



Agricultural Systems

PHOTO: PIXABAY

Improving the health of wild and domestic ruminant animals

Land-grant universities are conducting important research to develop effective solutions that will improve the health of wild and domestic ruminants such as cows, sheep and deer. This will directly impact the health and sustainability of the food systems and tourism industries that rely on these animals.

Successful examples include:

- The University of **Wyoming** is leading the country in several important studies that affect wild and domestic ruminants. Two of these studies focus on chronic wasting disease, a fatal neurodegenerative disease that threatens the state's mule deer, white-tailed deer, elk and moose. Nearly 100% of affected animals die through progressive weight loss and associated complications. There is no effective treatment or preventative vaccine for the disease. Infected animals and the resulting reduction in herd sizes have far-reaching negative economic and ecological impacts, especially on the tourism and hunting industries. In one study, Wyoming researchers are improving disease detection using “real-time quaking-induced conversion” tests that can quickly test up to eight animals at a time. In a second study, researchers are investigating what genetic factors make some animals within a species like elk more susceptible to getting the disease than others.
- **Wyoming** researchers are also investigating how Coccidiosis, an intestinal tract infection caused by protozoa, is transmitted within domestic cattle and bison in order to prevent transmission and determine which methods of treating it will be effective and sustainable.
- Researchers at historically Black land-grant institutions **North Carolina** A&T State University and the University of **Arkansas** at Pine Bluff are studying how to improve the health of cows and goats, respectively, through natural, sustainable strategies that will reduce or eliminate producers' overuse of antibiotics and dewormers.

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Prepared by the National Impacts Database Communications Subcommittee, supported by ESCOP, ECOP and USDA/NIFA.

02/2022