California Grazing Academy

Out of Feed: The Vicious Cycle

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The single biggest mistake people make in controlled grazing is providing too short a rest period for their paddocks. This is especially true in winter.

Last July I visited a grass farmer near Dubbo, Australia (July in Australia is equivalent to January here). Colin was in big trouble. He was out of feed. It started like this: Cattle were scheduled to graze for 6 days in each paddock during the winter in his 16 paddock grazing cell. That would give a rest period of 90 days: *6 days x 15 paddocks resting = 90 days rest.*

That seemed like a reasonable rest period for the slow growth of winter. However, in the first paddock, instead of grazing for 6 days, Colin only stayed 5. He told me that he'd either under estimated how much his cows would eat, or over estimated how much feed he had. He was also short of feed in the next paddock and stayed only 5 days there too. He was running out of feed in every paddock and continued to cut one day of the planned graze period. By the seventh paddock the feed shortage was getting even worse. The herd was out of feed after day 4, so he cut the graze period by another day. The last two paddocks had even less feed. Out of feed after just 3 days, he again reduced the graze period so his animals would have something to graze. By the time he got back to the last paddock it had only rested 66 days:

PAD. #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Planned GP	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Planned RP	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Actual GP	5	5	5	5	5	5	5	4	4	4	4	4	4	4	3	3
Actual RP	90	89	88	87	86	85	84	83	81	79	77	75	73	71	69	66

By shortening the rest in the first paddock he had shortened the rest (and, therefore, grew less feed) in every paddock in the cell. When I met with Colin he was three months into his winter rotation, passing through paddocks for the second time. He was out of feed after just three days in each paddock so he was moving the herd even faster:

Actual GP	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2
Actual RP	63	61	59	57	55	53	51	49	48	47	45	43	41	39	37	36

Do you see how once the decision is made to move faster it becomes a vicious cycle? We move faster because we are out of feed, but we can't grow the feed we need because we are moving faster (not allowing adequate recovery time). If Colin had resisted the temptation to move faster would he be in the trouble he's in?

NOT JUST GRASS...MONEY

On Colin's ranch there is only about 4 pounds of growth (dry weight) per acre per day during this slow growth period. In rough terms that means that for every day of rest Colin gave away, he lost two tons of feed from the 1000 acre cell!

4 Pounds/Acre/Day x 1000 Acres = 4000 Pounds/Day

By the time he returned to paddock 1 he had lost 54 tons of forage!

4000 Pounds/Day x 27 Days = 108,000 Pounds

Let's assume that his cows required about 30 pounds of dry matter each day. That means by deciding to shorten the rest periods Colin decreased the carrying capacity by 3,600 Cow Days!

$$\frac{\text{108,000 Pounds}}{\text{30 Pounds/Cow/Day}} = \text{3,600 Cow Days}$$

To avoid severe overgrazing he's going to have to sell some cattle.

BOOM OR BUST

But isn't Colin in trouble if he doesn't move? Of course he is. By the end of the graze period he has a mob of hungry, bawling cows, impatient to be moved. Let's take a closer look at his problem by thinking about what Colin's cows actually get to eat. Turned into a lush field of fresh grass, the cows probably eat like pigs on the first day of the graze period. They probably ate much more than they required. Research on stocker cattle in Humboldt County showed that steers ate up to 7% of their body weight on the first day of the graze period, approximately double their actual requirement. The steers ate a little less on each subsequent day, until the last day of the graze period when they didn't eat at all. The cows ate less as time went on for two reasons. First, there was simply less to eat. But, equally important, was the reduced quality of the feed left. The best feed had already been grazed and what was left was soiled by dung, urine and trampling.

CONTROLLED STARVATION

New Zealand Dairy farmers have come up with a strategy that minimizes this "boom or bust" scenario and provides adequate rest for their paddocks.

When farmers want to provide more rest, they subdivide existing paddocks with temporary electric fencing. A 6 acre paddock that may have been grazed for 2 days during periods of fast growth may be split into 3, 2 acre paddocks, or 6, 1 acre paddocks. Each paddock may be grazed for 1 to 2 days. This way, farmers lengthen the rest period (spending 6 to 12 days where they previously spent only 2). They are able to precisely control the intake of

their cattle. Rather than the binge and diet grazing we see with Colin's cows, a cow on a Kiwi dairy is eating a consistent, controlled quantity each day. The Kiwis call it *"controlled starvation"* because, if the cows had their way, they would eat more. The farmers are controlling the herd's intake.

OTHER OPTIONS

Colin's cell may have been slightly overstocked at the beginning of winter. He could have escaped serious trouble if he'd sold some stock or leased some pasture for part of the herd. He could have stayed with the original longer graze period and fed a little hay. He could have stayed in one paddock for a long time (a sacrifice paddock) to allow all the other paddocks to get the rest they needed. He could have controlled daily intake like the Kiwi dairy farmers by subdividing paddocks. Each of these options has pros and cons, but each is preferable to the disaster Colin created.

GREEN FUZZ: FIGHT THE URGE TO GO FAST

With the onset of the first rains of autumn our rangelands should soon be turning to fields of green fuzz. While fall temperatures may be warm enough through early November to provide some growth before winter, graziers should stick with conservative stocking and *SLOW MOVES.*

The temptation for graziers to speed up the rotation (shorter graze periods--shorter rest periods) is strong. After all, some of you haven't seen a green blade of grass outside of Candlestick Park all summer long. But the fall flush, if it occurs at all, is at best brief. Much more important than utilizing this small amount of growth during this brief period is the three months of "green drought" ahead (December-January-February). Drought management principles apply in winter. (For a free copy of the *Livestock & Range Report No. 911: Planning for Drought*, please call).