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EPISODE NAME: How Grass Farming Improves Water and Soil Quality

It's a lot easier to follow nature than working against it all the time. Today on Across the Fence we graze the landscape to learn how farmers are improving the air land and quality of Lake Champlain just by watching the grass grow. Good afternoon and thanks for joining us I am Judy Simpson. When people think of Vermont one of the scenes that always comes to mind is a landscape dotted with cows. But what often gets taken for granted is the grounds that those animals are standing on. Pasture raised beef gets a premium price so it only makes sense that the quality of the soil should match or even exceed the value of the land that's being produced. The farmer and Highgate has a whole approach that puts what's underground above everything else. Across the fence is Keith Silva has our story.

At Maplewood Organics in Highgate ... the cattle are kind of a coincidence ... almost a second-thought, almost.

Eric Noel//Maplewood Organics: “By building the soil and making the soil the best that I possibly can and increasing fertility and energy in the grass the beef is going to be second to none. That’s just what happens, so I don’t focus on that.”

Noel’s focus is on the soil. He’s built his 300 acre farm from the ground up ... using a practice called holistic management planned grazing. A mouthful to say, but in reality it’s a “down-to-earth process” that emphasizes the bond between the land and the air.

Noel: “You want that grass to regrow to its full potential to get the most energy out of that grass as possible [...] so the more roots you can grow the more cycling of carbon and nutrients you have within that soil and that’s what my job is is to basically collect carbon from the atmosphere, put it in the soil and
also add nutrients and make that biological system of the soil cycle the
nutrients quicker [...] that’s my whole job is to just aid mother nature and have
things expand on themselves.”

Noel grew up on this farm, he moved away in 1999, but returned to Vermont to
farm and raise a family in 2003 ... if that makes him sound like the ‘back-to-
land, earthy-type,’ think again.

Noel: “I’m pretty much polar opposite of the hippie. I’m trained as an auto
mechanic; I was an Indy car mechanic. I mean, I was all into the gearhead
stuff. Holistic to me means, whole thinking, I mean I look at this farm and look
at all the pieces working together with nature and then I look at nature for
some lessons sometimes. It’s a lot easier to follow nature instead of working
against it all the time. That’s holistic. Everything is synergistic; everything
works together. So, if you can see that and just add in where you can help that
it will actually grow itself instead of having to work as hard as possible to make
something happen that you want to happen.”

It’s perhaps his training as a mechanic that drives Noel to always gauge how
well his farm is performing.

Noel: “I want to keep my soil here and I want to increase the fertility and the
potential of my soil and grasses. I want to get that soil so it’s, basically, if you
cut into it it looks like chocolate cake so you know it’s nutrient dense and its
providing the highest density of nutrients for the cattle which in turn will
provide high nutrients for the people that eat the beef. I call it grass explosion.
I mean you graze off and twenty days later you can have just as much grass as
you had twenty days ago when they ate it off. I want to increase the amount of
animals this land will support which also goes to my bottom line, but also
increases the performance and water quality of the land itself.”

One way that Noel has found to ratchet up his performance is to constantly
move his cattle ... six times a day if necessary.

Noel: “I move my animals more in the afternoon because the sugars are higher
in the grass as the sun has been shining its building that sugar in the grass
which will put more weight gain on my cattle. So I’ll generally move one or two
times in the morning and then 4 to 5 times in the afternoon just to take
advantage of that grass and the more often you move those cattle the more
they’re going to eat so the more they’re going to gain. Add all these little things
up and you get an increase in performance and that’s pretty big in the end.”
Moving cattle once can be a time-consuming activity let alone half-a-dozen times. To speed up this process ... Noel uses tumble wheels. A product native to New Zealand that has allowed him to double the number of times he moves his animals.

Noel: “This is the first year I’ve used them. Takes longer to get out here than it does to do the move ... because you can move them in 30 seconds or less, because the cattle are trained to it.

Jenn Colby oversees the pasture program for the University of Vermont Extension’s Center for Sustainable Agriculture. She’s helped facilitate workshops here so that other farmers can learn from Noel’s innovative practices.

Jenn Colby//UVM Extension: “This farm is a classroom in many ways. I think one of the important things to go back to in pasture and grazing is that some of the real basics take about 5 minutes to learn, maybe ten, but really a lifetime to master. There’s a reality check when a farmer is trying something and can say it worked or it didn’t work and share those results with another farmer. Than it allows that other farmer to put it through their own decision making filter and decide if it’s going to work for them or not. And that’s something the farmers really want, can they take something and go back to their own farm and apply.”

Maplewood Organic’s website touts Noel as the ‘organic mechanic’ – it’s a title that sums up both the man and his mission.

Noel: “I’m a tuner, tweaker, so once I get this system going when I see I can make a little bit of a gain with just a little bit of adjustment that what I do I keep working on it, adjusting on it until eventually I’ll get to my goal.”

At Maplewood Organics ... the cattle may ‘only’ be a product of the farm, but they’re right in step with Eric Noel’s ‘whole’ approach to farming. In Highgate, I’m Keith Silva with Across the Fence.

Judy.: I'm joined in the studio now I with Eric Noel and Jen Colby. Welcome to both of you. Eric where did you learn about the holistic farm management technique and how to choose sort of make that leap from a mechanic to a farmer?

Eric.: I learned holistic planned grazing through the book actually. A book written by Alan savory holistic management. Then I have a close friend whose local to me and he was a planned a grazing practitioner instructor so I took the courses and he taught me that. The transition from mechanics to farming. I
grew up on the farm and managing now. My father was a dairy man and then I
went to school for auto mechanics and did that for a while. My wife actually got
thyroid cancer and we started looking at eating healthier organic and we
figured we could do that with our farm so we came back after my bit in the indy
car field.
Judy.: So you're focus is the soil in the air. How and where does water enter the
management?
Eric.: Whenever arrange the water hits the soil and if it's not covered and you
have a good route system is generally running off for roots and the grass is
what holds the nutrients and cycles the nutrients so if it's open soil uncovered
then those nutrients can be taken with the water and when it runs off it runs of
two streams and itchies and eventually into lake Champlain.
Judy.: You've taken some video of water running off your farm compared to the
runoff of other farms nearby let us take a look at that and you can tell us what
we see in the video.
Eric.: OK this is in the back of my farm. This is where water is converging one
from the management of all crop land corn and soy on the left and this is water
from dairy farms which is generally a 50\50 grass corn and soy crop land.
Judy.: The difference is the cloudy part.
Eric.: That there is all open soil. Soils been told all the way to the waterway so
there's no grass or root system to basically hold that soil in place.
Judy.: It obvious that prevents it or filters it from going into the lake.
Eric.: Exactly.
Judy.: Jenn do farmers often think about the animal first as opposed to the
land and the water when they're raising beef or pasture cattle?
Jenn.: I think every single farmer comes at it from a different side so there are
farmers who will move their animals more often because there thinking about
it from the animal side. Their farmers like Eric who think about it from the soil
and plant side and they don't need to be mutually exclusive but it's a very
interesting thing there's not one side it depends on whether you're an animal
person or whether you are really trying to manage the lands to its maximum.
Judy.: Aren't they sort of interconnected though?
Jenn.: There definitely interconnected and like I said they're not mutually
beneficial but it's funny on a daily basis you may get a person who says the way
that I'm managing is to make my animals as fat as possible warren the way
that I manage is to create the soil and the grass. The way that Eric manages it
works well for both sides of that and I think that's one of the reasons why he's a
great example is that you don't have to choose between whether your animal
focused or land focused.
Judy.: Do you have to have a lot of lands to do this Eric?
Eric.: Not necessarily. There is a tipping point to where works well and not well. I'm still actually on the smaller side. A good size to make a real good progress would probably be 1000 acres with 1000 animals.

Judy.: What is the Vermont Grass farmers association Jenn and how does it differ from the Vermont pasture network?

Jenn.: Certainly the Vermont Grass farmers association is a farmer nonprofit it's a 501C3. I actually provide the staff support for that organization through the Vermont pasture network in the arrangement that we have. The network that we have is really focused on education and sharing a lot of the lessons learned in the network itself is made of the UVM Center for sustainable agriculture and the grass farmers and the USDA NRCS. NRC as is helping to support some of these activities and also the center provides staff support. And Grass farmers and actually Eric is a board member of the grass farmers association. The grass farmers really provide a lot of guidance for what the network itself does and we also do an annual conference. We do educational workshops pasture walks and a lot of materials like that. It's very highly interconnected but also separate entities.

Judy.: Do you find the more farmers are interested in this?

Jenn.: Over the years definitely I have seen a lot more farmers who have begun. It's easier to start a system this way then it is to transition assist in this way for system management. Sometimes that's a change in the farmer sometimes it's just a change in the infrastructure but over the years I've definitely seen a lot of transition. That's very positive.

Judy.: What would you say to someone who has acreage and says they want to start raising animals on pasture Eric? What would the first thing they should do?

Eric.: Each situation is different but the first thing is infrastructure fencing and stuff and then to learn the planned a grazing because from what I've seen it's the best way to get everything you want because you're focusing on that Grass plant and its root system and the biological activity cycling which will hold the nutrients that those cows leave on the ground and cycle them into the soil instead of having them runoff.

Judy.: Speaking of those nutrients do you have to do anything different manure management wise?

Eric.: No the system pretty much covers all. With this kind of grazing you're feeding that biological system so even though I'm putting more feed through these animals there producing more manure it breaks down a lot quicker. When I first started this system when a transition and I could see manure pat from the year before still on the ground that wasn't decompose yet and now its 20 are 30 days and it's broken down into the soil because of all the earthworms dung beetles and microbiology bacteria just eat it up and cyclic quicker into the
soil so it's all bonded into the soil basically instead of being able to run off. It's not just sitting there on the top.
Judy.: Also I would imagine if the grass is thicker and taller than runoff would be hard are as well.
Eric.: Yes when you have more leaf area like that the rain is going to hit those leaves and it's going to slow the water down. With this system you want to slow the water cycle and speed the biological cycle because you'll get more water retained in the soil so when it's dry you'll have more water and it will also take more water on when you have heavy rains because you have more porous soil and it's working better.
Jenn.: And earthworms.
Eric.: It has more water capacity to hold a heavy rains.
Judy.: Do you think the local food movement is going to leave more farmers to press farming and raising animals on pasture?
Jenn.: I think that it is I see it constantly that there are farmers who are wanting to respond to demands and consumer demands. Tasty local lee raised foods that they can link back to positive environmental quality is a win for everybody.
Judy.: All right if you'd like to learn more about the maplewood farm you can visit their website go two maplewood organics dot biz we also listed the web site for the UVM Center for sustainable agriculture where you can get in touch with Jenn and learn more about everything that's going on with pasture research and programs at the University of Vermont. Thank you both for being here.
That's our program for today I'm Judy Simpson we'll see you again next time on across the fence.
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