A few months ago I accepted the position of range and pasture consultant for the Noble Foundation. The past 14 years of my career working for the Natural Resources Conservation Service (NRCS) most recently as the Texas state rangeland management specialist. I worked with farmers and ranchers to meet their management goals and objectives, and I am very excited to continue working with producers in the Southern Great Plains. One of my passions is working with producers to manage their operations while benefiting our nation’s most precious resource, our living soil.

Our nation is blessed with numerous natural resources. However, one resource that is often overlooked, and is in need of our management and protection, is our nation’s soil resource. Our soils are responsible for feeding billions of people and serve as the foundation for all agricultural endeavors. More importantly, soil is a dynamic living body that is the cornerstone for many of the ecological processes (e.g., nutrient cycle, water cycle, etc.) essential for functioning ecological systems. As part of managing for a healthy soil, cover crops are commonly utilized in agronomic systems to meet several management goals, such as keeping the ground covered and adding biological diversity. Cover crops are defined by the NRCS in their national conservation practice standard as “grasses, legumes and forbs planted for seasonal vegetative cover,” and NRCS describes their purposes as the following:

- Reduce erosion from wind and water.
- Maintain or increase soil health and organic matter content.
- Reduce water quality degradation by utilizing excessive soil nutrients.
- Suppress excessive weed pressures and break pest cycles.
- Improve soil moisture use efficiency.
- Minimize soil compaction.

Note that NRCS does not include livestock grazing as one of the purposes for a cover crop. Over the past several years, many producers have been utilizing mixed-species cover crops in cropland and pasture systems to increase diversity, organic matter, soil microbiological function and more. Many progressive producers graze livestock on these crops to add the benefits of animal impact and distribution of urine and manure.

Once livestock grazing is introduced, these are no longer traditional cover crops with the sole purpose of improving the soil. They are now mixed-species dual-purpose forage crops. In a soil health management system, mixed-species forage crops have similar purposes compared to traditional cover crops. They too are used to keep the ground covered, increase organic matter, increase diversity, etc. However, they also provide a forage source for graz-
ing livestock. In order to receive the soil health benefits, the grazing of these mixed-species forage crops should be managed to leave proper amounts of residue rather than being completely grazed out. Depending on rainfall and the region of the country, different rates of utilization (i.e., how much of the forage is grazed) can be planned. A rule of thumb is to determine the amount of production required to meet your residue goals then graze any additional production. For instance, if you need 3,000 pounds of forage residue to keep your soil covered and you produce 6,000 pounds, plan on utilizing 50 percent of the available forage. The remainder will be trampled and left for residue. Keep in mind that grazing these crops recycles the majority of their nutrients while haying and/or cutting for silage cover crops intended to add organic matter defeats that purpose. Grazing mixed-species forage crops can be very useful and add flexibility in beef production systems. However, the focus should be on balancing livestock forage demand with addressing the soil health concern that prompted planting the cover crop in the first place.