

Grant Mission: Clean Up Smith Creek

Two new Chesapeake Bay Foundation (CBF) staffers have hit the ground in Virginia's Shenandoah Valley, working with farmers in the Smith Creek watershed of Rockingham and Shenandoah counties to implement conservation practices that reduce runoff.

Alston Horn and Ben Craig are focusing on cattle and dairy farms as part of the "Shenandoah Valley Clean Streams Initiative." The goal: Reduce pollution sufficiently to remove Smith Creek from the national "dirty waters" list.

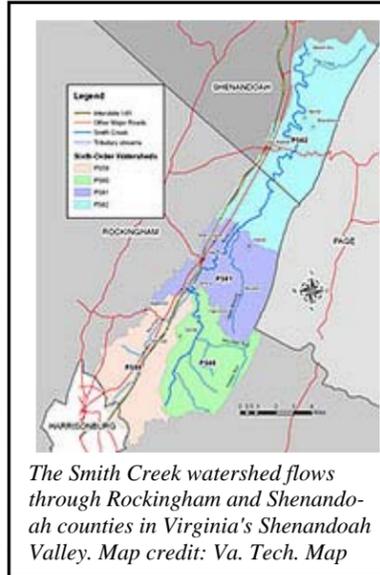
Personal outreach to farms is just one of the roles CBF is playing in an \$800,000 partnership grant project to ensure that U.S. Farm Bill dollars reach farmers in Virginia's Shenandoah Valley for conservation practices.

"This is an exciting and focused effort by lots of partners in one impaired watershed," says Libby Norris, CBF Virginia Watershed Restoration Scientist. "We're confident the grant will make a significant difference in Smith Creek water quality and become a model for what can be accomplished by willing land-owners and fully funded cost-share programs."

Smith Creek was selected because it is a large, primarily agricultural watershed with lots of conservation partners willing to work together. Located in the Shenandoah Valley, the watershed is seen as a model of how to de-list a stream from the national and state impaired waters list through concentrated outreach, voluntary participation, and conservation practice implementation.

CBF is a founding member of the Virginia Waste Solutions Forum coalition, which is partnering with the Virginia Department of Conservation and Recreation on the project. In addition to the outreach work with farmers, CBF also will be hosting participating farmers on "Farmers to the Bay" trips to CBF's Port Isobel Education Center and Tangier Island. The trips provide unique opportunities for farmers to experience the Chesapeake Bay and discuss water-quality issues with CBF staff and Bay watermen.

The Shenandoah effort is among 12 environmental projects in Virginia and Washington, D.C., that received a total of \$6.1 million in 2010 from the Chesapeake Bay Program and the National Fish and Wildlife Foundation to reduce pollution to local streams, rivers, and the Chesapeake Bay.



The Smith Creek watershed flows through Rockingham and Shenandoah counties in Virginia's Shenandoah Valley. Map credit: Va. Tech. Map



Gene and J.C. Fox from Luray VA first time strip grazing stock-piled fescue.

Diversity Matters in Native Grass Mixtures

By: Ben Tracy and Catherine Bonin

Native prairie grasses (e.g., switchgrass, big bluestem etc.) have great potential to supply forage during the hot summer months when tall fescue and bluegrass usually cannot. Prairie grasses can also provide valuable habitat for grassland birds, help with carbon sequestration and have biofuel potential. Planting mixtures of these grasses (as opposed to a monoculture) is usually recommended, but how much diversity is really needed though to provide consistently high yields? We recently completed a 4 year study that addressed this question.

We grew 10 native prairie species alone and in mixtures of 2, 4, 6, and all 10 together. Species included 5 grasses, 3 native legumes, and 2 broad leaf species. It turned out that mixtures with 10 species were the most consistently productive over the 4 years. Mixtures with 4 species were also very productive, but yields were not quite as consistent. The mixtures suppressed weeds very effectively because of their high productivity. The productivity of these mixtures actually surprised us. After 4 years with no fertilization or irrigation, mixtures with 4 to 10 species still yielded 7 tons of hay (per acre basis). Forage quality was not great by year 4 but usually adequate for non-lactating beef cows. Harvesting earlier than we did (early July instead of August) would greatly help improve forage quality though. We concluded that fields sown with a mix of 4 to 10 prairie species work very well during the early establishment years. Mixtures should include some short-lived broadleaf species (e.g., black eyed susan worked well for us) in addition to perennial grasses (e.g., indiagrass, big bluestem).

We are not advocating livestock producers plow up all their fescue fields and replace with them native warm-season species. That would not be practical or probably feasible anyway.



These warm-season species are an option though especially for producers interested in having truly multiple use pastures. A good example is the ability of these prairie pastures to be used dually - for livestock forage in early summer and then to provide bird habitat for hunting later in the fall. Leasing land for hunting can provide a good supplemental income stream and some producers are already doing this. Overall, we think allocation of maybe 10% of a farm's pastureland to these prairie grasses (at least to start) might be a good option for some producers. Some moderate diversity in these mixtures (4 to 10 species) is definitely recommended to help sustain high forage yields during the early establishment years, dually - for livestock forage in early summer and then to provide bird habitat for hunting later in the fall. Leasing land for hunting can provide a good supplemental income stream and some producers are already doing this. Overall, we think allocation of maybe 10% of a farm's pastureland to these prairie grasses (at least to start) might be a good option for some producers. Some moderate diversity in these mixtures (4 to 10 species) is definitely recommended to help sustain high forage yields during the early establishment years.

Why Bother to Control the Weeds in a Pasture?

By: Blox Daughtery

Why bother to control the weeds in a pasture? The production of "Biomass" per acre is a constant for a given amount of soil moisture and fertility, so a pound of weeds allowed to grow means a pound of forage LOST. So if you went out and baled up all the "weeds" in a given area, you would know exactly how much grass you lost. Why not grow more grass, lower feed costs, and increase your rate of return on assets? I met a cattleman who could actually tell me what the forage yield was in his pasture. It was pretty high, four and a half tons hay equivalent per acre. There's no way he could have done that in a continuous grazing system. With that information, he knew how to set a stocking rate, and maximize his gains per acre. It's not hard to sample forages for yield. A hula hoop or a square made out of wood, a pair of grass shears, a scale, and some mathematics, and 'viola'! What a neat science project for a child or grandchild! And then you could have them compare fertilized vs. not fertilized, or weedy

vs. no weeds, go to www.rangeandpasture.com, download the AUM Analyzer, and calculate various stocking rates for different areas. Like I said, it makes a great science project for a youngster with an interest in raising livestock.

Forage utilization by cattle increases with weed control because they don't like to graze near the plants that have thorns, which cause physical damage. If forced to do so, they can get scratched up, and injure their internals and eyes, creating a way for some bacteria to cause problems (pink eye is an example). Several "weeds" are toxic to livestock, and livestock producers should be well informed. The NC State website is a great resource, and Dr. Abaya at VA Tech has done a nice paper on them. The problems are usually sub clinical until the number of toxic plants gets high and animals can no longer avoid them. Some are lethal, like white snake root, which mama cow eats and then her milk becomes a poison, or any member of the nightshade family, including horsenettle. Most intake will be by young animals learning what's good and what's not, and even if they don't die or get real sick, ingesting them will cause them to perform at less than capacity. So toxic plants need to be identified, and dealt with.

Chemical weed control is an investment that should have a very good return. Most of the real problem weeds that are chemically controlled in pasture and grasslands are perennials. The better products that are now available will usually take them out and provide a yield increase for more than one season, which means that weed control in most pastures is an event every two, three or four years. The costs of that investment, spread over several years, makes it one of the most economical weed control programs in existence, with a very low annual cost.

The programs for pasture weed control can be simplified by stating that the costs of chemical control are directly related to the degree of difficulty in controlling the weeds. For example, in a situation where weed control is regularly practiced, where we might expect some biennial thistles, horsenettle and some summer annuals, a low rate of a product like ForeFront R&P or Grazon P&D may be all that is necessary. Where weed control is not regularly practiced, where we would probably see more perennials like Canada thistle, ironweed, or goldenrod, a higher rate of the same products would be required. In situations where there has been a high level of neglect, and some woody species like buckbrush, blackberries, or multiflora rose are also present, the addition of Remedy Ultra or PastureGard to those higher rates of ForeFront R&P or Grazon P&D, or using Surmount, would be necessary. And in a lot of situations with tall brush species, we may have to go after some individually with Remedy or PastureGard, or some tank mixes of these with ForeFront R&P or Grazon P&D.

There are not many chemicals labeled for range and pasture. I like to think of them in two groups, the ones that have good soil residual, which makes them great in taking out weeds as their seeds germinate in the soil, in addition to being great products for plants that are already up, and the ones without residual. All will be very hard on clovers except 2-4-D. All will pass through an animal in three days, unabsorbed. Most of the residual types will persist in animal urine and manure until it the soil microbes break them down. Before the soil microbes break them down, they can be taken up by some plants that you would rather not kill. So leave the manure in the field. Don't collect it and use it to fertilize the roses or the garden, because if you do, those roses or garden plants will suffer an untimely death.

What about legumes? They make nitrogen that the plants in the pasture can use, so they are valuable plants in our pastures,

Clean Drinking Water: Better for Cattle, Better for Profits

Water is the single most important nutrient for livestock. Water requirements vary with temperature, forage type and stage of growth, and livestock class and species. Table 1 shows the water requirements for various animal classes at cool (50 degrees F) and warm (90 degrees F) temperatures. Providing clean and fresh drinking water to livestock can help to reduce potential disease problems. Limiting livestock access to streams and ponds can be beneficial for both livestock and the environment. This article describes some of the options that producers might use for limiting livestock access to streams and ponds.

Table 1. Water requirements for various animal classes at 50 and 90 degrees F.

Animal Class	Water Needed @ 50 degrees F	Water needed @ 90 degrees F
Dry beef cows	8-12 gallons/day	20-30 gallons/day
Lactating beef cows	12-20 gallons/day	25-35 gallons/day
Lactating dairy cows	20-30 gallons/day	30-40 gallons/day
600-pound weaned calves	6-9 gallons/day	10-15 gallons/day
Horses	8-12 gallons/day	25-35 gallons/day
Sheep and goats	2-3 gallons/day	3-4 gallons/day

Adapted from *Watering Systems for Serious Graziers, USDA-NRCS Publication, Columbia, MO.*

Off-stream watering systems. Choose the best system for your needs based on the availability of an electric source, the water source, the required water volume, pasture layout, reliability, cost, and personal preference. Options might include pressurized and



gravity flow watering systems that feed troughs or frost free waterers. Generally speaking pressurized systems fed by a dependable well and powered by a electricity will be one of the most dependable and in many cases economical alternative water sources.

Fencing out streams. Fencing animals out of streams and ponds protects stream banks and keeps manure and urine out of the water and on pastures where they belong. Even fencing as simple as poly wire can be helpful for keeping cattle out of streams. The key is providing livestock access to alternative shade and water sources.

Limiting access to streams and ponds. In some cases pressurized or gravity flow watering systems are not feasible or cost effective. Even in cases where the primary water source is not streams and ponds, building access points for emergency watering may be a

that are fenced can allow livestock limited access to streams and ponds without degrading banks. In most cases these points should be constructed of geotextile topped with larger rock (2”).



Hardened stream crossings. In some cases livestock and equipment will need to be moved across fenced out streams. Hardened crossings constructed of geotextile and rock allow livestock and equipment to be moved without damaging stream banks.

Riparian buffers along streams and ponds. Wooded and vegetative buffer strips along streams and ponds can filter pasture runoff, greatly reducing sediment and nutrient pollution in the water. In some cases, grass filter strips can even be utilized for grazing. This is normally accomplished by flash grazing these areas for short periods of time with relatively high levels of stock density.

Luring livestock away from riparian areas. In cases where it is not feasible or desirable to fence livestock out of riparian areas, locate salt blocks, scratching posts, dusters, windbreaks, shade, other shelter, and alternative water sources away from streams and ponds. This will encourage animals to move away from riparian areas and reduce degradation of banks and water quality.

Cost-Share Programs for Limiting Stream Access

Because excluding livestock from streams reduces sediment loss from eroded banks and pollution from manure and urine, it significantly improves water quality for downstream users. Both the Natural Resources Conservation Service and the state agricultural BMP cost-share programs can help cover expenses for exclusion fences and alternative water sources. More information on these programs can be obtained from your local NRCS and state Soil and Water Conservation District offices.

It is important to remember that maintaining and improving water quality benefits not just your livestock, but everyone downstream. As forage and livestock producer it is your responsibility to not only produce a nutritious and palatable product for consumers, but to do it in the most environmentally friendly manner possible. Protecting our soil and water resources benefits everyone.



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Substantial one-on-one dialogue occurred in those fields and the milking parlors. Not only was there a good exchange of information between the watermen and the farmers, this event also provided a key opportunity to educate the press (local television, radio, and newspapers) and talk about the continued need for good local water quality. The increase in press coverage has showcased the local farming community's efforts reduce agricultural runoff into local streams and rivers, waterways that eventually drain to the Chesapeake Bay.

Following each trip, CBF staff continued talking with the farmers, visiting with them about local water quality issues and how changes in agricultural practices can make a real difference in their local streams, the Chesapeake Bay, and for the families living on Tangier Island. We believe these experiences have proven to be the cornerstone for building trust between the environmental and agricultural communities.



Tangier Island located in the center of the Chesapeake Bay (photo: Neil Kaye)



Dialog with local Tangier watermen is a large part of the trips (photo: CBF)

Nutrient Management in Grazing Operations

By: John Welsh

A fair bit of my role as an extension educator recently has been consumed with the implications the Chesapeake Bay TMDL might have on farmers in Virginia. In response to the EPA, the Commonwealth indicated that it would achieve agricultural target loads through the adoption of voluntary best management practices (BMPs). In their Phase I Watershed Implementation Plan (WIP), Virginia outlined specific BMPs and the rate at which they must be adopted to achieve the required nutrient and sediment loads. Nutrient management is one the priority BMPs listed and will require increased adoption for goals to be met. The Virginia WIP creates separate goals for nutrient management of land used for the production of crops, hay and pasture.

The Chesapeake Bay Watershed Model currently estimates that as of 2009, only 5% of pasture acres in the Commonwealth were covered by an official Nutrient Management Plan (NMP). A target of 20% of grazing land has been established and must be reached by the TMDL end date of 2025. When compared to the required NMP adoption rate for cropland (95%), it is clear that the EPA believes grazing acreage to be much less of a threat to water quality than their row crop counterparts. This begs the question, are grazing operations truly more environmentally friendly?

As part of a symposium on Dairy Cattle Grazing in the Southern USA, Mississippi State Researchers explored this same question. They noted that "grazing dairies do not seem to fit the typical description of a Concentrated Animal Feeding Operation." Unfortunately, the EPA and Virginia Department of Environmental Quality (DEQ) do not share that opinion and even the Mississippi State researchers concluded that grazing operations "must also make waste and nutrient management a top priority." It certainly stands on reason that operations that utilize feed nutrients created predominantly on the farm should cycle those nutrients much more efficiently.

A publication on Profitable Grazing-Based Dairy Systems by USDAs Natural Resources Conservation Service (NRCS) backs up this notion of increased nutrient cycling. It notes that "nutrients are effectively cycled onsite in well-managed grazing systems. Between 75 and 80 % of the nitrogen consumed by grazing dairy cattle in feeds and forages passes through them and is returned to the pasture."

So have Virginia's grazing farmers really earned the environmental accolades the government seems to believe they are owed? You will note that many of the statements endorsing grazing are predicated by statements such as "well-managed" or "management intensive." Traditional grazing systems may have cycled nutrients more efficiently but this does not necessarily mean that they were kept on-site permanently. Traditionally grazed pastures are prone to having areas of nutrient accumulation and sparse vegetation in the areas where animals drink, shelter and congregate. The threat of nutrient and sediment runoff from some of our minimally managed grazing operations is real.

I believe that grazing, in and of it-self, is not a BMP. Grazing is merely a least cost and effort way of raising livestock. As producers we have much to gain in increased productivity by investing more time and effort into our grazing operations. The fact that this will also improve water quality for the "herd" of folks downstream from us is an added bonus, and recognition that we will have then rightfully earned.



Keeping livestock out of streams has proven herd health benefits. It is also a clear sign to downstream neighbors and other community members of your ethics and environmental stewardship.

Try these options to keep cattle healthy by keeping them out of streams:

- Off-stream watering systems
- Stream fencing
- Stream crossings
- Buffer strips
- Rotational Grazing

Both the Natural Resources Conservation Service (NRCS) and the state agricultural best management cost-share programs can help cover expenses for certain livestock stream exclusion projects that are built to specification.

This is one in a series of articles about farmers in the Chesapeake Bay watershed who have implemented conservation practices to improve farm operations and water quality in nearby streams, demonstrating how agriculture has achieved half of the nutrient reductions necessary to clean up local streams and the Chesapeake Bay.

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Nutrient Management for Grazing Begins at the Cow's Tail

Richard Fitzgerald - NRCS Agronomist
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For more than twenty years my work in nutrient management throughout the Shenandoah Valley had me focused on the nutrients from animals after they were produced, collected, stored and ultimately applied to the land. Cropland and hay were the land-uses of choice because fertilizer replacement costs are significant. With my present responsibilities in USDA's "Showcase" Smith Creek watershed, I have spent a great deal of time engaged with nutrient issues as they apply to grazing land and animals that are not confined. This attention to pastureland with my colleagues at NRCS and our conservation partners reminds me that while there is not a "pile" of collected manure to deal with on pasture, similar nutrient issues prevail. Not the least of these is nutrient distribution and recycling nutrients back onto the land.

Cool season grasses abound all across the Valley region and the suitability of "stockpiling fescue" for winter grazing has long been documented. Adding a grazing technique called "strip-grazing" once this stockpiled forage has been produced, returns a forage utilization efficiency that will offset any increased land cost to this

Agriculture: We're Half Way There Gerald Garber - Cave View Farms

"I haven't seen the EPA being unreasonable. They came to the valley last year and targeted problems that needed fixing, and everybody knew it," said Gerald Garber, dairy farmer and former chairman of the Augusta County Board of Supervisors.

Garber is referring to the increasing pressure being put on farmers by the Environmental Protection Agency to install more Best Management Practices (BMPs) to clean up the Chesapeake Bay.

Cave View Farms Inc., owned by Garber along with Keith and Paul Wilson, is one of the largest dairies in the Shenandoah Valley. They grow crops on roughly 2,000 acres in the South Fork of the Shenandoah River watershed to support their 500-cow dairy. They received the Commonwealth of Virginia's Shenandoah Basin "Clean Water Farm" award in 2010 for their stream fencing, nutrient management, and no-till practices.

All the stream banks on their farms—six miles worth—are fenced to exclude livestock. "There's no advantage to having cows in the stream," said Garber. "It's bad for their health, and it pollutes the water."

These farmers have participated in many of the voluntary programs offered by the U.S. Department of Agriculture and the Commonwealth of Virginia. They also implemented many practices on their own without government assistance.

"Farmers know there's more to do than we are doing," Garber says. "We need to keep going. There are programs and people that can help us get this done, and we'll all be better off. That stream used to be a mess because of my cows. In less than a year after we fenced them out, the stream banks healed and my cows are cleaner and healthier."



Gerald Garber, dairy farmer in the Shenandoah River watershed in Weyers Cave, Va., at the beginning of one the streams fenced to exclude livestock.

practice. "Strip-grazing" is allowing cattle to graze a new portion of stockpiled forage to meet the nutritional needs of the herd for one to several days.

While we all gathered in February to evaluate the utilization of the forage by looking down at the ground, my manure management instincts kicked in and all I could see was the uniform distribution of manure across the area that had just been grazed. Even more apparent to my gaze were the stains on the grass from the fresh urine deposits. Between the distribution of the manure solids and the liquid portion, the cattle had spread both portions of the daily manure produced back onto the land they were grazing. As uniform as if it had been spread mechanically, but there was no manure pile to weigh, measure and test. So how could I estimate the nutrient management impact of this combination of practices?

Using the Midwest Plan Service's Manure Utilization Handbook, the 24, 1000 pound cows of Mr. Fox's deposited 54-40-45 per acre of total N-P-K onto the grazed acres over 87 days. This seems high compared to the traditional winter feeding process where feed is hauled to a feeding area where manure collects and is left exposed to environmental breakdown and loss throughout the winter months. Typically

2012 Southern Piedmont Equine Extravaganza Attracts Big Crowd

The 2012 Southern Piedmont Equine Extravaganza was held on April 6 at Virginia Tech's Southern Piedmont Agricultural Research and Extension Center located outside of Blackstone, VA. The conference attracted just over 100 participants that ranged in age from 3 to over 60 years old. Scott Purdum, a nationally known horse trainer with his own TV program on the Rural TV Channel, *Advantage Horsemanship*, was the keynote speaker. Scott shared his vast knowledge of horse behavior with conference attendees as he discussed building a stronger and healthier bond with your horse.

Dr. Chris Teutsch of Virginia Tech spoke to participants about maintaining healthy horse pastures. He discussed the importance of selecting well adapted forage species and then managing those species properly. He also talked about forage establishment in outdoor demonstration following lunch. Dr. Marty Adams of Southern States Cooperative discussed designing nutritional programs for your horse at all stages of its life. Dr. Brandy Phelps, DVM talked about emergency and preventative medicine for your horse. She also described how horse owners can most effectively work with their vets in emergency and routine situations. Theresa McManus of Keymon Farm talked about the foundations of riding and how to properly fit a saddle and tack to your horse.

This meeting was planned by a multiagency group which included the Virginia Forage and Grassland Council, Virginia Cooperative Extension, Southern States Cooperative, Natural Resource Conservation Service, and private horse owners and was a partially funded through a generous grant the Virginia Horse Industry Board. In a post meeting survey, 100% of the respondents agreed or strongly agreed that this meeting was good value in terms of both their money and time spent attending.



Scott Purdum and volunteer demonstrated how to change the behavior of an "unruly horse".



Brandy Phelps, DVM, demonstrates how to properly bandage an injured leg.

applied rates of solid collected manures would provide nutrient contributions at less than 30 percent of that recycled from the nutrient intake by grazing using average semi-solid Va. test values.

While few processes provide 100 percent recovery, strip-grazing spreads the daily manure produced at the back of the cow certainly more uniformly than random grazing over the 100 acre farm. It is important to remember that as much as half of the nitrogen and potassium is in the liquid portion of the excreted manure which is rarely collected at feed site to be spread back over the land. Plus the controlled grazing maintains a 3 inch grass cover that would improve nitrogen recovery by reducing ammonia loss and runoff. While there is little research to document these efficiencies, the practice does achieve commonly accepted erosion control guidelines. **Strip-grazing can impact a nutrient management plan on pasture by providing maintenance levels of available plant nutrients to the field being grazed and allow farm resources to be targeted to fields needing higher levels of fertility. Under these assumptions, the fertilizer value of this practice alone is \$75 per acre.**



Manure and urine distribution after strip grazing herd for three days



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Virginia since last October. Registration will begin at 3:00 pm with the program running from 3:30 pm to 7:30 pm including an evening meal provided by local sponsors. The field day will highlight the Winstead's management intensive grazing techniques for their stocker operation and the improvements to their forage base due to their management. Activities will include a pasture walk through grazing paddocks, a rainfall simulator demonstration as well as a producer discussion concerning alternative marketing. Please reserve **June 19, 2012** to join us in Craig County. Pre-registration is required, so contact the USDA-Bonsack Service Center at 540-977-2698 extension 3 or email bill.keith@va.usda.gov to register for your meal. Visit the VFGC website at www.vaforges.org for more details closer to the event.

Northern Region

The VFGC Northern Regional Forage Field Day is tentatively planned for Sky Meadows State Park in the northern Blue Ridge in Delaplane, VA, on Wednesday August 15, 2012. The program will likely begin around 4:00 pm and end at dusk with an evening meal provided. Program topics will likely include stockpiling fescue, cattle grazing management and system design, and the impact of recordkeeping on profitability. The program is provided in partnership with the Blue Ridge Cattlemen's Association, Virginia Cooperative Extension and the John Marshall SWCD. Mark your calendar and visit the VFGC website at www.vaforges.org for more details closer to the event.



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To JOIN the *Virginia Forage and Grassland Council* a membership form can be found on the web at <http://vaforges.org> - Contact Margaret Kenny at makenny@vt.edu or call 434-292-5331



The Future of Virginia Forages

Stop for a moment and think of outside forces that may impact the forage industry in Virginia. Specifically think of the ever increasing demand for energy in our Country and Worldwide. As I understand it the ethanol subsidy has ended but the ethanol blend requirements remain the same and will be increased from 10 percent to 15 percent. At the same time we have relatively inexpensive natural gas but no well developed infrastructure to utilize this resource in wide-spread transportation fuels.

In my area I have noticed many a well-established pasture or hayfield being converted to cropland for corn production. Certainly the price of corn appears to be part of the reason for this conversion. How will this affect us down the road if the ethanol blend requirement jumps almost 50 percent? Will the blend requirement come from foreign sources, ethanol derived from cellulosic material or just more demand for corn?

On the other hand what will happen if Congress decides to abandon the higher ethanol blend requirements and promote transportation fuel systems based on natural gas? What would this do to the price of corn, feed costs, demand for forages, and land rents? What would happen to Mid-western land prices that have jumped significantly in the past few years based upon higher grain prices? Would we be looking at the second coming of a major real estate crash and the fallout of such an economic scenario?

If you are a Virginia forage producer what should you do to be prepared? The answer may be relatively simple. In my mind everyday is a good day to be in the forage production business if you are an efficient producer. Low overhead costs and low debt load combined with effective forage production techniques quite often results in a profitable outcome regardless of background economic conditions.

Yes, as producers we have likely experienced increased input costs in the last few years and we cannot always control what is received for our product. Regardless the underlying business model of efficient forage production makes sense and is sustainable over a broad array of economic scenarios. That is comforting especially when none of us really know what policy decision Congress is going to come up with next or what affect the most recent case of BSE will have on market prices. In other words, anytime is a great time to be in the forage production business.

On a side note please keep an eye out for our upcoming summer forage tours in your area. Your VFGC Board of Directors and others have been busy planning the summer tours, our Winter Crops Conferences in December and our Winter Grazing Conferences in January 2013. The AFGC Winter Conference will be in Cincinnati in January 2013. The AFGC National Farm Tour will be held in Virginia in May 2013 and will be an added treat featuring down home cooking and Virginia hospitality at Graves Mountain Lodge in Syria, Virginia.

I hope to see you soon and have a great summer growing season!

Best Regards,
Robert Shoemaker
President, VFGC

VFGC Holds Fencing Schools

Properly constructed fences are an essential component of any good grazing system. It is essential that fencing systems be carefully planned and properly constructed to get the best quality finished product. Because proper fencing is such a vital component of all grazing operations, the VFGC and Virginia Cooperative Extension teamed up to hold Fencing Schools at Chatham, Roseland, and Abingdon this past March. Over 90 participants attended these very successful and educational schools.

During the morning classroom session of the schools, participants learned about fence economics and current Virginia fence laws. The remainder of the morning classroom session was spent going over proper construction techniques required to build strong and long-lasting permanent fences and learning about the different type of fences needed for various species of livestock for perimeter and cross fencing. All aspects of electric fencing were covered including construction, energizer selection, proper grounding, temporary fencing, and trouble shooting.

The afternoon hands-on session was spent outside where participants gained practical experience with all aspects of fence building. A post driving demonstration was conducted to illustrate the proper method for safely driving posts and post placement. Instruction was given in the proper construction of braces, high

tensile fence knots and splices, proper installation of high tensile electric fence, offsets, and water gates. The day ended with participants learning how to properly construct a fixed knot high tensile woven wire fence.

The VFGC would like to thank Lewis Sapp and Billy White, Stay-Tuff Fence Manufacturing; Lee Ellsworth, Gallagher USA; and Rusty and Brian Tanner, Tanners Fencing and Extreme Drivers for all of their instruction and support in conducting this years' very successful fencing schools. Plans are already underway to hold three schools in different parts of Virginia next year.



Virginia Tech Has a New Ruminant Livestock Specialist



Dr. Brian Campbell has been hired as the Ruminant Livestock Production Specialist at the Southern Piedmont Agricultural Research and Extension Center. Dr. Campbell received a BS in Animal Science from Texas A&M-Commerce in

2005 and his MS and PhD in Animal Science from University of Tennessee in 2008 and 2012, respectively. His research focused on incorporating winter annuals into tall fescue based forage systems for stocker cattle production. Additional research he conducted examined cow/calf production incorporating reproduction, genetics, and environmental factors. One aspect of this research involved determining the efficacy of a genetic marker for identifying beef cattle that are resistant to tall fescue toxicosis. He also compared fall and spring calving production in a forage-based system. His evaluation of production strategies will yield more efficient use of the forage base and information on the consequences of calving at different times of the year.



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especially where there is a lot of fescue, because they mitigate the ill effects of the endophyte fungus that lives in fescue. Research indicates that if we can get 25% of the pasture into legumes, we do not need to use any nitrogen fertilizers. (The flip side of that statement is that if we only have 10%, then we should be doing some nitrogen fertilizing, right?). Most range and pasture herbicides will knock out legumes, so how can we approach weed control with these herbicides? White and ladino clovers will come back from hard seed in the seed bank (if present), usually in the spring following a fall treatment or the fall following a seed treatment. Additional seedings can be made using these same timings (ie. Weed control with herbicide in fall, frost seed clovers in spring), and this presents a great opportunity to get some of the better varieties of clovers into the program. Red clovers need reseeding every few years. Time the weed control herbicide activity to when the clover stand is about played out, then reseed as with the whites and ladinos. An important thing to remember is that BEFORE renting the drill to renovate a pasture with legumes, address the weed issues (ditto for pH issues).

The time to spray a herbicide in a pasture depends on the types of weeds. Annuals and biennials are controlled best when vegetative. Perennials are usually controlled best when they reach maximum vegetative growth, which is often close to flowering. The fall of the year also presents some unique opportunity, and August, September and early October treatments will usually allow for frost seeding clovers. At this time of year, woody perennials are storing for next year and sugar flows are DOWN, where we want the chemicals to go, so treatments at this time of year usually work very well (there are a few exceptions, like buckbrush). Perennials in mowed fields have been set back and are trying to flower, reaching maximum vegetative growth later than they normally would, so fall is a great time to go after them. Biennials germinate in the fall, and the best time to hit them is in the fall with herbicides that have a good residual that will control them as they germinate all winter and into early spring. Perennials with a winter habit, like buttercup, dandelion, are a bit like the biennials in that they are just ramping up. Get them before they compete. Winter annuals, like chickweed, henbit, etc. cause a lot more yield losses than we realize. Get them in the fall when they start off (as opposed to revenge killing them in the spring, after they've competed all winter and reduced the grass's vigor). That leaves only the summer annuals, which the frost will take out in late October. They're different. But, if we get the winter competition out, we'll have thicker stands in the spring, and fewer holes for these to come in during the following summer.

There's a tendency for folks to look for some "silver bullets", specific products or management techniques to cure some of the problems. But none of them will correct for a failure to work with nature by ignoring the basics. Once the basics have been mastered and the vigor of the grasslands is restored, then the stage is set for more intensive practices. Its like football, which is all about blocking and tackling. If your team can't block and tackle, all the trick plays and smart play calling won't mean much, because they are going to lose the game, Period. Like the "Bear" said, "football is fundamentals, fundamentals, and fundamentals". So we need to focus on the basics with our new "crop", pasture. Where to from here? You have the ball. Your most important management ingredient is to take some "Action". So go do those soil tests, start pushing the pencil on profitability and rate of return on assets, lay out where you want to put that hot wire to paddock off some pasture, decide which areas you will do some weed control on, select a farm on which to "give this stuff a try", and follow up on countless other ideas that come to you as you think about your pasture as your most important crop.



VIRGINIA FORAGE AND GRASSLAND COUNCIL
3599 Indian Oak Road
Crewe, Virginia 23930



THE VIRGINIA FORAGER

A publication of the Virginia Forage and Grassland Council



Volume 33 Number 3

Summer 2012

Chesapeake Bay Foundation "Farmers to the Bay" Program

The Chesapeake Bay watershed includes 64,000 square miles of diverse land use across six states, plus the District of Columbia. If we are truly to improve the water quality of the Bay, we must continue to work to reduce the sources of pollution that flows into the Bay. However, one challenge of working with such a large land area is that many people in the watershed do not have the luxury or experience of enjoying the Bay and instead feel disconnected to what we ask them to hold dear. The key to changing this detachment is to help them make a connection to the Bay through the water quality in their own community and their local streams and rivers. The Chesapeake Bay Foundation, along with many partners, has focused restoration projects and outreach efforts on upstream landowners, farmers, and urban centers as a way of reducing nutrient runoff that eventually ends up in the Bay. In addition to on-the-ground restoration projects that are installed along local rivers and streams, many of the activities also offer an opportunity to educate the public on current policy and funding needs.

how each of their communities and ways of life are surprisingly similar.

After several years of partnering with local agricultural groups to bring farmers to the Chesapeake Bay, a pilot exchange was also conducted in which a group of seven Chesapeake Bay watermen visited farmers. This trip was the first *Watermen to the Valley Exchange Program*. The local farming community provided a warm welcome to their visitors as the group toured different types of agricultural operations, learned about local water quality and local land use issues. The watermen learned more about farming the land, and the farmers continued to learn more about the Bay and its issues. During the three-day trip, the watermen assisted local farm groups at the Rockingham County Fair, and on their final day, several watermen worked with local dairymen to milk their first cows, while others helped to pick sweet corn or harvest vegetables with small produce farmers. Each new experience helped the farmers and the watermen to better understand each other.

Page 4 Farmers to Bay



For the past 10 years, the *Farmers to the Bay Exchange Program* has aimed to connect farmers that live primarily in the upper watersheds to the Chesapeake Bay. The purpose is to show how their land use upstream can affect

the Bay located miles downstream. To that end, CBF has partnered with the Virginia State Dairyman's Association and others to bring groups of farmers on overnight trips to an island education center located near the center of the Chesapeake Bay. During these three-day events, farmers learn about Bay ecology through hands-on activities and about the historic watermen's community of commercial fishermen on Tangier Island, Virginia. Connections are quickly made as the farmers begin to understand how they are very much like the Tiger watermen and

Planning for the VFGC Summer Forage Tours Begins Early This Year

Local planning committees are busy coordinating with progressive farmers to put together interesting summer forage tours in different regions of Virginia. Listed below are two programs that are shaping up quickly for the western and northern regions of the state. The tour in the Shenandoah Valley is planned for Rockingham County in late May with a focus on forages in dairy systems. The Southern Piedmont tour is likely to be held late summer or early fall. As the details for these summer forage events finalize they will be posted on the VFGC website at www.vaforges.org and advertised to the membership. So get your summer travel calendar ready and try to attend one or more of these informative events while enjoying the richness and beauty of agriculture throughout Virginia.

Western Region

The 2012 VFGC Southwest Regional Forage Field Day will be hosted by Mr. and Mrs. J.C. Winstead of Craig County, Virginia on Tuesday, **June 19, 2012**. This farm operation was featured in the 2011 Gaining Ground Successful Graziers Tell Their Stories video viewed and distributed throughout much of

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