



Pasture Planning from the Ground Up

October 2022 Newsletter

by Jeff Semler, University of Maryland Extension

We hear a lot of things when it comes to pasture planning. We hear things like stocking rate, rest, rotation, strip grazing, stockpiling, warm seasons versus cool seasons, and annuals versus perennials, but how often do you hear soil sampling? Not often, I'll bet.

I hear of people that lime every other year or apply fertilizer in the spring or is it the fall. My question is, how many of them do this based on a soil test?

In Maryland, soil sampling cropland and hay acres are commonplace thanks to the requirement of a Nutrient Management Plan. Pastures pose extra challenges due to topography and grazing utilization patterns.

However, a practical first step is to get a baseline understanding of soil fertility to improve pasture health, productivity, and longevity.

Here are some tips from Extension specialists to help you collect representative soil samples of pasture to improve forage productivity through the soil.

Plan ahead.

Identify a certified soil testing laboratory that completes the desired analyses. Utilize the expertise of your Extension agents and specialists to identify the appropriate analysis

package to best meet your goals and track soil parameters over time.

For example, if the primary goal is to use soil tests to make fertilization decisions, soil pH, organic matter (OM), phosphorus (P), and potassium (K) are critical measurements.

Other soil test packages may be more appropriate if you have some carbon or microbial activity-related goals.

Establish the depth soil cores will be taken—two inches for monitoring pH on no-till cropland and pasture, and eight inches for fertility samples on cropland and pasture.

Make a game plan.

Consider how the soil test results will be utilized to make management decisions.

Rather than collecting a whole pasture sample, consider taking samples based on similar management units, paddocks, or grid sampling.

For areas inaccessible to fertilize, don't sample. Other places to avoid sampling include within 150 feet of limestone roads where road dust may influence the soil and areas of concentration like feeding areas, wet areas, livestock waterers, or loafing areas where significantly higher levels of manure

and urine are deposited.

Collect a representative sample.

Start with clean sampling materials. Walk in a random, zigzag pattern in the sampling area and take 15-20 cores. Discard and re-sample a core if it looks or feels significantly different from other cores in the composite sample.

Remove the grass tuft on top, and compile the cores in a plastic bucket. Thoroughly mix, and then use the combined cores to fill the soil sample submission bag to the appropriate level.

Each soil sample bag submitted should represent a single management unit. To speed up the process, mark a line at desired core depth on the soil probe with tape to maintain consistency.

Dry the sample by spreading it out in a warm place overnight to air dry it. DO NOT HEAT the soil.

Prioritize limiting nutrients.

With high input prices, it may not be economical to address all nutrient shortfalls in one year, so assess limiting nutrients and prioritize which nutrient applications will provide the most return.

(article continues on next page)

(continued from previous page)

The first thing to address is soil pH. Grass-based pastures will tolerate a wider pH range (6.0-7.0), while legume-mixed pastures require a minimum pH of 6.5.

Legumes have the greatest response to improved pH, so lime application is necessary to increase or introduce legumes into a pasture.

Correcting soil pH in pasture also favors the natural introduction of new grass and legume species.

While N is often the first nutrient applied because of the obvious yield response, inadequate levels of P and K can be limiting factors in yield boosts. Correcting P and K from low or very levels to optimum levels can improve pasture yield by 65% and 80%, respectively.

Still, application above optimum level typically doesn't warrant an additional forage yield.

Be consistent.

Ideally, sample each pasture every three years to monitor soil fertility and health changes.

Collect at a consistent time of year to reduce the variations driven by the environment. For example, the same area sampled in the fall will look different in the spring.

Avoid sampling in wet or very dry conditions. Time soil sampling to occur six months before desired fertilization to get the best return on investment from the fertilizer input.

There are apps available to help track and summarize soil changes over time, but a pen and paper or spreadsheet will do the trick.

Adding a week's worth of grazing can save the cow herd approximately 6% in harvested feed expenses.

With high stored feed costs, there is value in prioritizing soil fertility and subsequent forage productivity.

~~~~~

Source: Iowa State University and the University of Maryland.

## Fall Checklist

by Matt Booher, Virginia Cooperative Extension

Scout fall-planted stands of grass for winter annual broadleaf weed pressure (e.g. henbit, speedwell). Herbicides used to enhance forage establishment can often prevent weed issues down the road. Seedling grasses should be at the 5- to 7-leaf stage before spraying.

Fertilizing pastures with poultry litter now will have less effect on fall yield, but will still improve fall root growth and plant vigor next spring. Virginia Department of Conservation and Recreation nutrient management standards recommend to end poultry litter applications on pasture by November 1.

With the fall flush of grass growth slowing and many areas experiencing dry conditions, be cautious about pastures containing perilla mint. It is most toxic this time of year, and livestock are often drawn to it when forage becomes scarce.

Make sure fall-calving cows have plenty of good quality pasture; if pasture is limited due to dry conditions, feed hay. Immature first cutting or second/third cutting blade hay is needed to match nutrient requirements of lactating cows. Also, switch to high-mag mineral for lactating cattle if you haven't done so already.

Make plans for later this fall to evaluate body condition on winter-calving cows. Cows that are a body condition score (BCS) score 4 should gain 150-200 pounds to reach a BCS 5 with high quality forage or supplements. Research at Oklahoma State University found cows that were at a BCS of 6 at calving had a greater pregnancy rate for the next breeding season (91% compared to females that were at a BCS score 5 (81%) or 4 (60%) (Selk, et al. 1986)).

In preparation for weaning: consult with your veterinarian and make sure calves have had all needed clostridial and respiratory vaccinations. Ensure calves have a proper immune defense before weaning. If fenceline weaning, check fences and make sure electric fences have a minimum of 3,000 volts.

There may still be time this fall to spray perennial weeds, depending on the weed species and your geographic location. Foliage must be green and healthy for spray applications to be worthwhile. Fall is a great time to spray for seedling biennials (like thistles) and winter annuals (like yellow rocket).



# When is the Latest I Can Graze/Harvest My Alfalfa or Orchardgrass in the Fall?

by Dr. John Fike, Virginia Extension Forage Specialist

“When is the latest I can graze/harvest my alfalfa or orchardgrass in fall?” Of course, the answer to that is quite simple; anyone who’s spent time talking with a university professor could figure that, “It depends!”

First, that question should be answered based on the plan for the field/stand in the coming season. If the field will continue as a hayfield or pasture in 2023, it’s important that the stand be nurtured this fall, which will affect management decisions.

If the field will be used for some other purpose, then management for stand longevity is no longer a worry and you can hay or graze in any time frame.

To overwinter, a healthy alfalfa stand relies on the proteins and carbohydrates (often called “root reserves”) that are stored in roots.

Following harvest in fall, alfalfa will rely on these stored nutrients for 7 to 10 days to develop new top growth, but the plant will continue building root reserves for another 4 to five weeks. Without a complete five- or six-week period of root replenishment, the plant will enter the winter in a weakened state and at greater risk of mortality.

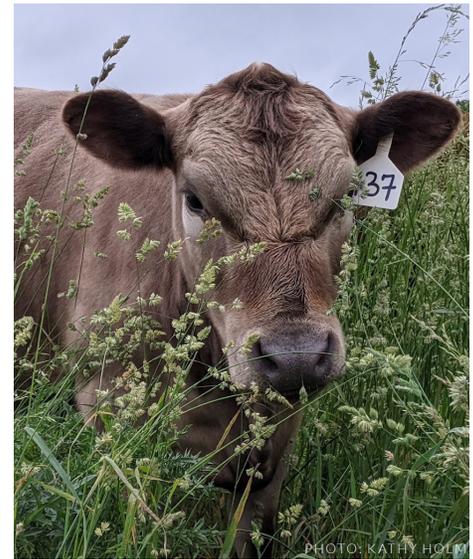
Generally, one can cut at or soon after a killing freeze (a period with several hours of 23-24°F temperature) and have no negative effects on the stand because the freezing conditions encourage the plant to go dormant and root reserves are not spent on new growth.

Thus, if you know your typical killing frost date, you can generally consider 4 to 5 weeks before that time as the appropriate window for harvests during the growing season.

If plants are stressed by harvesting without sufficient time to regenerate reserves, they may still make it through the winter; however, they can still be prone to poor growth or death in spring if they break dormancy during a warm spell and then experience another deep freeze.

Orchardgrass is a little different than alfalfa in that the carbohydrates and proteins that sustain it over winter are stored in stem bases as well as roots.

Like alfalfa, orchardgrass needs about five weeks to replenish reserves in fall. Unlike alfalfa, close cutting will both reduce orchardgrass’ capacity for regrowth (by taking away leaf tissues) as well as some



of its stored nutrient supply—needed by the plant to overwinter.

Thus, keeping a higher stubble height is important for management. A 6-inch stubble height is a common recommendation.

One more note that is applicable to both species and important in an era of high fertility prices: If you desire to keep alfalfa or orchardgrass stands for use next year, be sure that your fields have adequate potassium.

Potassium plays important roles in helping these plants tolerate environmental stressors, including cold temperatures, and potassium is more likely to be low in hayfields if the forage is routinely being harvested and removed.

# Working Alongside Farmers to Bring Back Our Grassland Birds

by Justin Proctor, Smithsonian’s Virginia Working Landscapes

Virginia farms have *always* been a place for birds. So much so that you might be hard-pressed to find a farmer that doesn’t have an anecdote about any number of our iconic bird species.

Most will be familiar with the sharp look and melodious song of the Eastern Meadowlark perched on a fencepost, the hauntingly beautiful face of a Barn Owl gliding over a hayfield at dusk, and the unmistakable—and highly sought after—“bob-white” call echoing from the back edge of a field.

Many farmers will also be familiar with other “barnyard favorites”, including Short-eared Owls, Northern Harriers, American Kestrels, Barn Swallows, Purple Martins, and Red-winged Blackbirds.

But when it comes to birds that can be found on our agricultural grasslands—hayfields, cattle pastures, fallow fields, and the like—well...that list goes on...Bobolinks, Grasshopper Sparrows, Savannah Sparrows, Field Sparrows, and on...Indigo Buntings, Yellow-breasted Chats, Horned Larks, Loggerhead Shrikes, and on... In fact, there are over 50 species of birds that rely on Virginia’s working grasslands for breeding, nesting, foraging, and refuge throughout the entire year.

And just as these species need grasslands, the grasslands need *them*. These birds offer priceless and irreplaceable ecosystem services that keep grasslands healthy and balanced, from insect and rodent control to seed dispersal and nutrient recycling.

However, the majority of grasslands in Virginia have, over time, been converted to “working landscapes,” and over the last century those landscapes have been worked harder and harder.

So much so that native grasslands have suffered the most intense impact by humans of any of North America’s terrestrial ecosystems.

This has unfortunately resulted in grassland birds experiencing a steeper decline than any other guild of birds, with some species seeing declines of more than 75% over the past fifty years.

*(article continues on next page)*

(article continued from previous page)

With the majority of remaining grasslands in Virginia currently held in private hands and under agricultural use, the onus for grassland conservation has fallen largely on landowners and agricultural producers.

Recognizing that balancing the needs of grassland bird conservation as well as the demands of working agricultural lands can be a complex conservation challenge, Smithsonian's Virginia Working Landscapes and the Piedmont Environmental Council came together to create a collaboration that could help create solutions—the Virginia Grassland Bird Initiative (VGBI)—and brought on American Farmland Trust and Quail Forever as lead partners.

The combined capacity and expertise of these organizations allows the initiative to offer landowners and producers a start to finish pathway for implementing a suite of win-win conservation practices tailored to their working landscapes.

VGBI Coordinator, Justin Proctor, explains the initiative's approach: "What we have created with these partnerships is the ability to conduct research on working lands that is locally relevant, addressing the needs of our community of landowners and producers, and then translate that research into tangible management practices. We are able to bridge what's referred to as the research-implementation gap, which means that we can take new information we learn and directly apply it to conservation action on farms."

Indeed, Virginia Working Landscapes (VWL) has spent more than a decade studying Virginia's plant, pollinator, and bird communities on working lands, trying to better understand the obstacles that our local plant and wildlife communities are facing.

Through this work, VWL has helped grow a vibrant community of landowners, producers, researchers, and citizen scientists working together to restore biodiversity—and in turn, greater ecosystem services and landscape resiliency—to working lands in Virginia.

The Virginia Grassland Bird Initiative uses this knowledge to better raise awareness about the plight of grassland birds, and identify science-based best management practices

that can simultaneously benefit grassland birds, landscape resiliency, and farmers.

"We are careful to make sure that we create a conservation plan for landowners and producers that can work for their production goals," says Justin. "The goal here is to find win-win compromises for grassland birds and agriculture, and the great news is that we are developing a handful of methods that work very well."

One such success story is the initiative's new in-house financial incentives program that pays farmers to adopt bird-friendly practices into their operation.

Eligible practices include either delayed spring haying or summer pasture stockpiling—both of which protect grassland birds and their young during the vulnerable nesting season.

VGBI's Co-coordinator, October Greenfield, oversees the incentives: "Delaying the first hay cutting in the spring until at least early July is a game-changer for allowing the bulk of our grassland birds to fledge at least one successful clutch of young, which quickly changes a hayfield from a population sink to a population source," explains October. "And while a delayed cut may not work for every farmer, it can work for many of them, especially in cases where producers aren't targeting high protein hay."

Meanwhile, summer pasture stockpiling involves rotating cattle off of select pastures in the early spring to allow a stockpile of grass to grow and be available for grazing in the summer, when hot temperatures normally reduce available forage.

"More and more evidence supports the positive impacts of rotational grazing—for cattle, soil health, and forage quality. Meanwhile, strategically stockpiling forage for the tough summer months means less dependency on needing to supplement cattle with hay. Excitingly, this practice works very well for grassland birds as well, as we are able to work with farmers to select stockpile fields that are conducive for their needs and also where nesting activity is most dense."

In its first pilot year (2022), the incentives program enrolled more than 1,800 acres into these bird-friendly best management practices. The 2023 incentives program



Eastern Meadowlarks are grassland birds that build their nests in hayfields and cattle pastures. Haying and grazing practices can be modified to allow these at-risk birds to successfully nest and fledge their young.

will be opening its enrollment soon. If you are interested in learning more, please visit [vagrasslandbirds.org/incentives](http://vagrasslandbirds.org/incentives).

Agriculture covers more than 8 million acres in Virginia, roughly a third of the entire landscape. Such an extensive presence makes working landscapes a dominant "habitat" in our state. Therefore, the opportunity to make this habitat more productive for a diversity of wildlife, including the suite of grassland birds that fully depend upon it, is one that we should seize.

For more information on Smithsonian's Virginia Working Landscapes and the Virginia Grassland Bird Initiative, including their upcoming events, programming, and ways to get involved, don't hesitate to reach out:

Justin Proctor  
Coordinator, Virginia Grassland Bird Initiative  
Smithsonian's Virginia Working Landscapes  
[Vagrasslandbirds.org](http://Vagrasslandbirds.org)  
[ProctorCJ@si.edu](mailto:ProctorCJ@si.edu)

October Greenfield,  
Co-coordinator, Virginia Grassland Bird Initiative & Incentives Program  
Piedmont Environmental Council  
[OGreenfield@pecva.org](mailto:OGreenfield@pecva.org)

Amy Johnson,  
Director, Smithsonian's Virginia Working Landscapes  
[Vaworkinglandscapes.org](http://Vaworkinglandscapes.org)  
[JohnsonAE@si.edu](mailto:JohnsonAE@si.edu)

# Managing for Both/And

by Dr. John Fike, Virginia Extension Forage Specialist

Recent placement of the monarch butterfly on an endangered species list (compiled by the International Union for the Conservation of Nature) highlights the growing concern about biodiversity loss.

Factors driving this loss include climate change, environmental toxins, and supporting species loss.

A quick, flippant response to the butterfly's new status might be, "Aww, who needs the butterflies anyway?" and the short answer is "We all do."

True, you might not need the butterflies or the plant species that they depend on for your daily sustenance, and you probably don't eat white rot fungi, earthworms, beetles, millipedes, and other detritivores, either.

However, if today all those species stopped working to convert dead plant and animal material back into soil organic matter, we'd be in a heap (literally) of hurt—or at least a deep mess.

Increasingly, agriculturists are realizing that our (human) survival and well-being is more tightly linked to the well-being of other organisms than what we might have considered in the past.

There can be definite tensions between managing farms and ecosystems to achieve multiple outcomes.

Part of that may be based in how we're paid. It's easy to see the value in products (like steak, potatoes, ketchup, and napkins) but the value of provisioning services (including pollination, water filtration, nutrient cycling, and carbon sequestration) may be a bit more obscure—and we don't get paid directly for that.

Another part of that strain likely arises out of how we view ourselves.

If we are simply livestock producers or forage growers, we may miss our part (and opportunity) on the bigger stage.

Some of those tensions could be resolved,

however, if we spent more time actively considering our farm in a "both/and" framework rather than our more common "either/or, yes/no" binary opposition framework.

Recent pasture walks in North Carolina (part of their Amazing Grazing program) and Patrick County (a Virginia Forage and Grassland Council-hosted event) highlighted two examples of this "both/and" approach.

On Mr. Mike Jones' farm, increasing diversity is a significant objective, and it's paying off in terms of system resilience and productivity.

Mr. Jones has observed his cattle eat a variety of plant materials—from nimblewill to pokeweed—that would often be called weeds and considered grounds for herbicide treatments on many farms.

Greater diet diversity is good for cattle (and for humans), but it may have to be taught. Just as your mother may have worked on you to get you to eat your peas, land managers may have to play schoolmarm to help their cattle learn to appreciate these plant materials.

Another observation from the Jones farm was that he intentionally leaves space on the landscape for plant and wildlife species.

A traditional view might see that as unproductive, but by so doing, he's given the predators and their prey resources and a place to roam.

In addition to the sheer pleasure he derives from seeing the wildlife, he's gotten the added benefit of having no depredation on his calves, despite a healthy coyote population.

The second stop was at Mr. Tim Service's farm in Meadows of Dan. Since purchasing his farm, Mr. Service has worked to restore wetland habitat (degraded by unregulated cattle access), added native pastures (including both warm season grasses and flowering species that support beef, grassland birds, and pollinating insects), and incorporated both novel introduced perennials and warm-season annual mixtures. Each of these changes has had significant



impact on both the animal output and environmental outcomes on the farm.

However, I note this point in particular: By almost any standard, the warm-season annual stand looked weedy, and Mr. Service said that would have been a problem for him in the past.

However, as his cattle have learned to eat a more diverse diet (and he has learned from them), he has recognized their capacity to make use of what he previously would have seen as a liability.

All of his efforts have been driven from a perspective of creating healthier soils which create better, more healthful plants for cattle and wildlife alike—a "both/and" approach.

The monarch is a beautiful and photogenic creature with a fascinating migration story, and threat of its loss is likely to stimulate greater societal action to save them.

However, we have far more to steward than that single species, and a great opportunity in so doing.

We can make greater inroads to benefiting our ecosystems if we take a larger ecosystems approach to managing our farms.

Sure, it may take some hard work to think and act differently, to pause and consider how to best manage for multiple outcomes, and that will require seeing ourselves BOTH as ecosystem stewards AND livestock/grassland/soil health professionals.

# Nourishing the Soil with Adaptive Grazing and South Poll Cattle

by Karl H. Kazak, reprinted with permission from Country Folks

Farmers make money when the natural cycles on their farm work properly,” said Becky Szarzynski of Mountain Glen Farm in Rockbridge County, VA. That’s why she and her father Glenn practice regenerative agriculture on their South Poll cattle operation.

Adaptive grazing and a commitment to being self-sufficient are at the center of the Szarzynskis’ farm philosophy.

The goal is to make the most of what their pastures have to offer without spending too much on inputs.

In their experience, adaptive grazing is the best way to develop healthy pastures and healthy soils which in turn lead to nutrient-dense forage and profitable farming.

Growing up, Becky helped her father manage the family’s Black Angus herd. When she got to college age, she decided to learn by experience and make a living farming. But she wanted to utilize a breed suited for grazing, and her sights settled on South Poll.

A cross between Hereford, Red Angus, Senepol, and Barzona, South Poll cattle are small-framed, docile, long-lived, and highly fertile.

The breed was developed by Teddy Gentry, the bassist from the band Alabama, with the goal of developing a heat tolerant animal with a gentle disposition which would produce tender beef on grass. Their red color helps with the heat tolerance. The breed is also adapted to perform on Kentucky 31 tall fescue.

“They’re super-efficient on grass,” Becky said, “easy calvers, moderate milkers, and easy keepers. It’s not a high-input breed. They also have good longevity—some animals can be productive in year 20.”

The Szarzynskis got into the breed about 13 years ago, and today most of their herd is South Poll, though there is some remaining Black Angus influence.

“It’s the right breed to make money with adaptive grazing,” Becky said.

The farm uses stockpiled forage and takes an unconventional approach to letting pastures rest, in that they’re not afraid to let forage stand longer than others might.

“We might let a field stand 75 days or longer when others would graze them in something closer to 30 days,” Glenn said. “People have said, ‘Look at what you’re wasting.’” But the Szarzynskis see something different.

“The rest period is really important,” Becky said. “It lets forages develop their roots which leads to more plant growth which leads to more photosynthesis, which helps build organic matter in the soils and also sequesters carbon dioxide from the air into the ground. It’s truly a beautiful cycle.”

And the grass does eventually get eaten during the winter months as a highly palatable stockpile.

One of their farms is a 160-acre piece they bought six years ago. Forty acres had been cropland and the remaining 120 had been in continuous grazing.

After they purchased it, one May the Szarzynskis let it rest through the remainder of spring, and through summer and autumn, until winter, when the pasture species were thigh-high.

“The plants in the pastures were exuding sugars into the ground which were feeding the microbiotics of the soil,” Becky said. “The diversity on top of the ground increased and so did the diversity underground.”

Today the farm comprises nine permanent fields which are split with polywire, depending on the amount and quality of forage in the fields and the needs and characteristics of the herd on the ground.



Becky Szarzynski and her father Glenn operate Mountain Glen Farm, using South Poll cattle to maximize the advantages of adaptive grazing.

They operate another farm as well, with 120 acres divided into 18 permanent fields, which themselves can be divided as needed by polywire.

“With stockpiled grazing in the winter,” Becky said, “we don’t need as much hay.”

The herd, which is spring calving, was initially developed with animals from numerous herds, including some from Missouri and Alabama. Today, Mountain Glen Farm is a source for South Poll cattle, and their animals are in high demand.

“With COVID there’s been an increase in homestead farms,” Becky said, “and those farmers have been looking for a docile, smaller-framed animal which is efficient on grass. There’s been a big demand for South Poll.”

Becky is active in the Virginia Forage and Grassland Council, and promotes grazing with a presence on Facebook and YouTube.

Long-term, she hopes to double the size of her land base and her herd. As a regenerative farmer, she’s also looking to increase her soil organic matter, and to that end she intends to measure the microbiology of her farm’s soils. Her goal is to improve her farm’s ecology and economic productivity.

“She’s going to be a better farmer than I am,” Glenn said. “She already is.”

PHOTO: KARL KAZAKS

# Farmer Climate Story: Thistle Creek Farms

by Lindsey Shapiro, Pasa Sustainable Agriculture

Recently, Pasa staff had the honor to visit Thistle Creek Farms in Huntingdon County, Pennsylvania to talk with farmer George Lake—a grassfed beef farmer with nearly 30 years experience.

George described how prioritizing ecological health on his farm often means less need to invest in damage control.

However he also shared how the changing climate has made for some tough years recently.

Touring the pastures, we got to see firsthand how the benefits of practices like rotational grazing and integrated pest management cascade to increase the health, productivity, and resilience of the whole farm system.

George is meticulous about the number of days he grazes each field, based on the vegetation, acreage, and herd size.

His six-year-old granddaughter often helps move the fence lines, and George relies on a beloved trio of sheep dogs to move his herds into new paddocks. “Who else would be delighted to get out there and move cattle on a freezing Christmas morning?”

His systems were developed to minimize the use of fuel and equipment, avoid chemical fertilizers and insecticides altogether, and enhance the complicated relationship between sun, soil, grass, and animal.

In recent years however, increasingly extreme weather is taking its toll. In 2018, Thistle Creek, like many farms in the region, experienced record rainfall.

Water infiltration tests of the farm’s perennial pastures indicate their soil can absorb up to 12 inches a day, unlike neighboring lands, whose bare soil washed onto their property. But sustained heavy rains made for a lot of mud.

“It was a tough year,” George said. “What really killed us though,” he said, “was no sunlight. We really are farming sunlight.”

Fewer sunny days reduced photosynthesis in the grazing forage, which reduced the

sugar levels in the pastures and, in turn, the milk for nursing calves. “It was like the moms had fed them skim milk.”

Many of the farm’s sustainable practices carried them through that tough year.

A visiting entomologist explained to George how refusing to spray hay fields with insecticides had likely spared them from a serious leafhopper infestation, which turned many neighboring alfalfa fields yellow in 2018.

“We were standing out behind the barn, and he said, ‘You have a lot of lightning bugs, don’t you?’ And I said by the hundreds and thousands! My wife and I come out here at night to watch them... And he said, ‘They eat alfalfa leafhopper.’”

George believes that avoiding chemical inputs has helped increase in beneficial bugs in their soil as well. He told us:

“When we started farming, I couldn’t find any worms for fishing. That’s just how degraded our soils were from extensive chemical fertilizer application. Over the years, with a focus on soil health—the land is now teeming with wigglers.”

So far 2022 is shaping up to be a different kind of tough year, much more dry than 2018, though nearly just as hot. The temperature during our visit was well into the 90s, and the global temperature in June of this year was the sixth hottest on record.

Across Pennsylvania, many counties are drier than normal or experiencing moderate drought.



Farmer George Lake took Pasa staff on a tour of Thistle Creek’s pastures, where they graze cattle for beef and prioritize the health of both the animals and the soil.

PHOTO: PASA STAFF

A focus on soil health, on farms like Thistle Creek, can help them get through a tough dry year too.

But as the tough years begin to stack up, farms of all types will need increased support and resources to weather the change and continue to feed their communities.

At a moment like this, with tougher years in the forecast, it’s so vital that George was willing to share his story with us.

Part of what I love about Pasa is that this organization understands the value of gathering farmers and community members together to share our hardships, our triumphs, our wisdom, and the deep joy we get out of being stewards of this earth.

I left Thistle Creek feeling reaffirmed in my knowledge that farms like George’s are both better prepared to withstand the upheaval of a changing climate and more equipped to reverse some of its most damaging effects.

Widespread adoption of these practices is no small lift, though, and will require more support from government agencies, research institutions, and the farming community at large.

With the Farm Bill reauthorization on the docket for next year, we have an unprecedented opportunity to do just that.

# Graze 300 Practices Adopted by Virginia

by Carl Stafford, Senior Extension Agent, Livestock Forages

Graze 300 VA, a Virginia Cooperative Extension branded program, has reached another milestone in its progress with producer adoption of extended grazing practices.

The Graze 300 team is concluding its grant commitment with the Virginia Tech College of Agriculture, Center for Advanced Innovation in Agriculture.

This grant funded our work to develop and deliver training, educational resources, and technical applications supporting advances in grazing livestock management.

And now, the Virginia Department of Conservation and Recreation (DCR) is rolling out pilot testing of Graze 300 practices in two Virginia Soil and Water Conservation Districts (Culpeper and Headwaters).

Grazing management advocated by Graze 300 will become part of the DCR SL10E cost-share practice, an upgrade to the existing SL10.

In addition, measures of Soil Test Biological Activity (STBA) based on research by Dr Alan Franzluebbers, USDA Agricultural Research Service, North Carolina State, and implementation of Bale Grazing based on work by Dr Greg Halich, University of Kentucky, will be incentives added to the new practice.

Adding grazing days to livestock production increases profitability to a point, when compared to a long winter of hay feeding.

Reaching 300 days of grazing can be the sweet spot economically for many producers and case studies developed by Extension agents across Virginia show this.

Our examples point to profit increases when stocking rate is reduced because extra grass grown is carried forward for use during drought and as a primary feedstuff in winter.

In the end, less hay feeding will improve the bottom line as our budgets show hay is responsible for at least 50% of cow calf production costs.



Adding STBA to the new SL10E practice offers the potential to limit another cost related to stockpiled fescue—nitrogen (N) fertilizer.

Testing soil reveals the potential for plant-available nitrogen to be released from decomposing organic matter. Soils under long-term pasture and in no-till cropping often have an active N cycle involving organic matter decay which is responsible for releasing stored N.

Old sods are expected to contain organic matter sufficient to release N at levels supporting adequate stockpiled fescue production.

Work by Chris Teutsch in Virginia suggests that these sods contain sufficient concentrations of organic matter to release enough N to stockpile 2,500 pounds of hay equivalent fescue per acre.

Adding more N to these soils is not expected to result in an economic response in fescue production. Current N and hay costs further support the value of using of this practice.

The Bale Grazing practice offers a chance to strategically spread out fed hay and animal waste across a landscape capable of absorbing most of the nutrients introduced from hay.

When compared to centralized feeding areas, bale grazing will result in fewer nutrients being lost in run-off during wet winter conditions, while spreading out impacts to pasture sods.

Some reseeding may be required on these feeding sites but nutrients from fed hay can be recycled for future production, while improving water quality.

## Regional Grazing Conference Planned for December 8!

The Mountains-to-Bay Grazing Alliance's annual grazing conference will feature Dr. Fred Provenza!



Dr. Fred Provenza.

Dr. Provenza is professor emeritus of Behavioral Ecology in the Department of Wildland Resources at Utah State University where he worked for 35 years directing an award-winning research group that pioneered an understanding of how learning influences foraging behavior and how behavior links soil, plants, herbivores, and humans.

He is one of the founders of BEHAVE, an international network of scientists, ranchers, farmers, and land managers committed to integrating behavioral principles with local knowledge to enhance environmental, economic, and cultural values of rural and urban communities.

He is also the author of three books, including *Nourishment: What Animals Can Teach Us about Rediscovering Our Nutritional Wisdom*; *Foraging Behavior: Managing to Survive in a World of Change*; and *The Art & Science of Shepherdng: Tapping the Wisdom of French Herders* (co-author with Michel Meuret). He has published over 300 research papers in a wide variety of scientific journals.

We are excited to bring Dr. Provenza to the Chesapeake Bay watershed to learn from his expertise and insight.

Please mark your calendars for December 8 when Dr. Provenza will speak at the Washington County Agricultural Education Center in Boonsboro, Maryland.

## UPCOMING EVENTS

### Maryland Beef Webinar Series:

#### Utilizing Crop Residue as a Forage Source October 11, 7:30 PM

During this session, we will discuss the utilization of crop residue to extend your forage supply. Register at [extension.umd.edu/resource/maryland-beef-webinar-series](https://extension.umd.edu/resource/maryland-beef-webinar-series).

### Soil Health to Go!

#### October 12, 12:00–12:30 PM

Join the Million Acre Challenge for this virtual Lunch and Learn. Bob Miller of Nice Farms Creamery will talk about his regenerative farm where soil is treated as a living ecosystem. Register at [millionacrechallenge.org](https://millionacrechallenge.org).

### Pasture Walk at Fiddlers Folly Farm

#### October 12, 4:00–7:00 PM

195 Fiddlers Hill Road, Edgewater, MD  
Join University of Maryland Extension, NRCS, and Amy Posey for a field day focused on equine pasture renovation. Learn how Fiddlers Folly Farm is working to improve their pastures through a combination of good grazing management and pasture renovation. Event is free but registration is required. Visit [go.umd.edu/octoberpasturewalk](https://go.umd.edu/octoberpasturewalk) to register.

### Begin, Improve, or Grow Your Grazing System

#### October 13, 10:00 AM–3:00 PM

#### Aaron Lantz Farm

3038 Old Philadelphia Pike, Ronks, PA  
Join PASA on a fall pasture walk of a 100% grass-fed dairy and learn all about how PASA's Dairy Grazing Project can support your operation. Visit [pasafarming.org](https://pasafarming.org) to register.

### Cover Crop Planning

#### October 13, 12:30–4:00 PM

#### Red Wiggler Community Farm

23400 Ridge Road, Germantown, MD  
Join the Million Acre Challenge for an interactive field day about cover crop planning for small-to-mid-scale diversified farms, including a discussion on the Soil Health Management Plan and how others can work on their own soil health management plan. Register by visiting [www.eventbrite.com/e/cover-crop-planning-for-small-to-mid-scale-diversified-farms-tickets-420447940107](https://www.eventbrite.com/e/cover-crop-planning-for-small-to-mid-scale-diversified-farms-tickets-420447940107).

### Field Day

#### October 14, 8:30 AM–3:30 PM

#### Wilson Land & Cattle Co.

1417 Stitzinger Road, Tionesta, PA  
Russ Wilson will host a field day at his farm to discuss regenerative farming practices, soil health, rotational grazing, and climate change. This full-day program will feature a series of experts who will speak to the relationship

between pastured-based systems, profitability, and environmental stewardship. Register by visiting [pasafarming.org](https://pasafarming.org).

### Horse Pasture Management Short Course

#### October 15, 8:30 AM–4:00 PM

#### Chesterfield Cooperative Extension 9501 Lori Road, Chesterfield, VA

During this workshop, specialists from Virginia Tech and University of Kentucky, along with local representatives, will cover areas such as forages, weed management, soil testing, composting, nutrient management, and more. Register at [register.ext.vt.edu/search/publicCourseSearchDetails](https://register.ext.vt.edu/search/publicCourseSearchDetails).

### Advanced Grazing School

#### October 18–19, 9:00 AM–4:00 PM each day

#### Renbark Barn

#### 8668 S. Blue Ridge Turnpike Rochelle, VA

These workshops are designed for farmers looking to transform their farm operation into a profitable business with less work and stress. Dave Pratt has helped thousands of farm families improve the health and productivity of millions of acres and will be leading this two-day advanced workshop. Registration costs \$100–\$150. Visit [vaforages.org](https://vaforages.org) to sign-up.

### Maryland Advanced Grazing Workshop

#### October 20–21, 9:00 AM–5:00 PM each day

#### University of Maryland—Western Maryland Research & Education Center

#### 18330 Keedysville Road, Keedysville, MD

This advanced grazing workshop is designed for producers looking to transform their operation into a profitable business with less work and stress. Workshop attendees will dive deeper into the principles behind farm economics and increasing farm profitability. For more information at to register, visit [go.umd.edu/rfpworkshop](https://go.umd.edu/rfpworkshop).

### Equipment WISE and Cattle WISE

#### (Women Increasing Skills & Education)

#### October 21–22, 9:00 AM–4:00 PM each day

#### Kentland Farm

#### 5250 Whitethorne Road, Blacksburg, VA

Join fellow women in hands-on learning experiences such as: chainsaw use, how to back up a trailer, small engine troubleshooting, low-stress cattle handling, etc. \$25 for one day or \$45 for both days (lunch provided). Register online at: [tinyurl.com/equipcattlewise](https://tinyurl.com/equipcattlewise)

### Fall Pasture Walk

#### October 22, 3:00–5:00 PM

#### 832 Grim Road, Stephens City, VA

Join Virginia Cooperative Extension for a pasture walk at the Ray Hylton Farm. Check out rotational grazing, planning a system, and

evaluating fall grass for winter grazing. No registration required.

### UMES Extension's Small Farm Conference November 4–5

#### UMES Student Services Center

#### 30665 Student Services Center Lane Princess Anne, MD

This two-day event will equip farmers and landowners in Maryland and along the Delmarva Peninsula with tools and strategies to increase farm profitability and promote farm sustainability. Register at [www.wcp.umes.edu/extension/small-farms-program/conference/](https://www.wcp.umes.edu/extension/small-farms-program/conference/)

### Fall Forage Tour

#### November 15, 11:00 AM–2:00 PM

#### 826 Burke's Mill Road, Mt. Sidney, VA

Hear about strategies for successful establishment of brassicas and cool season annuals and legumes. Learn about grazing strategies using turnips with sheep, as well as temporary electric fencing for small ruminants and the SL-10E Cost Share Program. To register, please visit [vaforages.org/events](https://vaforages.org/events). Cost is \$15 and includes lunch.

### Pasture Walk

#### November 17, 4:00–7:00 PM

#### University of MD Beef Demonstration Site

#### 12005 Homewood Road, Ellicott City, MD

Join University of Maryland Extension and NRCS at the new Beef Teaching and Demonstration Site and learn how to be successful utilizing corn stalks and cover crops as a forage source for livestock during the winter months. Visit [go.umd.edu/novemberpasturewalk](https://go.umd.edu/novemberpasturewalk) to register.

### SAVE THE DATE!

#### Regional Grazing Conference

#### December 8

#### Washington County

#### Agricultural Education Center

#### 7303 Sharpsburg Pike, Boonsboro, MD

The Mountains-to-Bay Grazing Alliance's annual grazing conference will feature Dr. Fred Provenza—see the previous page for more information. Registration coming soon!

### 2023 Forage Conference

#### January 24, Wytheville, VA

#### January 25, Blackstone, VA

#### January 26, Warrenton, VA

#### January 27, Weyers Cave, VA

#### 9:00 AM–3:00 PM each day

Join the Virginia Forage and Grassland Council as they explore how stockmanship, infrastructure, and forage management can work together to work for you. Visit [vaforages.org/events](https://vaforages.org/events) to register by January 1 for an early-bird rate of \$50.

# Mountains-to-Bay Grazing Alliance



Funding for this newsletter is provided by the U.S. Environmental Protection Agency, Natural Resources Conservation Service, and PA Department of Environmental Protection through the National Fish and Wildlife Foundation's Innovative Nutrient and Sediment Reduction program.

This material in this newsletter is based on work supported by the U.S. Environmental Protection Agency (Assistance Agreement No. C896358101) and the National Fish and Wildlife Foundation's Chesapeake Bay Stewardship Fund, which promotes community-based efforts to develop conservation strategies to protect and restore the diverse natural resources of the Chesapeake Bay.

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or the National Fish and Wildlife Foundation or its Funding sources.

This material is based upon work supported by the Natural Resources Conservation Service, U.S. Department of Agriculture, under number NR183A750022C004. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture. USDA is an equal opportunity provider and employer.

**Mission Statement:** The Mountains-to-Bay Grazing Alliance networks organizations within the agricultural community to support and encourage wider adoption of rotational grazing and related conservation practices that benefit water quality, improve soil health, and boost farm economies.