

Early Grazing Damages Grass and Reduces Profits

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Turning livestock onto native range too early in the spring can be costly to producers, says a North Dakota State University range scientist.

Grazing too early in the season damages plants and limits herbage production by removing leaf area from grass that has not recovered from winter dormancy," says Lee Manske, range scientist at NDSU's Dickinson Research Extension Center. "This damage from early grazing reduces the forage available to livestock later in the season and decreases profits."

Manske says grass cannot withstand defoliation until it reaches the third-leaf stage, when plants have produced sufficient foliage to support growth. "The arrival of plants at the third-leaf stage is the most reliable indicator that producers can use to determine when grazing may safely begin," he notes. The date on which the third new leaf appears varies by plant type. Most native range cool-season grasses are ready for grazing in early June and warm-season species are ready about two weeks later.

Research shows that starting grazing on native range in early May results in a loss of 75 percent of the potential herbage and that starting grazing in mid May results in a loss of 45 to 60 percent of the potential herbage, Manske states. Those reductions in herbage production lead to reductions in stocking rate, calf average daily gain, calf gain per acre, net returns per cow-calf pair and net returns per acre. Delaying grazing until early June on rotation grazing systems or until mid June on seasonlong treatments results in smaller reductions in potential herbage production and produces greater economic returns for the cow-calf operation, Manske stresses.

Cool-season domesticated grasses can serve as alternative spring forage sources until native range grasses are ready for grazing, Manske says. Like native range, complementary spring domesticated grass pastures should be grazed only after plants arrive at the third-leaf stage. No perennial grasses develop the third new leaf before late April, but domesticated grass species such as crested wheatgrass and smooth brome grass reach the third-leaf stage three to five weeks earlier than cool-season native species. Pastures of domesticated grasses can support grazing livestock from early May until grazing on native range can begin safely in early June.

"Allowing livestock to graze native range early in the season may seem less costly than feeding livestock harvested hay, but the lower cow-calf gain that results from reductions in native range forage production ultimately yields lower net returns for a cow-calf operation," Manske observes. "Coordinating grazing with grass growth stages to meet the biological requirements of grass plants and livestock helps to protect rangeland health and increase profits for beef producers."