# Views From The Foothills A Publication of the Culpeper Soil & Water Conservation District Serving Culpeper, Greene, Madison, Orange & Rappahannock Counties www.culpeperswcd.org

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## Reconnecting Cattle and Quail - NRCS' Working Lands for Wildlife Program

By Justin Folks, Private Lands Biologist

Prior to World War II, our cattle grazed upon pastures of native grasses with scattered wildflowers and brush. These pastures, combined with the way we managed the rest of the land, helped harbor scores of wildlife species, including the beloved (but now rare) bobwhite quail. In 1931, a new tall fescue grass released in Kentucky (appropriately named Kentucky-31) became popular, agricultural equipment became more advanced, and more and more mouths had to be fed. All forms of agriculture became more intensive, leaving little "weeds and brush" behind that quail needed to thrive. Cattle and quail were becoming mutually exclusive.

While quail have struggled, the cattle farms are now facing challenges. Our summers seem to be getting hotter and drier, feed costs are increasing, and an endophyte fungus found in fescue is affecting herd health. Operations that rely only on common cool season forages such as fescue and orchardgrass may find it increasingly difficult to stay above the bottom line. To help both graziers and quail, the USDA-Natural Resources Conservation Service (NRCS) and its partners are recommending producers go "old school" by grazing native forages once again.

The NRCS's Working Lands for Wildlife program offers assistance for conserving wildlife on agricultural lands to create a win-win for the producer and the critters. The regional "Bobwhites in Working Grasslands Initiative" will help reconnect cattle and quail by promoting the use of native, warm-season grasses in grazing systems to boost livestock productivity during the "summer slump," decrease feed and fertilizer costs, and create habitat for bobwhites and other wildlife at the same time. Dr. Pat Keyser's recent research at the University of Tennessee's Center for Native Grassland Management, a leader in U.S. grazing research, has shown that proper management of native forages can maximize livestock productivity and benefit quail on the same acreage. A true win-win!

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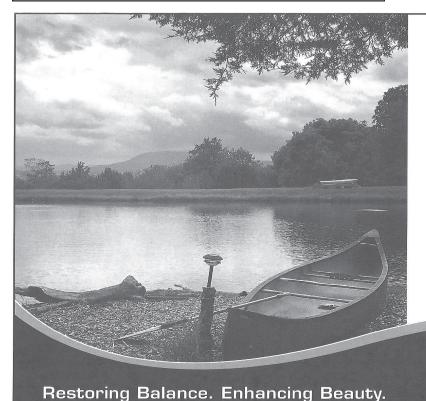
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# The Importance of Forage Management in Pasture and Hay Fields Heading into Fall

## By David Massie, Conservation Specialist III

Fall is a critical time period for determining the amount of forage that is produced on a pasture. Management decisions made at this time affect the ability of the plants to survive over winter; they determine when new growth is initiated in the spring, and how much total forage growth will be produced over the entire season. Overgrazing or excessive forage harvesting in the fall inhibits root system rebuilding and the formation of shoots for spring growth.

Why is fall one of the most critical period of the forage cycle? The answer is that two major plant activities occur during fall growth. One is root regeneration and the other is the formation of the shoots or growing points. Allowing the plants to store carbohydrates in the fall is essential for long-term forage production. The lower stems, rather than the roots, are the major storage unit of complex carbohydrates in perennial grasses. The new root system will take up water from the soil plus important nutrients that nurture those new growing points. Both plant systems must work together to sustain pasture growth in the next grazing season.

To support a high level of forage production, the root system is vital. Just as the parts of the grass plants that we see above ground have a growth cycle, so do the roots. This is also a time when plant root systems are rebuilding from summer shedding. The actual time of new root growth varies depending upon the amount of moisture either by irrigation or rainfall, shortening day-lengths, and the residual stubble height.

You can determine if your pasture plants are undergoing root rebuilding by looking for new white roots developing from the crown tissue in the fall. New roots will be variable in length but easily seen if dug out of the ground with a shovel and washed free of soil with water.

Growing points are developing in the fall to provide next spring's forage growth. These young grass shoots, or tillers, are much like babies. Both need a steady supply of nutrients and protection from stress. In the fall, nutrients are supplied from the previous season's tillers, which have stored carbohydrates in the bottom 3-4 inches of the plant. Often these older tillers are dormant and brown at this time of year, but they aren't dead, and their storage function is critical. These older tillers also provide physical protection to the new tillers.

If pastures are grazed or mowed lower than a 3-4 inch stubble height in the fall, these reserves are reduced, and the new tillers are starved, as well as being exposed to weather extremes. Usually root formation will slow or stop, and in the following spring these tillers will grow slower and have fewer roots to support themselves.

Fall is also a great time to take soil samples to test the fertility of the pasture soil. Soil tests should be taken during the same month each year for consistency. Early fall is also a good time to apply nutrients based on your soil test. Manure or other sources of nitrogen can be applied based on plant nutrient needs, but just make sure that you do not apply too much nitrogen.

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## VCAP URBAN COST-SHARE PROGRAM AVAILABLE IN CHESA-PEAKE BAY WATERSHED

By Kevin McLean, VCAP Coordinator

As urban and suburban development continues to increase throughout Virginia's Chesapeake Bay Watershed, demand for conservation practices that can supplement the agricultural cost-share services already provided by Soil and Water Conservation Districts continues to grow. Nutrient and sediment runoff, in the form of non-point source pollution from developed areas, is now the number one cause of pollutants in the Chesapeake Bay. In order to address this issue, several SWCDs, including Culpeper, began in 2012 to pursue small pilot program grants that could allow for the development of an urban cost-share program.

Fast forward to 2016, with the assistance of these and other districts, and the Virginia Conservation Assistance Program (VCAP) was brought fully to life through its first round of federal funding as part of the EPA's Chesapeake Bay Implementation Grant (CBIG). Since that time, the program has grown rapidly due to demand from local landowners and the district staff members that support them.

VCAP is an urban cost-share program of the Virginia Association of Soil and Water Conservation Districts (VASWCD). The program provides financial reimbursement to property owners installing specific conservation practices. A plan is first proposed to the district, after which a site visit verifies the project's eligibility, an application is submitted to the VCAP Steering Committee for approval, and installation can begin. These practices are installed in small acreage settings, at the source of stormwater discharges in lieu of larger more expensive practices that treat larger areas. Residential, business, public, and private locations that are non-agriculture are eligible sites.

Most practices are eligible for 75% cost-share and some practices provide a flat incentive payment up to the installation cost. A number of practices are eligible for cost-share funding including:

- Conservation Landscaping (CL): Includes meadows, mulch beds, and tree plantings.
- Impervious Surface Removal (ISR)
- Rain Garden (RG)
- Dry Well (DW)
- Rainwater Harvesting (RH)
- Vegetated Conveyance System (VCS): Includes grass channels, dry swales, wet swales, and step pool conveyance.
- Constructed Wetlands (CW)
- Bioretention (BR)
- Infiltration (IF)
- Permeable Pavement (PP)
- Green Roof (GR)
- Living Shorelines (LS)

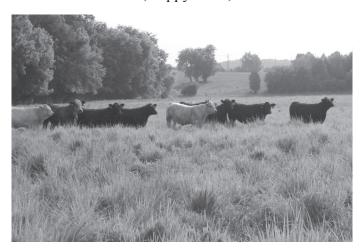
Each VCAP practice is another small step towards improvements we can count towards Chesapeake Bay clean-up milestones we're faced to meet this year and in 2025. More resources on VCAP approved Best Management Practices and program opportunities can be found at vaswcd.org/vcap. Please contact Richard Jacobs at <a href="mailto:richardj@culpeperswcd.org">richardj@culpeperswcd.org</a> or 540-825-8591 with any additional questions.

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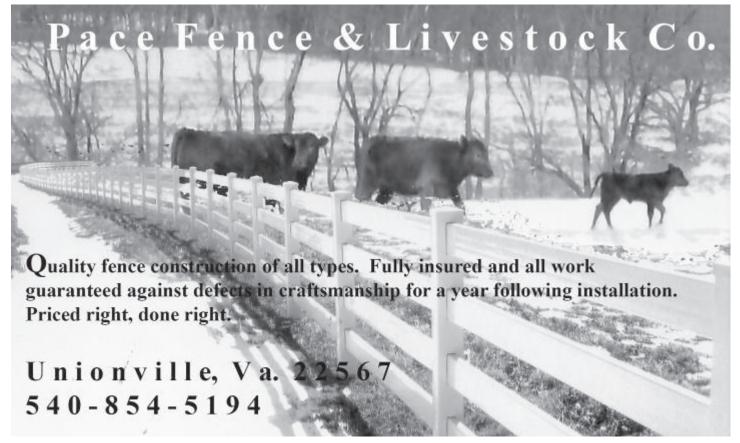
If you're interested in maximizing cattle productivity while helping wildlife in need on your land, contact your local USDA Service Center to get started. For more information on managing native forages for cattle, visit <a href="http://nativegrasses.utk.edu">http://nativegrasses.utk.edu</a>. For more information on the bobwhite quail initiative in Virginia, visit <a href="http://www.VAquail.com">www.VAquail.com</a>.

Here's to fat, happy cows, and that sweet sound of "bob-WHITE!"





These steers are fattening up on lush, vigorously-growing native grass in July while most other cattle are picking at what's left of the spring growth from fescue and orchardgrass



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## 2 Billionth Tree Seedling Harvested in Virginia

Provided by Virginia Department of Forestry

First Lady of Virginia Dorothy McAuliffe helped harvest the 2 Billionth tree seedling grown by the Virginia Department of Forestry during a celebration March 29, 2017 at the Garland Gray Forestry Center in Sussex County. The First Lady and Virginia's Secretary of Agriculture and Forestry, Dr. Basil Gooden, were staffing the lifting machine that pulled the special seedling out of its bed of loblolly pines before a gathering of elected officials, agency partner organizations and VDOF staff.

The ceremony was part of the VDOF Nurseries' 100<sup>th</sup> anniversary. The tree seedling nursery program began in Charlottesville in 1917 as a way to restore the millions of acres of Virginia forestland that had been lost to over-harvesting and wildfires during the previous three centuries. In the spring of 1917, Mr. J.P. Taylor of Orange, Va., gave \$500 to establish a tree nursery under the direction of Virginia's first state forester, Chapin Jones. At the time, Jones was the only employee of the Office of the State Forester - the predecessor to the VDOF. Jones planted a mix of loblolly pine, shortleaf pine, white pine and Norway spruce on the campus of the University of Virginia. At the end of that first growing season, Jones had 200,000 tree seedlings to sell to Virginia landowners so that they could replant formerly forested tracts on their property.

"Our forest resources diminished from 25 million acres when the colony in Jamestown was established in 1607 to just 1 million in 1917 as a result of land clearing for farms, production and the establishment of our cities and towns. The trees were harvested for everything from building materials to fences, ships and poles. Much of Virginia grew and thrived, but this was detrimental to our forests as what was being cut was not being replanted. Fortunately, sustainability became a cornerstone for VDOF, and we now have 16 million acres of forestland across the state and have lifted a total of 2 billion seedlings from Virginia's nurseries in the last 100 years.

Secretary Gooden said, "Thanks to the forest landowners, the forest industry, a number of terrific partner organizations and the staff at the Virginia Department of Forestry, Virginia's forestlands have made a remarkable recovery and now comprise 16 million acres across the state. And forestry is a key component in the New Virginia Economy, employing more than 103,000 Virginians and contributing \$17 billion annually to the state's economy!"

State Forester Bettina Ring said, "In addition to the contribution to our economy, our forests provide clean drinking water, fresh air, abundant wildlife habitat and diverse outdoor recreational opportunities. They also contribute to our overall health and wellness. The VDOF nurseries are at the very heart of all this because, without tree seedlings, we would not have the extensive forests we have in Virginia today. We are certainly grateful to the men and women who plant, nurture, harvest and sell more than 33 million tree seedlings each year and to partner organizations who work with us to ensure healthy, sustainable forests."

The Virginia Department of Forestry operates two tree seedling nurseries (the second is in Augusta County) that produce 45 species of hardwood and softwood trees for sale to Virginia landowners. These nurseries operate without tax dollars – their operations are funded solely through the sale of the seedlings they grow. Seedlings are available for sale through April 15<sup>th</sup> each year. You can order yours at <a href="https://www.buyvatrees.com">www.buyvatrees.com</a>.

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## **VA Department of Forestry Announces Sign-up for Reforestation** By Joe Rossetti, VDOF Senior Area Forester

Pine forests are a financially and ecologically valuable resource for Virginia. The Virginia Department of Forestry (VDOF) has been promoting replanting pine following harvesting of pine for decades to continue this resource for our children's generation. VDOF provides technical assistance to landowners for replanting and release of young plantations, and provides cost share through the Reforestation of Timberlands (RT) program. If you are considering replanting following a timber harvest, please contact the VDOF to discuss and request cost-share assistance. If you have low productivity or difficult to access areas of your farm, please contact VDOF to discuss planting pine, or other management options that will benefit the forest or wildlife habitat. Landowners in Rappahannock and Culpeper counties can contact the VDOF at 540-347-6358, and landowners in Madison and Greene can contact Jack Kauffman at 434-229-9043, and landowners in Orange can contact Ed Furlow at 434-220-8051. Signup is ongoing.

Interested in Converting Turf to Native Plants and Trees? The Virginia Conservation Assistance Program may pay for some of the costs of the trees on page 4. Call 540-825-8591 to learn more!



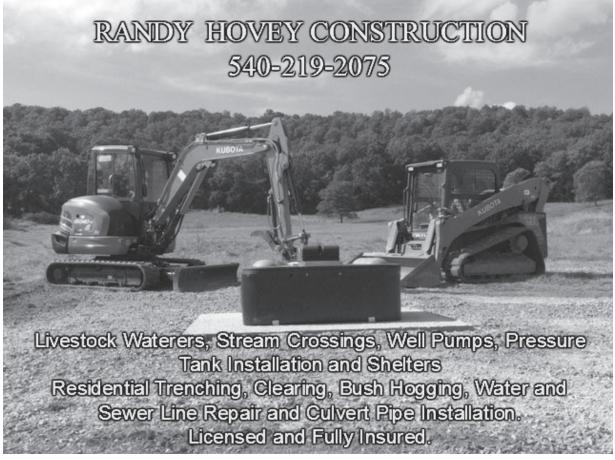


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## Virginia Ag Expo Returns To Renwood Farms

"Focused on Productivity, Management and Stewardship" is the theme for the 2017 Virginia Ag Expo. The Virginia Ag Expo is the largest agricultural field day held in the Commonwealth of Virginia. As an educational, marketing and social event farmers and agribusiness look forward to the Virginia Ag Expo each year. This year the AG EXPO will be held in Charles City County on August 3th. The location, Renwood Farms, is owned and operated by The Stanley Hula Family. Renwood Farms is a large diversified farming operation producing over 6,000 acres of crops a year; consisting of corn, soybeans and small grains; along with seed conditioning and sales. This focus on management and productivity at Renwood Farms has produced the world record corn yield of 532 bushels per acre by David Hula. The USG soybean seed that produced the world record yield of 172 bushels per acre was grown and conditioned at Renwood Farms.

The field tour will have the Virginia on farm corn and soybean variety test. Plots will demonstrate in-furrow and pop up fertilizers on corn and soybeans; biologically-based nitrogen soil testing; Mn-coated potassium fertilizer; potassium needs for 100 plus bushel soybeans; seed treatments on early emergence and vigor in corn; planting date vs relative maturity in soybeans; soil quality for high yields including a soil pit along with controlled traffic farming; low population soybeans and simulated drift of commonly used herbicides. In the afternoon there will be field demos of chopping corn header vs regular headers.

Breakfast and lunch will be provided by Virginia food vendors. Attendees will be able to eat any time from 6:30 AM to 2:00 PM.

For exhibitor and sponsor information contact John Smith at 804-829-5671 or email: vaagexpo@aol.com.

Pastures continued from page 3

Hay growers should follow the same recommendations as folks with pastures. Many grass hay growers with cattle like to move the animals onto the hay field after the last cutting has been removed. This long held practice may do more damage than you realize. The remaining hay stubble is high in storage sugars, just like in the pasture. Livestock tend to readily eat this plant portion because it tastes good. Without adequate storage of basal sugars prior to winter, those plants will have a distinct disadvantage in the spring. If you must graze hay fields in the fall, make sure you've given the field adequate time for regrowth to occur and to follow the same guidelines of stubble height minimums as for pastures.

For long-term survival of pastures and hayfields, remember to keep an eye on stubble heights and don't graze below them. Allow roots to rebuild and shoots to develop by not grazing hard in the fall. Make plans to get on a soil testing schedule, which is usually a test every three to five years. Use this information to make the most economical fertilizer applications. By following some of these management tips, your pasture should be productive for many years.

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## Cost Share for Septic System Maintenance and Repairs Open to Entire 5-County Area

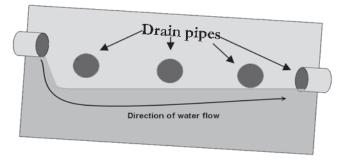
By Henny Calloway, CSWCD Conservation Specialist II

All residents of the District are now eligible for reimbursement of fifty percent of the expense of pumping, maintaining, repairing or replacing septic systems. The Culpeper Soil and Water Conservation District has a two year grant that funds their current septic system program in all areas of the five county conservation district; all areas Culpeper, Greene, Madison, Orange and Rappahannock Counties. This grant is focused on reducing any existing or potential impacts on local ground and surface water quality. E. Coli bacteria in some local streams has long been identified as being higher than expected by state water quality standards. Properly functioning and maintained septic systems can help reduce this. An additional benefit to the property owner is the assurance that their system is up to standards and functioning properly. It is a win-win for both water quality and property value. This grant compliments several others already in existence by expanding the options to the entire District.

Program participants are eligible for several different payments depending on the actual needs of their system. Reimbursement payments are typically fifty percent although can go as high as eighty percent for individuals that qualify for low income status. Maximum payments to property owners under average income levels are \$150 maximum towards a pump out and inspection; \$2,500 maximum towards a repair; \$4,000 maximum towards a conventional system or \$5,000 if a pump is required to move the liquids to the drain field; and \$12,000 maximum towards an alternative engineered system. Pump outs and inspections are encouraged for everyone; such preventative maintenance extends the life of a system and prevents higher costs later on if the systems fail. If further repairs are indicated by the inspection, the owner is still eligible for the additional repair payments. **Applications are required and need to be approved prior to the work being done or funding can be declined.** Free assistance with initial assessments of individual system needs is available from the District. Reimbursement payments are made promptly once the work has been completed. The program is entirely voluntary and assistance from the District is free of charge.

Further information on the program is available from the District at 825-8591 or 948-7531. Funding for these projects has been secured by the Culpeper Soil and Water Conservation District from the Virginia Department of Environmental Quality, Commonwealth of Virginia.

## A Common Septic System Problem



An unlevel distribution box forces all of the septic wastewater into 1 drain line. This can cause failure of that line and also causes the "sewer" water to appear above ground because the soil is saturated.

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## SUMMER RAIN BARREL SALE!

Rain barrels are available! Prices are \$70 for one and \$135 for two. For more information, contact Stephanie DeNicola at 540-825-8591 or send an email to: <a href="mailto:stephanied@culpeperswcd.org">stephanied@culpeperswcd.org</a>.



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## Views From The Foothills

# Published Seasonally By Culpeper Soil & Water Conservation District

Stephanie Rose DeNicola, Editor

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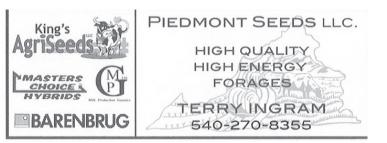




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