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Early Grazing Strategies

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Alternative 1:

Grazing Domesticated Grass Pastures In May

This is the best-case scenario, which eliminates damage to native rangeland and still permits turning cattle out on pasture by early May. Domesticated grass pastures reach grazing readiness two to four weeks earlier than does native range, permitting grazing in May and deferring native rangeland grazing until range grasses reach the third leaf stage. Livestock producers should graze their domesticated grass pastures in May, rent domesticated grass pasture for the month of May, or graze conservation reserve program (CPR) lands in May and June when contracts expire or released for emergency grazing.

Crested wheatgrass is the only domesticated grass pasture ready to be grazed by May 1 in most years. Smooth bromegrass and meadow bromegrass are typically ready for grazing by second week in May, while most CRP lands and grasses such as intermediate and pubescent wheatgrass ready for grazing by the second to third week in May.

Crested wheatgrass and some other cool-season domesticated grass pastures can provide early spring grazing because the third leaf is reached between April 20 and May 15, 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 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 grasses reach the third leaf stage. The starting date of grazing should be based on the phenological stage of growth of the grass plants. Initiating grazing before the third leaf stage is very costly forage production. 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 pastures can result in a loss of over 60 percent of the potential forage production when grazing begins in late April and early May and around 45 percent when grazing begins in mid May. This lost potential production will translate into lost pounds of calf (lambs, etc.) production from those early grazed pastures. Ranchers need to consider this loss of production when they decide whether to feed hay a little longer or to put livestock out on pasture before the grass is ready.

Lost pounds of animal production caused by grazing too early are difficult to visualize when a rancher is faced with out-of-pocket costs of an extended feeding period. The costs of feeding harvested forage until crested wheatgrass reaches the third leaf stage will be lower for most ranch situations than will the costs of lost herbage and animal production resulting from early grazing. Grazing cool-season domesticated grass pastures in May after they reach the third leaf stage is lower in cost than feeding hay.

Alternative 3:

Early Grazing Native

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 plants. Evaluations of long-term trials at Dickinson (Table 1) show that grazing started prior to the three leaf stage of native range causes a reduction in stocking rate, animal performance, net return per cow/calf pair, and net return per acre. These reductions in production result in increases in 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 (twice-over rotation grazing in this trial) improved animal performance with increased stocking rates, calf average daily gain, and calf gain per acre, and resulted in improved financial status in the livestock operation. Lost calf gains and the increase in pasture costs per cow/calf pair that result from starting grazing too early are true costs that need to be evaluated against the costs of feeding hay a little longer.

The costs of ranch-produced harvested feed should be evaluated on the number of acres required per animal unit per month, and the costs per pound of animal gain on harvested feeds between birth weight and calf (lamb, etc) animal weight at pasture turn-out at the three leaf stage. Producers should evaluate purchased feeds by the cost per pound of animal gain and determine whether this cost is greater than the cost per pound of gain on pastures grazed prior to the three leaf stage. A lactation ration that costs between $0.40 and $0.60 per pound of gain would be lower in cost than grazing pastures too early. A lactation ration costing over $0.65 per pound of gain should be reformulated.

Ranchers who have exhausted feed supplies and can not purchase feed or do not have domesticated grass pastures may have to put their livestock on native pasture before grasses are ready to graze. Producers who decide this scenario is their ONLY OPTION should follow

these guidelines to minimize damage.

Remember, this option will cost you in terms of lost forage and damage to the range resource. This damage can be reversed but will require rest during the current year's fall period and deferment the subsequent year.

Most acceptable option:
Use of pastures lightly grazed In previous year

This technique has many flaws since livestock will still graze any lush new growth; 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 (18-23%), high in water content (75-80%), and low in crude fiber content (20-30%). If old growth is not available to provide a dry fill and fiber, livestock will not consume adequate dry matter. For example, a mature 1200 Ib cow needs 29 pounds of dry matter per day, and if moisture content is 80%, she will need to consume 145 pounds of grass. She will become loose and animal performance of both the cow and calf will suffer (she will actually lose weight).

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. Supplementation with grain or cake in this situation should occur.

Second, less acceptable option:
Use summer pastures that am currently under ct rotational grazing program.

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 or mid May. Producers should provide dry supplemental feeds to add dry matter, graze only one pasture of the rotational system early, and allow the remaining pastures in the system 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 if severely utilized.

Least acceptable option:
Use summer pastures that are grazed seasonlong

This option has the greatest potential to cause long-term damage to 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 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 supplementation 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 livestock have been moved to the large section of the pasture, maintaining the temporary electric fence should occur to keep the smaller early pasture ungrazed for the remainder of the growing season. This early smaller pasture will recover in

due time if provided adequate rest.

Grass Tetany

Livestock producers should be aware of the potential for grass tetany on lush grass. This problem is generally more prevalent on domesticated grass pastures such as crested wheatgrass and smooth bromegrass that lack old growth (residual growth from previous year) and native rangeland grazed in April and May. Grass tetany occurs most commonly on Pastures grazed in April and May because of a deficiency in magnesium or calcium. Tetany is most commonly associated with cows that are six years old or older and are nursing calves under 2 months of age.

Producers can prevent grass tetany by providing plenty of magnesium mineral prior to and during the period livestock are on pasture in April and May and by grazing domesticated grass pastures containing significant amounts of old growth. Grazing should not start before the three leaf stage because the more mature grasses will have a more balanced ratio of-available magnesium than will young grasses.

Early grazing of pastures with grass-legume mixes such as CRP would be beneficial because legumes have two to three times more magnesium than grasses. High risk pastures with little or no old growth should be only cautiously grazed by less susceptible animals (heifers, dry cows, stockers, cows with calves 4 months of age or older, dry ewes, and yearling sheep). Animals that have previously had grass tetany will tend to experience recurrence of the condition. To prevent grass tetany, producers should incorporate a combination of these precautionary steps.

Table 1. Comparisons of costs, production, and net returns of starting grazing before and after the 3rd leaf on seasonlong and twice-over rotation grazing systems on native range.

		Seasonlong starting prior to 3rd leaf	Seasonlong starting after 3rd leaf	Twice-over rotation starting after 3rd leaf
Stocking rate (acres/AUM[1])	(ac)	4.04	2.86	2.04
Calf ADG[2]	(lb)	1.80	2.09	2.21
Calf gain/acre	(lb)	13.59	22.55	33.64
Pasture cost/cow/calf pr	($)	212.34	111.25	78.84

@ $8.76/ac	($)	212.34	111.25	78.84
Cost/lb calf gain	($)	0.64	0.39	0.26
Net return/cow/calf pr @ $0.70/lb	($)	18.24	89.18	133.10
Net return/care @ $0.70/lb	($)	0.75	7.08	14.79

[1]acres/AUM indicates number of acres per animal unit (1,000 lb cow and calf) for one month.
[2]Calf ADG indicates calf average daily gain.

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