2014 Winter Forage Conference

Scott Hagood, Retired Weed Specialist at Virginia Tech, receives the Harlan White Distinguished Service Award from VFGC President Patty Johnson.

J.B. Daniel, NRCS Grassland Agronomist for Virginia introduces a speaker at the Blackstone meeting location.

Patty Johnson presenting the Outstanding Forage Producer of the Year Award to J. C. Winstead.

Ed Rayburn and Gordon Groover visiting at one of the 2014 Winter Forage Conferences.

Joshua Dukart discusses the finer points of building soil health in pastures with conference participants at the Wytheville location.

Conference participants discuss the morning's presentation at the Brandy Station meeting location.

Keenbell Farm Featured Producer at Blackstone VFGC Winter Conference Site

By Dennis Jones:

Each of the four VFGC Winter Forage Conference sites in 2014 featured talks from local forage producers. C.J. Isbell of Keenbell Farm filled that spot on the agenda at the Blackstone session. C.J. is the third generation of the Isbell family to farm this Hanover County land. Established in 1951 by Joe Isbell, fresh out of the Navy, the farm originally produced eggs and had a 3 day-a-week delivery route in Richmond, and sold to the Virginia Dairy. Most of the farm at that time was wooded.

In the 70's the farm started a farrow to finished swine operation, maintain a small cattle herd, and cash hay business. When the swine market went away in the 80's they focused more on the cattle and grain farming, opening up more of the farm for cropland. In 1998 Joe Isbell retired and rented the farm to local grain producers, but maintained a few cattle. Low grain and cattle prices sent CJ's dad off the farm to a public job, although he has continued with cattle and hay on weekends is currently 50% owner of the cattle at Keenbell Farm.

C.J. Isbell visits with participants at a summer forage meeting held at this farm located near Rockville, VA.

Since 2005 the next generation, CJ and his family, with support of the prior generations, have been reducing the acreage rented out and renovating Keenbell Farm. MaxQ and Persist Orchard grass has been established in permanent pasture, water and fence systems were built to control grazing. Farm products are now beef, poultry, pork, and eggs, all the livestock is grass feed, hormone and synthetic input free. The farms products are marketed a variety of ways. You can purchase by phone or internet, by visiting the on-farm store, through their Buyers Club, at the Richmond online farmers market-Fall Line Farms, in local grocery stores, or through the Local Roots Food Coop out of Goochland.

Keenbell has been just as innovative with their forage program as the marketing. CJ stated, "Our goal is to maximize forage production with livestock as my primary management tool". In order to control the livestock he has divided 100 acres of perennial pasture into 5-10 acre permanent paddocks using high tensile fencing. A water system was installed that pipes water to fence line troughs, each serving two paddocks. Quick couple risers are installed along the water lines as they run to the permanent water stations allowing flexibility to subdivide paddocks as needed. Poultry follow the beef cattle as they rotate through paddocks. "The poultry help disrupt the parasite life cycle by breaking apart manure piles and eating larva living in the piles".

Another 30 acres are planted to annuals each year to supplement perennial pastures in the summer and winter. Mixtures of 7-12 cool season or warm season forage species are planted each spring and fall. Spring plantings include sorghums, sudan grass, corn, sunflower, alfalfa, cowpeas, clovers, lespedeza, millets… Fall mixes include wheat, rye, forage radish, clovers, turnips, triticale, barley, oats… Typically spring seeded mixes are grazed 2-3 times through the summer, fall seeded annuals can often be grazed once in fall, then twice after stockpile pasture plays out.

When asked about making and feeding hay, CJ said, "we do make and keep about 60 days of hay on hand, but our goal is to graze 365 days. I hate for us to go out and start the tractor to make or feed hay, the cattle can do it so much more efficiently. We are working toward grazing everything and finding a source of good quality, reasonably priced hay to purchase off the farm."

How all these components come together was explained by CJ, "first we use the 50-50 approach, graze 50% and leave 50%, .this helps the forages to re-grow faster, feeds the critters that cycle nutrients in my soil, and maintains organic matter in the soil profile. This approach keeps our soil working for us. We aim to move cattle daily. Cattle go into a new paddock and poly -wire with step-in post is used to allocate what looks like 24 hours of feed. This is where the water system pays off, with water in every paddock and several sites in each to pull water from; we're not limited to one or two divisions. You really have to develop an eye for allocating the forage and always be prepared to adjust.

We graze perennial pastures in spring and summer; then fill in the wholes with the warm season mixes when cool season forages shut down. Then we get back on perennial re-growth and stockpile in the fall. Next we go to cool season mixes when the stockpile runs out. Hopefully this gets us to the spring flush of perennial pasture. This past fall the cool season annuals were a bust, we had a dry fall and they just didn't grow, so we are feeding hay. Like I said, always be ready to adjust."

The poultry clean up behind the cattle and work nicely into the system. The pigs are something that we are still trying to figure out. We need better infrastructure than the farm has now for pigs, they need more acres, better fence, and different water facilities. There is certainly market for the pork, so we will keep working with them."

As CJ stated in his talk at the VFGC Winter meeting, he is a fire fighter and works 24 hours on, then 72 hours off. This schedule makes the farm life possible; however this truly a family farm, each generation has a part to play. His wife Jessica first takes care of raising the fourth generation at Keenbell, and handles online marketing. His dad partners on the farm and Keenbell plans to hire a cousin, Jonathan, who now works part at the farm managing the poultry, to work full time in the near future. CJ and his family also want to be sure to give credit to the local Agriculture and Conservation Service offices. "Jim Schroering with Virginia Cooperative Extension; Brian Wooden and JB Daniel with Natural Resources Conservation Service; and Jim Tate with Hanover-Caroline Soil and Water Conservation District each have helped me tremendously, I want to thank them for their support."

When I spoke to CJ he was getting ready to go to Argentina with the VALOR (Virginia Agriculture Leaders Obtaining Results) Program. This is a two year program, ran by VCE and designed to develop leaders who can effectively engage all segments of the Virginia agriculture community to create collaborative solutions and promote agriculture inside and outside of the industry. CJ has been a Fellow in the program for about 18 months; about six months remain with the trip to Argentina an international component of the program. CJ praised the program for its forward looking goals and the personal development opportunities it has afforded him. The VFGC also appreciates CJ's willingness to speak at the Winter Conference, sharing the experiences of Keenbell Farm, a family farming in Virginia.

Dennis Jones is serves on the VFGC Board.

Front Page Soil Health

Reducing fertilizer need through increased efficiency of nutrient cycling, as well as weed suppression through increased biodiversity are two more ways that managing for soil health can benefit producers. And through our grazing management, we can allow more desirable species to become more competitive, leading to better animal performance.

West Virginia University Forage Extension Specialist Ed Rayburn presented an overview of some of the different organisms that comprise the soil community, their effects on plant growth and the integral role of ruminants in soil health management.

For many attendees, presentations from Gabriel Pent, Gordon Jones and Scott Neil, participants in this year's Ecology of Grazing Lands Systems course, were an unexpected highlight. These Virginia Tech graduate students joined students from University of Tennessee, Texas Tech, Clemson and University of Missouri on a two-week field trip, exploring some of the varied forage ecosystems in the southeast.

The producer talks, given by C.J. Isbell of Hanover County, J.C. Winstead of Craig County, and Roy Boldridge of Culpeper County all had a common theme – improved grazing management frees up resources (economic and labor) to allow them the opportunity to plan, to experiment, to expand marketing opportunities and to enjoy their cattle.

For producers, controlling input costs and controlling risk are the primary keys to profitability, and we already have enough to manage. Soil health shouldn't be viewed as yet an additional element to manage, but rather as a way to help optimize those things we already manage.

Patty Johnson is the president of the VFGC.

AFGC has a YouTube Channel

AFGC has a YouTube Channel with recording session form this year's conference. http://www.youtube.com/user/AFGCORG/videos

The Forage Leader will now be available in digital format only on the AFGC website. The February 2014 Edition has been posted. If you would prefer to receive a printed copy please contact AFGC.

Did you know that by being a member of the VFGC that you are automatically a member of the AFGC.

Front Page White

meeting. In the late summer of 1973 while I was spreading fertilizer for Royster I top dressed 35 acres of fescue and shut the gate. My daddy wanted to know what a doctor knew about grazing and thought I had lost my mind. I even took the snow plow and uncovered the fescue, but he never would admit that stockpiling was the reason for all the hay left over every winter. Forty years later my neighbors can't figure how I can carry a brood cow through the winter on less than a ton of hay. While they were sitting around the country store complaining about the price of calves compared to the cost fertilizer I was attending the VFGC meetings listening to Harlan White.

Without Harlan White I would not have been able to pass on his money making advice to my fertilizer customers to help their management decisions such as stockpiling fescue, rotational grazing, or creep grazing. We probably wouldn't have a Virginia Forage and Grassland Council without his leadership. I learned from him how to keep the cost down with self harvested feed from grass without sacrificing the stocking rate or pay weights. Since I'm living out my boyhood dream and making a good living marketing grass through cattle, I want to return a small portion of my profit to the Dr. Harlan White Scholarship Fund so that some young person with a dream of being free will have the knowledge to live off the land with livestock. I wouldn't be where I am today without the information I learned from Harlan. I donated $500 at the winter meeting in Blackstone and hope to be fortunate enough with the outlook for cattle prices do donate more in the future in honor of a great man.

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VFGC receives Soil and Water Conservation Society Award

The Virginia Chapter of the International Soil and Water Conservation Society (VASWCS) presented its 2013 Outstanding Conservationist Award to VFGC President, Patty Johnson, at the Blackstone VFGC Winter Conference Site. The Virginia SWCS Chapter is much like the VFGC, being a chapter of a larger National/International non-profit organization, it operates on members' dues, grant funds, donations from associated businesses, and registration fees for it educational programs.

The VASWCS award recognizes the VFGC for its consistent emphasis on the wise use and conservation of soil and water resources, for its leadership in educating landowners and users, introducing innovative practices and research that emphasize efficient and sustainable production of Forages in Virginia.

Upcoming Events

2014 Virginia Cattlemen's Association Annual Meeting
March 27-30
Rockingham County Fairgrounds
www.vca.org

Pennsylvania Forage and Grassland Summer Tour
June 25-27
www.paforageandgrasslandcouncil.org

Southern Piedmont Annual Field Days
July 30, 2014—Tobacco
threed@vt.edu
July 31, 2014—Forage and Livestock
cteutech@vt.edu

Southern Piedmont Family and Farm Day
September 13, 2014
pjshep@vt.edu

2015 AFGC Annual Conference
January 11-13
Hilton Frontenac in St. Louis, Missouri

Mob Grazing Research Update

By: Robert Bauer and Ben Tracy

Does mob grazing management affect forage quality? This is the central question of a two-year study currently underway at two locations in Virginia by Drs. Ben Tracy and Mark McCann from Virginia Tech, thanks to funding from the John Lee Pratt Animal Nutrition Program at Virginia Tech with support from a Conservation Innovation Grant from the United States Department of Agriculture, Natural Resources Conservation Service.

At demonstration farms near Steeles Tavern and Blacksburg, Va mature beef cows are stocked on tall fescue-white clover pastures in three ways: termed 'continuous', 'rotational', and 'mob' stocking. The pastures receive similar stocking rates (135 animal unit days per acre) but different stocking densities and rest periods. Stocking density of the mob treatments is 56,000 pounds per acre and animals are moved every 12-24 hours. Mob grazing occurs over three to ten day periods in May and September.

In 2013, we found that the amount of forage was similar between grazing treatments but mob grazed pastures tended to be greater in the fall than in the spring, while the opposite was observed in the other treatments.

The pastures were fertilized in 2012 with commercial fertilizer according to soil fertility tests and frost- seeded in February 2013 with red and white clover.

In 2013, we collected field data once per month to measure the response to grazing management. We measured establishment of frost-seeded red and white clover in the pastures, total herbage biomass, and forage nutritive value. Nutritive value was assessed in terms of crude protein, acid detergent fiber (digestible plant cell contents), and neutral detergent fiber (gut-filling plant cell walls).

Mob grazed pastures are allowed to accumulate forage for ~90 days, and we hypothesized that the forage growth would suppress clover establishment and growth. We found that the mob grazing treatment contained more clover than expected, however. The clover likely responded to better penetration of light into the sward when plants were consumed and trampled by grazing cows. Clover establishment may partially explain why forage nutritive value did not differ between mob, rotational, and continuous stocking this year.

In 2014, we will measure forage productivity and changes in species composition in addition to nutritive values. The clover should be fully established this year so we could expect to see differences between the treatments.

Robert Bauer, graduate student and Ben Tracy, Associate Professor are in the CSES department at Virginia Tech.

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In a pasture system this results in a lot of grazing throughout each day, usually close to the ground surface leaving very little leafy vegetative stubble for regrowth. Compared to cattle and goats, horses graze more hours of each day and they tend to graze forage down closer to the surface. In addition horses are naturally spot grazers. When left in a continuous grazing situation they overgraze areas of tender, highly palatable forage while avoiding other areas. They avoid forage near piles of manure droppings thus adding to the uneven effect of the pasture. During periods of the year when forage is not actively growing and plentiful (mid summer and winter), if left on the pastures the hoof action of these large animals can compact the soil, suppressing root and plant growth. Also under excessively mucky conditions this can cause lasting detrimental impacts to soil quality not to mention a higher incidence of thrush and other hoof related issues for the horse.

The forage base in a horse pasture is under extreme grazing pressure in a continuous grazing situation. As mentioned above due to the way the horse is made, they tend to graze a pasture unevenly and closer to the ground compared to other grazing livestock. The fact that most people are limited in pasture acres greatly exaggerates the negative effects on the system. Most people don't have a sufficient number of pasture acres to allow unlimited grazing access to the pasture even if the horses are being supplemented with hay. When the system is out of balance by having more animals than the pasture can reasonably support, the forage base quickly deteriorates. In a continuous grazed situation in most horse pastures, the forage plants don't get a chance to rest and regrow to provide the needed energy for regular plant maintenance or to replace stored sugars and carbohydrates needed for future root and plant tissue growth. This results in a thin, weak, pasture stand with dwindling ground cover, decreased plant persistence and a higher incidence of weeds invading the pasture.

No forage can sustain and provide a healthy sod in a pasture that is overstocked and continuously grazed. However if horse numbers are reduced to a reasonable stocking rate and their access to available pasture is limited (hours per day) and managed in a rotational system, then certain forages may work well. Tall fescue mixed with white clover is a tough and durable forage combination that can take some abuse, recover after a drought, and provide a good cool season perennial forage base for most horse pastures. Some people like to avoid using tall fescue as pasture forage when raising horses, however, as long as the mares are removed from the endophyte infected tall fescue pastures 90 days prior to foal, they should not suffer the common problems associated with delivery and nursing the young foal. Another possible combination is Kentucky bluegrass and white clover. Both of these forages can sustain under close grazing heights (2-3 inches) however Kentucky bluegrass is not very tolerant of drought or high temperatures, therefore it is a better option for the northern and western portion of Virginia. Orchardgrass mixed with clover is another possible combination however it will not persist under close grazing. Even under good grazing management it often only performs as a short lived perennial. Some of the improved seeded varieties of Bermudagrass are winter hardy throughout much of VA and offer a warm season perennial forage option that can serve as a portion of a horse pasture. When seeded

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Inviting Neighbors Over The Fence

By Deidre D. Harmon

With funding from the Virginia Forage and Grassland Council, Virginia Tech graduate students embarked on a two -week trip with a dozen students from four other universities to explore varying grassland systems from South Carolina to Texas. The goal of this trip was to understand the components of grazing lands in different ecoregions and the role forages play in livestock and wildlife habitats, conservation practices, and sustainable agriculture. I am pursuing a Master's degree in beef cattle nutrition, so I was particularly interested in this aspect of the course. However, I want to share some observations about a topic that may be critical for agriculture's long-term viability.

Throughout the trip, one of the common topics typically overlooked during agriculturally related discussions was that of the need to find a balance for coexistence between farmers and non-farm residents. From South Carolina to Kansas and spreading across an assorted array of ecoregions, the hosts or hostesses of our stops gave us an insight into issues they were facing with their non-farming neighbors.

In Tennessee, our group was fortunate enough to stop at Bush Brothers' feedlot, a finishing feedlot with over 800 head of cattle a year. The farm's sole purpose is to economically eliminate the bean waste, with its distasteful odor, from the Bush Brothers' cannery by finishing cattle they purchase at a local livestock market. The farm is surrounded on all borders by non-farm residents, some established before the building of the farm and some thereafter. The manager of the farm is not only in charge of the operation in its entirety, but also has an appointment as a public relations person for the farm and company. To ensure coexistence, the manager must know all neighbors by name, communicate with them frequently, and take a diplomatic approach to their comments and concerns. With this approach, Bush Brothers' are able to maintain a great relationship and coexist with their neighbors.

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

On the Konza Prairie in Kansas, a much broader spatial area was problematic when looking at coexistence with neighbors. In this area, prescribed burns are used to revitalize plant species and improve range quality for animals by suppressing invasive species and removing dead forages. However, this type of grasslands management comes with a price. The smoke from these burns travels east into Kansas City, at times contributing to lower air quality, which can decrease to below satisfactory limits. Once air quality has declined, governmental officials must take action to reduce pollution within the city. To prevent this situation from happening, the Konza Prairie staff works closely with government officials to do controlled burns only when air quality in Kansas City can handle the added smoke pollution. In this situation, communication between agricultural and residential areas allowed for coexistence.

Coexisting with non-farming neighbors is becoming a necessary skill for people in the agriculture sector. During this trip, I learned many techniques for coexistence between farmers and non-farmers. There are an array of complaints about agricultural areas including noise, odors, and practices such as pesticides, controlled burning, and fertilizer usage. Developing good relations can be done by getting to know your neighbors and talking or explaining to them your agricultural plans. A gesture of friendliness and community involvement can also go a long way. Inviting neighbors over the fence so they can better understand why farmers do what they do is a great way of being proactive at building a better relationship and allowing for coexistence between two very different sectors.

Deidre D. Harmon is a graduate student at Virginia Tech in the Crop and Soil Environmental Sciences.

Frost Seeding Pays Big Dividends

By Peter Callan

Frost seeding, also called overseeding, is an excellent way to incorporate legumes into a pasture. Preparation for frost seeding starts in the previous growing season. Pastures that will be frost seeded need to be grazed close prior to seeding. Since the seed is broadcast, there must be spots of bare soil showing so that there is soil/seed contact. If there is residue on the soil, it will be difficult for the seed to reach the soil and the young seedlings to grow through the residue.

There are several advantages of frost seeding legumes into grass pasture. Yields are higher with grass-legume mixtures. There will be higher tolerance to drought if a legume with a taproot (e.g. red clover) is seeded into the pasture. Legumes fix nitrogen which is used for fertilizer in grasses. By incorporating legumes into a grass pasture there will be a major reduction in fertilizer costs because no additional nitrogen is needed if legumes make up 30% of the total sward on a dry matter basis. Past research has shown that legumes increase animal performance by increasing forage quality of pasture swards. Even more important to producers in Virginia is the dilution effect from adding legumes to endophyte infected tall fescue stands. The addition of legumes increases animal performance and improves conception rates.

Seed selection is important to insure that the frost seeding generates a stand. Alfalfa does not frost seed as well as white and red clover and should be drilled if possible. Red and white (ladino) clovers work well in frost seeding. Red clover is a key pasture legume because it is easily established with frost seeding. It is a short lived perennial with of a life of 2-3 years. One disadvantage of red clover is that it does not self-reseed consistently. White clover is well adapted to short, close grazing and produces high quality forage. Another important advantage of white clover is that it re-seeds. There are three types of white clover available, common or Dutch, intermediate or grazing type, and ladino or large type. The use of intermediate or ladino types is recommended. The ladino types will produce 3-5 times as much dry matter compared to the common white clover. Although the intermediate white clovers producer less dry matter than the ladino types, they tend to be more tolerant to grazing.

The seeding rates on a per acre basis are as follows: red cover 8-10 pounds and white clover 1-2 pounds (VA Tech Agronomy Handbook, 2000). A mixture of red and white clover is often used at a rate of 4-6 lb./A and 1-2 lb./A for red and white clover, respectively. The cost of frost seeding a mixture of red and white clover is approximately $30 per acre (Table 2). The value of the nitrogen fixed by this clover mixture will be around $100 to 120/A/year (Table 2). It is important to remember that clover shares its nitrogen with the grasses in pastures indirectly. In a healthy grassland ecosystem ruminant livestock graze legumes and then deposit the nitrogen back onto the pastures in the form of dung and urine. With good grazing management a strong and vigorous nutrient cycle develops overtime.

Soil fertility plays a major role in determining the success of frost and the maintenance of clovers in pastures. A current soil test takes out the guesswork and prevents the producer from under or over-applying lime and fertilizer, either of which will decrease your efficiency and profitability. Virginia Tech soil test laboratory recommendations are based on research conducted for Virginia soils and climate. “Red and white clovers require soil pH levels from 6.0-6.4 while alfalfa requires a pH of 6.8 or higher. Fertility levels for phosphorus and potassium should be in the med+ to high- ranges.” [1] Soil testing needs to be done in the fall prior to seeding. Lime may be applied in the fall to bring pH up to desired levels. The table below lists value and amount of nitrogen fixed by several legumes.

Table 1: Cost of frost seeding legumes

Crop	Seeding rate lb./ acre	Seed cost/$ lb.	Seed cost	Spread-ing cost	Total cost
Red clover	10	2.40	$24	$10	$34
White clover	2	4.00	$8	$10	$18
Red and white clover	5 and 2	2.40 and 4.00	$20	$10	$30

Table 2: Value and amount of nitrogen fixed by various legumes [2]

Crop	N fixed lb./ acre/year	N value, $, @		
		0.55/lb.	0.65/lb.	0.75/lb.
Alfalfa	150-250	$83-138	$98-163	$113-188
Red clover	75-200	$42-110	$49-130	$56-150
White clover	75-150	$42-83	$49-98	$56-113

Frost seeding is generally done in late winter since freezing and thawing of the soil is required to incorporate the seed into the soil. There must be good seed/soil contact for the seed to germinate and produce a viable seedling. In Virginia, pastures should be frost seeded starting in early February and ending in early March.

Frost seeding legumes enables producers to improve the quality and yields of their pastures. Furthermore by maximizing grazing efficiency, producers can maximize recycling of nitrogen, phosphorus and potassium that will reduce purchase fertilizer inputs for their pastures.

1. Personal communication Chris Teutsch. January 23, 2014.
2. Ball, D.M., C.S. Hoveland and G.D. Lacefield. 2002. Southern Forages, Third edition.

Peter Callan, Extension Agent, Farm Business Management, Northern District.

Winter Hay Feeding Strategy for Blizzard Conditions

By Robert Shoemaker

This past February with 24 inches of snow in seven days reminded me of the importance of employing successful hay feeding strategies. There are many ways to successfully feed hay during the winter but I would like to share something that worked best for me during February 2014. For the most part we had an open winter without snow cover.

Several years ago my neighbors taught me a valuable lesson free of charge. Our area received over 30 inches of snow with blizzard conditions and twelve foot drifts. I was able to get hay to the cattle ahead of the storm. My neighbors did not. Each neighbor lost about 30 head of cattle because once the storm hit no one could even move a 4 wheel drive tractor through the fields. Some farmers could not get to their cattle for four or five days.

Therefore rule number one is start early before the storm hits. This year we had been grazing up until the February storm. Regardless we did put hay in the previously grazed pastures and closed the gates to prevent cattle from eating the hay. As an example one herd consisted of 140 cows and calves. We put a load of eleven 4 X 5 round bales in each field. We did not unroll the bales but they were placed with the flat side on the ground. The baler used to produce the bale made an extremely tight bale. There was little waste as cattle had to pull a bite from the side of the bale.

In one day we were able to transport 5 loads two miles and place them within separate fields. Gates were shut between the fields so when cattle finished the hay in one field we simply needed to open the gate to the next field (or take it off the hinges if snow was deep).

When the snows came we simply turned the cattle into the first field with hay. This gave us approximately 4 days of feed. Subsequent feedings involved opening a gate. Some areas were remote and deep snows prevented us from reaching the fields with a tractor but I was able to trek across the fields with snowshoes. This was a brisk workout but very successful.

Getting ahead of the storm and watching the weather is critical. Putting hay out ahead of time is much less stress on the farmer and the equipment. It is more time efficient to strategically place the hay when the ground is open versus when two feet of snow is on the ground. The hay was moved when the ground was frozen so this prevented the fields from becoming rutted. Normally I would recommend unrolling the hay for better nutrient redistribution. Unfortunately that strategy disintegrates when the number one goal is just trying to survive.

Robert Shoemaker is past president of the VFGC.

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President's Message

"In this world, there are only two tragedies: One is not getting what one wants, and the other is getting it."

Oscar Wilde certainly wasn't talking about food choice when he made this statement, but he could have been. This quote comes to mind whenever I hear about consumers taking control of their food. They want choices. They want transparency. They want influence. It's reasonable, and it's fair but it's also sort of "The Good, the Bad and the Ugly."
News events of the last week brought forth three clear examples.

In response to consumer demand, Chick-Fil-A announced that it plans to transition to "antibiotic-free" chicken within the next five years. Perdue and Tyson, two of Chick-Fil-A's suppliers are on board too, as they roll out their own "antibiotic-free" brands. (Though the term "raised without antibiotics" would be more accurate since all meat sold in the US is supposed to be antibiotic-free.) There are producers willing to produce it, and consumers willing to pay extra for it. It's how the free-market system is supposed to work.

The bad came in the form of a story, told by the parents of an Oregon toddler, and the (former) owner of the dairy that supplied the child's family with raw-milk. In an effort to avoid processed milk, Kylee Brown's parents purchased unpasteurized milk on shares. Kylee's mother Jill, and dairyman Brad Salyers share the story of how two families were devastated as Kylee contracted the O157:H7 strain of E. coli.

And consumers got a glimpse at one of the more unattractive, but scientifically based, practices of the livestock industry, courtesy of the latest Humane Society of the United States (HSUS) video. Lacking a vaccine for PEDV (porcine epidemic diarrhea virus), an Owensboro, Kentucky farmer is recorded utilizing the "feedback" system in an attempt to curb an outbreak of this fatal disease in his hog houses. As the name suggests, portions of dead animals, in this case piglets, are fed back to adult animals in an effort to help them establish resistance to the virus. Ugly, indeed, but one of the few means available to combat a disease that has been in the United States for less than a year. What does this have to do with forage producers? Hopefully not much. But we need to be aware of what is going on around us. Consumers want information. They don't always like it. And we're not always in a position to control the information they get. But unfortunately, we're often left to deal with the consequences.

Best Regards,
Patty Jonson
President, VFGC

Managing Horse Pastures for Improved Soil Function, Pasture Health and Water Quality

By J B Daniel

The estimated number of horses in the United States and Virginia continues to rise each year, while land area to pasture and produce feed for these animals continues to decline. However, when we look at the equine industry today, the sheer number of horses and limited acres available to house these animals in close proximity to their owners is evident. Horses are widespread throughout the state in general; however large concentrations of horses are present just outside the major population centers of our state. This is understandable since many horse enthusiasts live and work in the cities and the surrounding suburban areas and thus need quick access to a place where they can board, ride and enjoy their horses. Unfortunately these areas are competing with and under pressure from the continued sprawl of both residential and commercial development.

The equine industry is very important to local economies throughout Virginia. The industry is good for local business providing supplies and services, as well as the surrounding agricultural community that produces and provides much of the needed hay to support the local horse population. As the industry faces the challenges of a greater number of animals and fewer acres to provide for them, it becomes increasingly important to acknowledge the natural resources that support horse farms. These natural resources must be carefully managed in order to maintain the long term function and productivity of agricultural lands and the conservation of soil and water resources.

Every situation is different. Some horse farms are maintained with healthy pastures and some are not. Regardless of the individual situation, many horse farms face the significant challenge of managing their horses on a given area of land. On most horse farms, the focus tends to be on the animal resource, the horse, while the other natural resources supporting the system such as the pastures are many times unintentionally overlooked. The challenge comes when determining if the area of land is large enough to meet the needs of the horses and provide a healthy pasture sod at the same time. A healthy pasture has the potential to provide horses a sufficient supply of nutritional forage throughout most of the growing season in addition to a place to exercise in the sunshine and fresh air. Under grazing conditions, one must understand the basic relationships between the grazing animal, plant, and the soil. Understanding these relationships is the key to managing the plants and soils to benefit the grazing animal and maintain pasture ecosystem integrity.

Horses left to graze on pasture without proper management can quickly result in undesirable results for all aspects of the system. Horses are large livestock animals, with a relatively small stomach and a mouth having both upper and lower front teeth.

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and allowed to properly establish, Bermudagrass forms a thick dense sod that can sustain close grazing in a managed system. It is productive May through August and goes dormant in the fall. Bermudagrass pastures can be inter-seeded with a cool season annual in the fall, such as annual ryegrass, to provide some green forage in late fall and spring on the same pasture field.

The negative impacts to the forage base in unmanaged horse pastures directly relates to the deterioration of soil quality which restricts the natural function of the soil. The function of the soil in an agricultural situation is to provide a healthy medium for plants to grow and flourish. A healthy and properly functioning soil is usually rich in organic matter having a diverse and expansive system of micro and macro pores connected to the soil surface that allow for infiltration of rain water and the exchange of water and air with plant roots. However, in an overstocked, overgrazed pasture, due to the thinning plant cover as described above, there is less plant material covering the soil, fewer roots to hold the soil, and a lack of plant residue to replenish the organic matter in the surface soil horizon.

The plant cover and thin layer of mulch residue that used to protect and enhance the soil quickly diminishes. These changes leave more of the pasture soil surface exposed and unprotected, increasingly susceptible to erosion and the loss of the most valuable and fertile layer of soil in the pasture system. The soils direct exposure to horse hooves quickly compacts and seals the soil surface, degrades soil porosity, limiting rainfall infiltration and greatly increasing surface runoff. Most of this sediment laden runoff does not infiltrate into the soil but rather deposits the soil from the field into adjacent streams and ponds causing water quality concerns for the aquatic life living in those waters and for the horses drinking from that same water.

When too many animals have unrestricted access to pastureland that does not have the capacity to provide and sustain those animals, then the plant, soil, water and animal resources all suffer. To break this negative cycle of decline, the source of the problem must first be identified and a careful recovery strategy planned. In many equine pasture situations the number of horses stocked or managed in the pasture far exceeds the carrying capacity for that land under the present management. The true carrying capacity depends on soil type, productivity potential, the type of forage, type of livestock and the way livestock are managed on the pasture. A plan must be carefully crafted to bring the management, and often the number of horses, into balance with a realistic carrying capacity for the available land.

Common changes in management include:

- designating a heavy use area as an exercise lot where the horses spend most of their time
- subdividing the overall pasture into a series of smaller paddocks with internal cross fencing to allow for controlled grazing and minimum forage rest periods to allow for sufficient plant regrowth and maintenance of a thick protective sod
- deferred grazing on paddocks under renovation for an extended period of time (commonly 18+ months) while newly seeded forages become established and the soil begins to heal
- a plan for restricted access to a grazing paddock for a limited amount of time each day
- fencing surface waters to restrict animal access and prevent continued stream bank degradation and erosion and installing a clean reliable source of drinking water for the horses
- installing herbaceous or forested buffers between grazing paddocks and surface waters to slow the velocity and filter runoff water before going into surface waters

418-101 at http://pubs.ext.vt.edu/category/horses.html.

A thorough assessment of the equine system, planning and implementation of specific conservation practices, and a commitment to the improved management of horses in the renovated paddock system can greatly improve the quality of the soil, water, plant and animal resources supporting the pasture system. A horse owner should not have to do this alone. Every location and situation is different and a plan should be customized to address the resource concerns on each specific farm. Horse owners are encouraged to assemble their planning team from the local SWCD, NRCS, Extension, and other local agricultural professionals available to provide sound technical assistance for conservation of natural resources supporting the pasture system. Begin this year by putting a plan on paper. Then start implementing the chosen practices that can positively change your pasture system forever and result in a more enjoyable experience while spending time and caring for the horses. For more information about pastureland soil quality, why it is important and the indictors for assessment and monitoring, see Pastureland Soil Quality Sheets 1 and 2 available at http://soils.usda.gov/sqi/publications/publications.html. For additional guidance on managed grazing in horse pastures refer to, Virginia's Horse Pastures: Grazing Management, Virginia Cooperative Extension Publication

J.B. Daniel, NRCS Grassland Agronomist and also serves on the VFGC Board.

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

2014 VFGC Board of Directors Ballot

Producer Directors (CHOOSE ONE)

Jon Repair is a retired extension agent who worked more than 30 years in Virginia's Shenandoah Valley. He has a B.S. from Delaware Valley College in Animal Science and a M.S. in Crops Science from Rutgers University. Jon is now fulltime on the farm where he and his family farm a total of 950 acres which includes pasture, hay, barley and corn. The farm maintains 200 head of brood cows in a rotational stocking system. He sells Hereford and Angus breeding stock and freezer beef.

Jon Repair_____ Write in _____

Agency Directors (CHOOSE TWO)

Jim Tate is the owner and operator of Pipe Dream Farm, a beef production operation. His background is in dairy marketing and industrial sales. As a Conservation Specialist since 1999, Jim focuses on the BMP cost-share program, especially engineering designs and grazing management practices.

Jim Tate_____ Write in _____

Matt Booher has master's degree in forages & ruminant nutrition from Colorado State University. After graduation he worked in Shenandoah Valley as field rep for Rockingham Cooperative for six years. In 2012 Matt started with Virginia Cooperative extension. He currently covers Augusta, Rockingham, Rockbridge counties focusing primarily on strategies for extending the grazing season and on pasture management.

Matt Booher_____ Write in _____

Mail ballot to VFGC, 3599 Indian Oak Road, Crewe, VA 23930 or email makenny@vt.edu

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Soil Health: The Foundation of Profitable Ruminant Livestock Production

VFGC's annual Winter Conference Series was held in January, with stops in Blackstone, Wytheville, Weyers Cave and Brandy Station. The 3" "dusting" of snow between Wytheville and Weyers Cave served as a fitting welcome for keynote speaker, Joshua Dukart of Bismark, North Dakota.

Joshua manages his family's ranch and serves as a field rep with the North Dakota Grazing Lands Coalition, an organization providing financial and land management guidance to producers in the Burleigh County, North Dakota. Since the 1990s, producers in Burleigh County have responded to increased input costs and weather challenges by including cropland acres in their grazing systems and introducing Multi-species cover crops into both their grazing lands and crop lands. While the specifics of managing land in the upper Midwest are different, many of the challenges and opportunities are familiar to producers here in Virginia.

The concept of using cover crops to help reduce input costs isn't new, but Joshua's perspective of soil health gave producers a new insights on how to use this underappreciated management tool. By considering how our grazing practices impact soil health, we can rethink some of our own individual strategies for reducing input costs and mitigating risk.

Plant species diversity increases soil species diversity and maximizes the ability of our pastures to favorably react to differing conditions, such as extremes in moisture and temperature, animal impact, and pathogen load. By retaining soil cover we can improve the water-holding capacity of our pastures, increasing moisture mobility for our own crops, and minimizing runoff.

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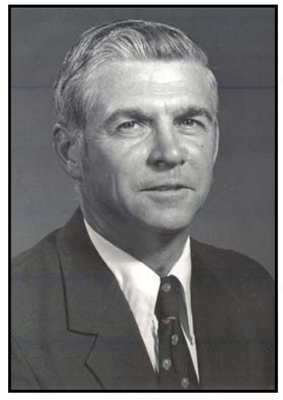
Harlan White Scholarship Fund

By: Richard Ruff

Every young boy fantasizes about the career he will have to support his family with when he becomes an adult. I had two. An engineer on a steam engine for the N & W or every true Celtic's dream; live off the land with livestock. The N& W retired the steam locomotives when I was twelve so I ended up as a cattleman. Very few adults are fortunate enough to make a living chasing their childhood dream. My first memory of farming was breaking my fingers in the cog wheel on the old corn sheller at seven years old while feeding the sheep and pulling the wagon up beside the thrashing machine with the 8N Ford that summer with all the old farmers telling me how to do it. I made my first income selling orphan lambs and latter selling cream from the milk cow.



My experience in army basic training built enough confidence that I could do anything I made my mind up to do if I had the knowledge to do it. Everyone discouraged me from farming so I bought a couple of trucks and did custom fertilizing and spraying for thirty years. Sixty years after getting my hand caught in that old hand sheller I'm making a good living doing what I always wanted to do, marketing grass through value added cattle. The doctor who owned my great great grandfather's farm across the road showed my father an article about stockpiling fescue. Dr. Harlan White was mentioned in the article so I went to hear him speak at the next extension

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INSIDE THE VIRGINIA FORAGER

Reporting the progress of Virginia's forage industry