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Adaptive Grazing Q&A

Allen Williams left the security of a tenured full professor and research position at Mississippi State University to become a sixth generation farmer and adaptive grazing consultant in 2000. Here's some of what he's learned from observing his own operation and from graziers across the country.

Q1 What is adaptive grazing?

A: It's a system of grazing that is completely non-prescriptive, with no formulas. The very moment you try to turn grazing into a prescription, a formula, or a recipe is the very moment you are no longer adaptive and regenerative. When I got into this, I was looking for something that allowed me to fit in with the conditions I was experiencing every day––what was nature throwing at me every day, every month, every year. And how would I tailor and fit that grazing to be able to work with what nature was throwing at me rather than against nature?

Q2 How is adaptive grazing different from conventional grazing?

A: In the past, we sort of worked against nature in the way we grazed. We tried to make grazing very prescriptive in nature. It worked for a while, but we always hit a wall––some kind of barrier. Long term it never works. What we want is to be able to very quickly adjust and flex according to the conditions we see.

Q3 Does adaptive grazing work in South Dakota?

A: In addition to our own farming experiences here in the Deep South and the grazing that we do, we have helped people implement adaptive grazing in virtually every corner of North America and in many other places around the world.

Because we have implemented it in virtually every type of scenario and environment that you can imagine, I can say it works equally well no matter what. It is a form of grazing that that allows you to be successful in any climate; hot, cold, temperate, arid, it doesn't matter.

Q4 Is this kind of grazing labor intensive?

A: A lot of people think this is going to require a lot more labor. But you actually reduce your total annual labor burden because you're no longer raking and baling hay, feeding hay all winter long, etc. like you used to do. Instead, you're spending that time observing your livestock and landscape, and managing accordingly.

Q5 What are you trying to observe?

A: There are a number of key things we pay attention to on a day in, day out basis. We're going to look at the soil every day. How is grazing impacting my soil, what's happening beneath the soil surface. We carry a shovel, a sharpshooter or spade. I want to see what's happening with soil aggregates. Am I building aggregation or not? I call it the cottage cheese of the soil, except this should be black cottage cheese. Some people call it a chocolate cake appearance to the soil. What you should be seeing is a very friable soil that has a lot of pore space for water infiltration and oxygenation and all of that to occur. And we look at both the size of those aggregates and how deep those aggregates go.

Another thing we observe is the total plant leaf volume. We always want to leave plenty of leaf volume for protection of the soil surface, to keep it from heating up and losing moisture, and to allow it to regrow and repair and to continue to feed the microbes beneath the soil.

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Questions and Answers (continued)

Q6 Does adaptive grazing include rotational grazing?

A: Some people refer to adaptive grazing as adaptive multi-paddock grazing management. Daily observation is crucial to what we do now under most adaptive grazing systems. We do like to move once every day or as much as we can––that's really an important part of it. But we want to make sure we spend plenty of time each day in the art of observation. What is the grazing impact we see as a result of of that day's grazing events? And then based on that, how do I need to adjust what I do tomorrow? Observe and adjust. If we do that, everything works better.

Q7 Why leave so much good feed in the pasture?

A: Root growth matters a lot, particularly in areas that can be hot and dry, like South Dakota. Research has shown that we can graze up to 50% of plant leaf volume and have less than 5% root growth stoppage. But if we go from just 50 to 60%, we have 50% root growth stoppage. And if you graze more than 60% of that plant, you'll have 80 to 100% root growth stoppage. You've got to have functioning roots in the soil to feed microbes and develop that cottage cheese structure.

Q8 Any particular principles that apply in adaptive grazing?

A: In the two decades-plus we've been working on this and refining it, we have come up with what we call the three rules of adaptive stewardship. We stress these points and teach these three rules to everybody we work with:

- ***The rule of compounding.*** In nature and in biology, there never are any singular effects. Everything creates a series of compounding, or cascading effects. And those effects are never neutral. They're either positive or negative. We want the positive cascading effects.

- ***Consistently work at increasing diversity.*** Boost diversity in everything—microbes beneath the soil, plant species, insects, birds, wildlife, the whole bit.

- ***The rule of disruption.*** This rule is absolutely core and key to being truly adaptive in your grazing practices. Being disruptive means there's a whole series of planned, purposeful disruptions we can introduce to keep things non-prescriptive. We shuffle up the disruptions so we're not doing the same disruption all the time, or at the same time of year.

Q9 Where is the research on this kind of grazing?

Having lived in that research world, we we got all entangled in the reductionist model, trying to control as many variables as possible. But when we're looking at research into adaptive grazing or regenerative farming and ranching, it doesn't fit that reductionist model at all.
it takes a researcher with a different type of mindset, what I would call old style observational-based research, and you have to account for numerous variables at all times.
That means we can't we can't do this type of research on a small plot or even university research station status. It's got to be done on real farms, real ranches across regions. Those become our replicates. This research is very doable, but it's just much larger scale. It takes a lot more time and it takes a lot more resources to be able to do it effectively.

Dr. Allen Williams is a 6th generation family farmer and founding partner of Understanding Ag, LLC and the Soil Health Academy. He has consulted with more than 4000 farmers and ranchers in the U.S., Canada, Mexico, South America, and other countries, on operations ranging from a few acres to over 1 million acres.