Overseeding Winter Annuals into Native Grass Forages

Many producers wonder if they can supplement summer forage production from their native grass stands by overseeding them following dormancy with a winter annual, such as cereal rye. Bermudagrass growers have been overseeding pastures successfully for many years. Can this practice also work with native grasses? The short answer is, “maybe.”

We know that we can physically plant winter annuals into dormant native grass stands with a drill. We also know that the annuals will grow well in the dormant stand and that they then can easily be grazed or hayed. The real issue then, is when we remove the winter annuals in the spring.

Timing the removal of winter annuals is exactly the same challenge that bermudagrass growers face when they overseed. Past studies of overseeded bermudagrass demonstrate that removal of the winter annual canopy by early April leaves little competition for the perennial summer grass and, as a result, stand vigor and yield are not impacted. By late April, however, still having a winter annual canopy creates substantial competition and leads to weakened perennial warm-season grasses with reduced productivity and yield. In that case, the “tail” (annual) has “wagged the dog” (perennial).

Although studies evaluating overseeding of native grasses are almost non-existent, timing the removal of the winter annual clearly remains a critical issue. Heavy competition during April when summer grasses are emerging from winter dormancy, regardless of the source of that competition, can have a substantial negative impact on native grasses. Until we develop better information on this subject, there are a few key recommendations we can make.

First, wait until native grasses are fully dormant (after a killing frost) before doing any mowing to facilitate drilling. Waiting to mow will allow the native grasses to translocate above-ground nutrients and energy into the root system for winter dormancy. This later seeding date may preclude meaningful forage production during late fall, but will help ensure long-term vigor of native grass stands.

Second, do not use annual ryegrass because of its persistence and reseeding ability. Instead, use cereal rye because it is the earliest maturing of our winter annual grasses. This early maturity allows the bulk of the rye’s growth to be captured before it begins to offer serious competition to the emerging native grasses.

Third, be diligent about removing the cereal rye canopy by no later than mid-April. This will require heavy grazing prior to this time or mechanical harvest, likely requiring wet-wrapping given the time of year. Subsequent clipping may prove beneficial as a supplement to either of these two practices.

Finally, it would be prudent not to overseed native grasses every winter. Instead, only overseed every second or third winter. By following these guidelines, overseeding native grass stands may be a practice that allows for additional production from fields planted to native grasses.