

Natural Resources Conservation Service

Soil Science Division

Soil Survey Region 5

Miles City, MT, Soil Survey Office

Northern International Livestock Exposition: 4th Grade Style

Purpose

NRCS soil scientist Raven Chavez, along with several soil conservationists from around the State of Montana, presented soil and soil health information at the 2018 Northern International Livestock Exposition (NILE). The education portion of the event was held October 15-17th at the MetraPark Arena in Billings, MT, where nearly 2,000 4th grade students from around Montana attended to learn about soils, livestock, erosion, and anything else concerning rangeland, crops, and livestock.

Raven was set in charge of teaching more than 700 students about soil and soil health. Unfortunately, the presentations were being held under the grandstands, making the soil tunnel too loud to inflate, thus causing the soil health presenters to work with the tunnel deflated on the ground. On the bright side, all of the groups were very interested and well-behaved.

The groups were first questioned on whether or not they thought soil was important. Although most agreed that soil was important, it took some convincing for others. Once Raven explained how toilet paper comes from trees which grow in the soil, almost everyone decided that soil was indeed important; except the few that claimed they don't use toilet paper at all. After chanting "*The soil is alive!*" all 700+ students were convinced that taking care of the soil was something worth their time. The students then learned about the five soil health principles. While learning the soil health principles, the students were introduced to the word "diversity" and the importance of not constricting your diet to only doughnuts (diversify crops), described how they always want to touch new and shiny things (don't disturb the soil), related their previous presentation at the erosion tanks to two principles (keep it covered, keep a living root), and got very excited (yet grossed out) by the importance of livestock poop (add livestock). The groups were then huddled around the soil tunnel where the physical, chemical, and biological soil properties of the soil were briefly discussed. Properties such as texture, particle sizes, and pH were pointed out on the tunnel. The students also learned about the nitrogen cycle and were once again very excited, yet grossed out, about livestock poop. To wrap things up, the students gave some examples of creatures big and small living in the soil and were asked to repeat the five principles of soil health again. Free "*I Dig Healthy Soil*" stickers were given to those who could name off the five soil health principles, which proved to be an effective motivator for the students to pay attention and ask questions.

Key Outcomes

The 4th grade students of Montana learned about soils, soil health, crops, livestock, and everything else we NRCS staff could teach them, in our ongoing efforts to educate our students on how to *help people help the land*.

