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High School Youth Forum

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Society for Range Management

**Blowouts, Friend or Foe?**

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Hello my name is Sam McMillan I am a junior at Anselmo- Merna High School, I live on my family's ranch north of Milburn in the Sandhills of Nebraska.

Blowouts, friend or foe? What is a blowout you may be wondering?

According to Webster’s dictionary, a blowout is 1.) A festive social affair; 2.) A bursting of a container (as a tire) by pressure of the contents on a weak spot; 3.) An uncontrolled eruption of an oil or gas well. Hummmm, well as you can see ole Mr. Webster was not from the Sandhills of Nebraska, because the definition of a blowout, according to Kody Unstad, University Of Nebraska Omaha) is a “sandy area where rapid wind erosion literally “blows out” a hole in the surface of the landscape”.

The Nebraska Sandhill’s are the largest area of sand dunes in the Western Hemisphere, occupying over 12.3 million acres in north-central Nebraska. Some of the native grasses and forbs root as far as 10 feet deep into the sandy soils. Because the particle size in this soil is large, its water holding capacity is low, along with its organic matter. This makes a somewhat droughty situation, and therefore harder for plants to get established, so keeping the native vegetation healthy and growing is a high priority for ranchers.

Erosion occurs when the native vegetation is disturbed or destroyed and the wind blows. Examples of this are livestock watering locations, or livestock trailing along fence lines. Cattle’s hooves naturally dig up plants and sand while they travel around pastures. Blowouts are active sites of erosion, and in this concave depression, loose and moving sand can cause loss of vegetation. Usually, the wind starts moving the sand in a “saltation effect”, this can kill surrounding plants by cutting them off or exposing their roots. The plants die, and the bare sand is exposed and a blowout is created.

On December 23, 2021, Bethany Johnston a Sandhills rancher and conservationist with the Natural Resources Conservation Service, described saltation as **“**one sand particle transfers its energy to another, then that particle jumps, then it transfers its energy to another particle.... it reminds me of those steel balls that hit each other and move called Newton's cradle”.

Most cattle ranchers in the Sandhill’s of Nebraska feel that blowouts threaten their rangeland by reducing their grazing potential. Traditional range management practices of season-long grazing have been changed to rest-rotation grazing, which seems to double the capacity of the native range in this ecosystem, while also reducing the size of blowouts. Blowouts range from tenths of an acre to over 250 acres in size. Even though blowouts are a natural feature in these rangelands, they make up a very small percent of the total Sandhill’s region.

Shaping, mulching, seeding, and fencing blowouts are some ways that ranchers try to stabilize these unsightly areas of blowing sand. Others place old tires around electric poles or at the edges of blowouts to prevent them from spreading. A fence line blowout can expand onto your neighbor’s range and may upset those landowners causing hard feelings.

Wildlife biologists feel that blowouts are important for certain types of animals, insects, and plants. Plants such as Blowout grass, Sandhill muhly, Painted milkvetch, and

Nebraska’s endangered plant the Blowout penstemon, all call blowouts home.

Unique insects such as Big Sand tiger beetles, dung beetles, Bumblebees, and the threatened American burying beetles are all found on this sparsely vegetated ground.

Rocky Mountain toads, Lesser earless lizards, Ornate box turtles, and Ord’s kangaroo rats all reside in or near blowouts.

I first became interested in blowouts when my mom mentioned restoring a blowout on some rangeland that my parents recently purchased. For two years I worked to stabilize this classic fence line blowout on our family ranch. I completed this as part of my 4-H Range Management project. One of my first steps was adding organic material such as grass clippings, branches, and twigs. I planted Sandcherry and Skunkbrush sumac shrubs, all to slow the wind speed and decrease the erosion process. The newly established rest-rotation grazing system that is used on this pasture helps maintain adequate vegetation and allows annual and perennial plants to grow, increase vigor, and reproduce.

Ranchers use these 12.3 million acres of native Sandhills grasslands to raise beef, a protein supply that is used to help feed the world. On the other hand, the unique variety of wildlife that occupy the blowouts, dotted throughout these grasslands, benefit the health and diversity of this ecosystem.I feel the Sandhill’s of Nebraska provide both habitat for wildlife and a livelihood for ranching families.

Now, I ask you again, Blowouts, friend or foe?

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