

Early Grazing Strategies

Llewellyn Manske, Range Scientist
Dickinson Research Extension Center

Kevin Sedivec,
NDSU Extension Rangeland Specialist

Ranchers who are short of hay in the spring are likely to turn livestock out on pasture as soon as the snow melts. This practice will come with costs to production in those pastures during the growing season. Grazing before grass plants reach the third leaf stage causes a reduction in herbage production which can reduce stocking rate and animal performance. In western North Dakota, early cool-season native range grasses have their third leaf around June 1, which is the recommended time period to begin grazing native range. Many livestock operators will be looking for alternatives to feed their animals by late April and May with the extreme shortage of harvested feeds. Some alternatives, their positive and negative consequences, and techniques to minimize damage to native rangeland are:

Alternative 1: Grazing Tame Grass Pastures in May

This is the best-case scenario to eliminate damage to native rangeland and still permit turning cattle out on pasture by early May. Tame grass pastures reach grazing readiness two to four weeks earlier than native range, permitting grazing in May and deferring native rangeland grazing until June 1. Livestock producers should graze their tame grass pastures in May, rent tame grass pasture for the month of May, or graze conservation reserve program (CRP) lands in May and June, if they are open for emergency grazing. Crested wheatgrass is the only tame grass pasture ready to be grazed by early May. Smooth brome grass and meadow brome grass are typically grazing ready by mid May, while most CRP lands and grasses such as intermediate and pubescent wheatgrass are ready for grazing by the third week in May.

Crested wheatgrass and some other cool-season tame grass pastures can provide early spring grazing because the third leaf is reached between 20 April and 10 May, depending on species. Although these grasses may reach the third leaf stage in late April and early May and are physiologically capable of handling grazing pressure, the herbage quantity is too low for high stocking rates. The management decision will be whether to start grazing crested wheatgrass early with moderate stocking rates for the entire spring period or to wait until the first week of May when the growth can keep up with the higher customary stocking rate.

Alternative 2: Continue Drylot Feeding in May

Many ranchers may not have complementary spring pastures for May grazing. Feeding hay in drylot situations would be the lowest-cost scenario compared to grazing native range in May before the grasses reach the third leaf stage.

Most ranchers will be faced with tough management decisions of whether to turn cattle out on pasture before the grass is ready or to feed harvested forage for a longer period. Grazing before

the third leaf stage on native range or tame grass pastures can result in a loss of over 60% of the potential forage production when grazing begins in late April and early May and around 45 % when grazing begins in mid May. This lost potential production will translate into lost pounds of calf production from those early grazed pastures. Ranchers need to consider this loss of calf production when they decide whether to feed hay a little longer or to turn cattle out on pasture before the grass is ready. The costs of feeding harvested forage until crested wheatgrass reaches the third leaf stage will be lower for most ranch situations than will the cost of lost forage and calf production resulting from early grazing. Grazing cool-season tame grass pastures in May is lower in cost than feeding hay.

Alternative 3: Early Grazing Native Rangeland

Alternative 3 is NOT THE RECOMMENDED STRATEGY. Grazing native rangeland prior to range readiness will be the most costly alternative, with both economical losses (in most cases) and reductions in production associated with physical damage to the plant. Reductions in production result in increased pasture costs and costs per pound of calf gain compared to pastures where the grazing is started after the third leaf stage. Using a rotation system can improve animal performance with increased stocking rates, calf average daily gain, and calf gain per acre, and result in improved financial status in the livestock operation. Lost calf gains and increased pasture costs resulting from starting grazing too early are true costs that need to be evaluated against the costs of feeding hay a little longer.

Costs of harvested feed should be evaluated on the number of acres required per cow/calf pair per month and the costs per pound of calf gain on harvested feeds between birth weight and calf weight at pasture turn-out at the three-leaf stage. Producers should evaluate purchased feeds by the cost per pound of calf gain and determine whether this cost is greater than the cost per pound of calf gain on pastures grazed prior to the three-leaf stage. A lactation ration that costs between \$0.40 and \$0.60 per pound of calf gain would cost less than grazing pastures too early. A lactation ration costing over \$0.65 per pound of calf gain should be reformulated.

Ranchers who have exhausted feed supplies and can not purchase feed or do not have tame grass pastures will need to put their cattle on native rangeland. Producers who have decided this scenario is their only option should follow these guidelines to minimize damage:

1) Use fall pastures not fully grazed in previous year

This technique has many flaws since livestock will still graze any lush new growth first; however, they will also consume some of the old growth from the previous year. The new growth, which is needed for the current year's plant growth, will be high in crude protein content, high in water content (75-80 % moisture), and low in fiber content. If old growth is not available to provide a dry filler and fiber, cattle will not consume adequate dry matter. For example, a mature 1200 lb cow needs 29 pounds of dry matter per day, and if moisture content is 80 percent, she will need to consume 145 pounds of grass (literally impossible). She will also become loose, and animal performance of both cow and calf will suffer. These early grazed pastures will need to be rested throughout the summer months; however, if grazing is not severe, some light use can occur in the fall. Supplement with grain in this situation.

2) Use summer pastures that are currently rotationally grazed

Once again, this technique will cause damage to native range plants. Summer pastures were probably fully utilized the previous year and minimal old growth remains. These pastures will lack adequate fiber and will not provide sufficient dry matter in early and mid May. Producers should provide dry supplemental feeds to add dry matter, graze only one pasture of their rotational system early, and allow the remaining pastures to reach grazing readiness before turning out livestock. The pasture grazed early in May will need to be rested the remainder of the grazing season to recover from the severe utilization.

3) Use summer pastures that are grazed seasonlong

This option has the greatest potential to damage native range plants. Once again, this pasture will lack sufficient dry matter in early and mid May and supplementation with dry feed will be needed. We recommend that producers develop a temporary pasture within their large seasonlong pasture, using electric fencing to form a small pasture for grazing. This developed pasture should include a water source and be easily accessible for supplemental feeding. This technique will cause severe, but localized, damage on a relatively small location while allowing the remainder of the pasture area to reach grazing readiness. Once cattle have been moved to the large section of the pasture, producers should maintain the temporary electric fence to keep the smaller early pasture ungrazed for the remainder of the growing season. This early smaller pasture will recover if provided adequate rest.

NDSU
Extension Service
North Dakota State University

County Commissions, North Dakota State University and U.S. Department of Agriculture cooperating. North Dakota State University does not discriminate on the basis of race, color, national origin, religion, sex, disability, age, Vietnam Era Veterans status, sexual orientation, marital status, or public assistance status. Direct inquiries to the Vice President for Equity, Diversity and Global Outreach, 205 Old Main, (701) 231-7708. This publication will be made available in alternative formats for people with disabilities upon request, 701 231-7881.