



## National Bison Association

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### *Bison Issues Overview, September 2022*

#### **Healthy Herds: The First Step in Continued Bison Restoration**

##### ***Background:***

The growth in North America's bison herds is a remarkable story of species restoration since less than 1,000 bison teetered on the brink of extinction in the late 1800's. Reckless slaughter was a major cause, but so too was the devastation caused by pathogens brought to the New World by European domesticated livestock.

For most of the past 150 years, individual bison producers and a handful of veterinary professionals have attempted to determine herd health protocols and nutritional requirements needed to support the expansion of our herds.

This has been difficult because bison are similar to, but different from domestic livestock. As ruminant animals, they are comparable to domesticated cattle. But, bison are undomesticated and retain many of their unique biological and sociological instincts as wild ruminants. They exhibit stress when confined, are seasonal breeders, and follow seasonal cycles for growth and metabolism. They are also more resistant to harsh weather, require much less human intervention, and are well adapted to thrive in the grassland ecosystem in which they evolved.

Celebrating its second anniversary this week, the Center of Excellence for Bison Studies (COE) offers a valuable new resource for the development and dissemination of bison-focused research. This summer, the COE awarded two additional research grants, bringing the total of bison-specific research projects to ten, one of is a USDA ARS study on bison's impact on ground-nesting bees. Other funded projects cover bison health, ecosystem improvement, Tribal bison restoration and meat quality. See a full list of funded studies at the bottom of this document).



Moving forward, the COE seeks to work with USDA, the National Academies, and other institutions to advance producers' ability to maintain healthy bison herds that restore healthy grasslands and healthy cultures, and that produce great tasting, nutritional meat. We are confident that the COE can support the current and future work being conducted through the Agricultural Research Service and the Animal and Plant Health Inspection Service to the benefit of bison producers across the country.

**These priority projects include:**

- Completion of the work to develop a vaccine for Malignant Catarrhal Fever (MCF) as a result of continued research conducted through ARS.
- Continued research into *Mycoplasma bovis* in bison and in particular, the work of Dr. Bryan Kaplan with ARS at the NADC who recently shared that he is excited to have a mycoplasma subunit vaccine trial scheduled for early 2023.
- Completion of the Bison 2022 Study currently underway by the USDA's National Animal Health Monitoring System (NAHMS).
- Further development of tools to monitor and reward producers utilizing bison to help sequester carbon in their pastures and rangelands.
- Coordination with APHIS to utilize the NBA's mobile app to monitor herd health, establish traceability, and improve bison management.
- Coordination with APHIS as it develops the proposed new livestock indemnification valuation system with consideration for fluctuating bison market prices through the year.

**Projects funded by the Center of Excellence in 2021 (Including Organization and Funding):**

- Assessing factors that influence the virulence of *Mycoplasma bovis* in bison (University of Wyoming)
- Investigating mineral and vitamin status and needs for bison (Colorado State University)
- Benchmarking live animal and carcass quality outcomes at slaughter to identify factors impacting bison carcass value (Colorado State University)
- A baseline inventory assessment of biological and cultural impacts of buffalo restoration in Indian country (InterTribal Buffalo Council)
- An integrated approach to assess parasite burden and anthelmintic treatment success in North American bison (Kansas State University)
- Bison on the move: How translocations affect bison production and disease prevalence across space, time, and organization (South Dakota State University)
- Characterization of bovine viral diarrhea virus (BVDV) in bison (South Dakota State University)
- Investigating the ruminal metagenome of grass-fed bison to uncover metabolic activities that impact the efficiency of forage utilization (South Dakota State University)
- Habitat use and avoidance in a large, patchy landscape by American plains bison: Implications for management and conservation of the species (University of Nebraska - Kearney)
- Comparison of ground nesting bee (Apoidea) abundance and diversity between bison wallows and adjacent prairie (USDA - Agricultural Research Service)