo (2014) discussed the history of animal welfare and the role the media has played in consumer perception of animal welfare. Five management or animal husbandry areas were identified that could be influenced. Minimizing the impact of environmental factors was an area identified through which management changes could enhance animal welfare. In addition, discussions related to pain management of surgical procedures commonly performed on beef cattle was shared. Improving facilities and techniques used in beef cattle handling and restraint was suggested as a route of enhancing beef welfare as well. Transitional management and the implementation of biotechnology were introduced as potential manageable areas that could enhance beef cattle welfare.

In an effort to manage, one must be able to measure. This is an important concept with respect to beef cattle welfare and stress. One challenge is defining models that allow for studying stress and welfare. Carroll and Burdick Sanchez (2014) discussed the impacts of stress on physiological and acute immunological responses, as well as how these responses allow the animal to adapt to challenges. The authors have successfully utilized a model incorporating a lipopolysaccharide challenge to evaluate stress responses. Monitoring changes in pro-inflammatory cytokines and metabolic markers was presented as a mechanism to aid in elucidating responses to stress. Gaining knowledge on how stress impacts the acute immune response will shed light on intervention strategies to aid in mitigating the impact on health and performance.
As discussed by Lyles and Calvo-Lorenzo (2014), environmental stress can play a role in animal welfare and stress. Beef cattle have an ability to adapt to changes in their environment. However, rapid and/or extreme fluctuations in environmental conditions can be a source of stress. Mader (2014) further expounded on the effects of extreme ambient temperatures, both low and high, and the corresponding influences on beef cattle production. Bedding, sprinklers and shade were discussed as facility manipulations that can be combined with dietary changes to help beef cattle cope during adverse weather.

The human-animal interaction is a continued source of criticism as media displays sources of neglect and improper handling. Prey animals, including cattle, have an innate fear of humans as they are perceived as predators. Cooke (2014) explained that the temperament of cattle is a fear-related behavior that can be influenced by animal handling and genetics. The author described current methodologies on measuring temperament, as well as the effects that excitable temperaments can have on beef cattle physiological and production responses. Alteration in animal handling techniques were shown to influence animal temperament (Cooke, 2014). In addition, research illustrated how cattle can have conditioned behavioral responses to the presence of predators.

The Bill E. Kunkle Interdisciplinary Beef Symposium was extremely well attended with standing room only and highlighted recent studies involving beef cattle welfare and stress. The symposium identified areas in which alterations in management could aid in mitigating animal welfare related and stress responses.

**LITERATURE CITED**


