



FORAGE BITS

Spring 2011

Publication of the Maryland-Delaware Forage Council, Inc.

Inside This Issue

- ❖ MD-DE Forage Council Activities
- ❖ Paramount Herbicide
- ❖ Orchardgrass Survey
- ❖ Roundup Ready Alfalfa Release
- ❖ Managing Drought
- ❖ Grandin, Provenza, and Anderson Available on DVD
- ❖ Value of Legumes
- ❖ UKY Variety Trials
- ❖ Upcoming Meetings

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Next Board Meeting:

June 14, 2011

NRCS State Office Conference Room,
Annapolis.

No Better time:

- Evaluate forages stands following last year's drought.
- Evaluate nutrient needs and compare pricing for nutrient sources. Update nutrient management plan. Apply first split of Nitrogen to grass forages at green-up.
- Perform maintenance on farm equipment. Ensure drill and harvesters are operating properly. Order extra supplies (blades, guards, belts, batteries for hay meter) to increase uptime during busy season.
- Review and compile records, evaluate past management performance, prepare for tax season, check out crop insurance options, sign up for FSA and Soil Conservation programs.
- Control growth of winter annual weeds before seed head development

MD-DE Forage Council Activities in 2010-11 Secretary's Report Richard W. Taylor, Secretary MDFC

During 2010 and so far in 2011, MDFC has played a key role in organizing and conducting a number of educational programs for our

members and other forage producers. Pasture walks and workshops were held in a number of locations throughout Maryland and Delaware during 2010 and more are planned or being planned for the upcoming growing season. During the week of January 17 to 21, 2011, the MDFC jointly sponsored Hay and Pasture conferences in Delaware, southern Maryland, and in western Maryland/Pennsylvania. Attendance at these meetings totaled about 270 participants. The Council also helped organize a preliminary meeting with the Maryland Department of Environment to discuss CAFO and MAFO issues in advance of the Maryland Cattle Industry annual meeting and hay and pasture conference in early March of 2011 and which garnered another 165 participants. I'll present summaries of some of the presentations in a future issue of Forage Bits.

The executive board of MDFC invites all members of the Council to attend educational events sponsored by MDFC and to submit your ideas for future meetings and topics to the MDFC board members. The quarterly meetings are open to all to attend and are generally held from 10 am to noon on the second Tuesday of March (the March meeting runs from 1 to 3 pm), June, September, and December in the conference room of the USDA-Natural Resource Conservation Service located in the John Hanson Business Center at 339 Busch's Frontage Road, Annapolis, MD. Call or email the secretary at rtaylor@udel.edu or 302-831-1383 to confirm meeting date and time.

**New Herbicide Available for Grass Pastures
and Hayfields
Ben Beale, UME-St. Mary's**

A supplemental label for the use of Paramount 75 WG (quinclorac) from BASF is now available for post-emergence control of some annual grasses and a narrow spectrum of broadleaves weeds. The typical use rate is 3-8 ounces/acre with a total season rate not to exceed 18 ounces

per acre/year. Quinclorac is not a new chemistry, as it has been used in the lawn and turf industry for many years for the control of crabgrass. Forage producers may find the product useful for providing crabgrass and foxtail control in grass hay or pasture systems. Paramount is labeled for post-emergence application and has some residual activity. There is a 7 day Pre-Harvest Interval for hay. There is not a lot of data available on effectiveness of control for crabgrass in forage systems. Studies in the turf industry generally show greatest effectiveness when used on small plants before tillering and when applied sequentially. (Dernoeden, P., et al., 2003, UMD) Quinclorac will injure or kill legumes so do not apply it to fields with alfalfa or clover. According to the label Paramount will control barnyardgrass; large crabgrass; yellow, green and giant foxtail; broadleaf signalgrass; leafy spurge, field and hedge bindweed, morninglory, , clovers and bedstraw. Paramount will suppress lambsquarters, canada thistle, dandelion, and ragweed. It may be used on most cool-season grasses including bromegrass, tall fescue, Kentucky bluegrass, orchardgrass, and ryegrass as well as many warm-season grasses.

**Initial Results from the Mid-Atlantic
Orchardgrass Survey**

Dr. Ben Tracy
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Sciences**
**Grassland Ecosystem Management
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Growers across the Mid-Atlantic region have experienced problems with orchardgrass stands in recent years. Reduced forage yield, fewer hay harvests each year and premature death of orchardgrass stands have been reported and confirmed in University sponsored forage variety trials. Estimates suggest lower orchardgrass yields and premature death of stands may be

costing hay producers over \$90 million a year. With the help of Extension agents in Virginia and other neighboring states, I organized a survey to help answer questions about this orchardgrass problem and perhaps find the path to a solution.

The survey contained 28 questions that covered a wide range of issues. Data were entered on-line by agents who interviewed growers – usually in the field. Soil samples from many fields were collected and analyzed for standard soil nutrients. By the end of 2010, 43 orchardgrass fields had been surveyed across 4 states and 22 counties. Below is a summary of the more significant findings:

- 74% felt their stands had declined faster than expected.
- 64% of the problem fields were planted in last 5 years.
- 53% harvest hay twice per year, 30% harvest hay three times each year.
- 86% cut stands to the recommended 3-4 inch stubble height.
- 63% reported no visible insect or disease problems.
- 86% apply nitrogen fertilizer every year.
- 79% had a soil test done within last 3 yr.
- P and K ratings for most fields were in the low to medium range.
- Cultivar type appeared unrelated to poor stand persistence.

Overall, most growers reported poor stand persistence and these included seemingly well-managed stands. None of the individual variables surveyed (e.g., pests, disease, cutting management, soil fertility) were well correlated with poor orchardgrass persistence.

So what might have caused these orchardgrass problems? Well, the evidence probably points to a combination of factors, and I suspect a major player was climate. For example, from June 2007 to April 2008, approximately 90% of Virginia was under drought. Drought conditions also were widespread in 2006, 2008 and 2009 but for shorter duration. Moreover, since 1960 mean air temperature has increased by 0.3 deg F each decade. Warmer temperatures and periodic

droughts surely stressed many orchardgrass stands in recent years. When combined with other issues, like low soil fertility, these environmental stressors probably contributed to many problems observed by growers. If this climate hypothesis is correct and temperatures continue to rise, as they have been, growers in Virginia might consider switching to more stress tolerant forage species (e.g., novel tall fescue varieties) to replace declining orchardgrass stands.

The Word is Out: Roundup Ready® Alfalfa Gains Approval for Spring Planting

Richard W. Taylor
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In a press release through Reuters on Jan. 27, 2011, the word came down that the United States Department of Agriculture (USDA) has approved GMO alfalfa without restrictions and that the alfalfa can be planted as early as this spring. Surprising few in the agricultural community, Secretary Vilsack stated that there are no doubts about GMO crop safety and that APHIS has determined that Roundup Ready alfalfa is as safe as traditionally bred alfalfa.

Many in the industry had expected that a compromise was in the works that would place limitations and restrictions on planting Roundup Ready alfalfa and that the process of defining those limits and restrictions would delay approval past spring planting time. This worry proved unnecessary as no restrictions were announced on Thursday. Many conventional and organic producers are very worried that pollen from Roundup Ready alfalfa and carried by the bee pollinators will end up pollinating their conventional or organic alfalfa seed sources. Actual hay and feed producers have less to be concerned about since if they are managing their alfalfa correctly, the crop should never

reach the seed set stage of growth. Also since alfalfa has its own regulatory means (autotoxicity) of preventing self-generated seed from germinating and establishing in an established stand of alfalfa, there should be minimal chance of contamination of a stand during its lifetime as a hay, greenchop, haylage, or grazing field.

Secretary Vilsack said that the USDA would promote research into how genetics could be used as a means of preventing contamination and research designed to improve detection of any contamination that might occur. The Secretary will have the USDA set up two advisory committees to help ensure the availability of high-quality seed and to set up programs to try to protect the purity of the alfalfa germplasm base.

Since the above article was originally written, several groups have again filed a law suit against Roundup Ready alfalfa although at this time I know of no court injunction preventing the planting of the GMO alfalfa. Growers who want to establish alfalfa in the spring will find this type of alfalfa of the most use. Generally by the second year, the availability of other herbicides for grass or broadleaf control significantly lessens any advantage to RR alfalfa.

Managing Drought in Grazing Systems

Dr. Chris D. Teutsch
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In the Mid-Atlantic region drought is a part of our agricultural landscape. An analysis of long-term weather records conducted by Dickerson and Dethier in the 1970's indicated that we can expect a moderate drought once every five years and a severe drought once every 10 years. Developing a drought management plan could significantly reduce the economic impact

of drought on your operation. The strategy that is used will depend on the resources of the farm and its long term goals. The remainder of this article will outline some strategies that could be used either alone or in a combination.

Implement rotational grazing. Although this does not sound like much of a drought management strategy, the first thing that people notice when they switch from a continuous to rotational grazing system is that pastures grow longer into a drought and recover faster after the rain finally comes. The reason for this is that rotationally grazed plants have larger and healthier root systems that can go deeper into the soil for water. In fact, maintaining a healthy pasture is not just a drought management strategy, but probably one the best ones.

Incorporate deep-rooted legumes into pastures. Interseeding legumes into pastures increases pasture quality, supplies nitrogen for grass, and extends grazing during a drought. The most commonly used legume would be red clover. The primary advantage of red clover is that it has great seedling vigor and can be easily frost seeded into pastures. Alfalfa possesses a deeper tap root and is more drought tolerant than red clover but takes more effort to get into a sod. Alfalfa mixes well with a variety of grasses like orchardgrass and matua bromegrass. The most drought tolerant legume and our only truly perennial warm-season legume is sericea lespedeza. Sericea has an extremely deep taproot, but its major limitation is poor seedling vigor making it difficult to incorporate into an established sod. Once established, sericea has amazing drought tolerance. There is only one commercially available variety of sericea lespedeza, "AU Grazer." This variety was selected at Auburn University for increased tolerance to grazing, medium tannin levels, and finer stems. It is available from Sims Brothers, Inc. located in Union Springs, AL (<http://simsbrothers.com/index.htm> or 334-738-2619).

Incorporate warm-season perennial grasses into grazing system. Warm-season grasses will produce about twice as much dry matter per unit of water when compared to cool-season

grasses. There are a number of perennial warm-season grasses that can be used in the Mid-Atlantic region, but one of the most productive, persistent, and tolerant to close and frequent grazing is bermudagrass. Bermudagrass requires management to be productive, which means it needs to be grazed frequently to keep it vegetative and it needs nitrogen. Other perennial warm-season grasses include the native grasses such as big and little bluestem, Indian grass, switchgrass, and eastern gamagrass. Although these grasses can be productive during the summer months, they do not tolerate close and frequent grazing well.

Incorporate warm-season annual grasses into grazing system. Warm-season annual grasses like pearl millet, sorghum-sudangrass, and crabgrass can provide high quality summer grazing. The primary disadvantage with summer annual grasses is that they need to be reestablished every year, which costs money and provides the chance for stand failure. The exception to this is crabgrass that develops volunteer stands from seed in the soil. Although most people don't realize (or want to admit it), crabgrass has saved many cows during dry summers in the Mid-Atlantic region. Research at the Southern Piedmont Station has shown that crabgrass responds well to improved management and can produce 2-4 tons per acre of highly digestible forage. Crabgrass can produce a tremendous amount of growth from small amounts of rainfall that accompany summer thundershowers. Only two commercially available varieties of crabgrass exist, Red River and Quick-n-Big. Both are available from Elstel Farm Seeds, Ardmore, OK (<http://www.redrivercrabgrass.com/contact.html> or 580.223.8782). More information on crabgrass and other summer annual grasses can be found at <http://pubs.ext.vt.edu/418/418-004/418-004.html>.

Irrigate pastures. Irrigating your pastures can increase dry matter production by about 50% in a normal year and much more than that in a dry year. The best grass to irrigate is a warm-season grasses. One common misconception is that irrigating a cool-season grass will make it grow in the summer. Cool-

season grass growth is limited by not only moisture, but also temperature. Once temperatures exceed 70 F, cool-season grass growth greatly slows and even stops in some cases. In contrast, warm-season grasses do not even reach peak growth until 90 to 100 F. Research has shown that warm-season grasses will produce about 1.5 to two times as much growth per unit of water used when compared to cool-season grasses. Although irrigation of forage crops is a viable drought management strategy, the economics may be questionable. In recent years, lower cost irrigation systems, such as pod systems have been developed. These systems offer a relatively low initial investment. Two lines of 5 pods and a pump to run them can be purchased for less than \$5,000. More information on irrigating pastures and irrigation pods can be found at <http://hayandforage.com/hay/alfalfa/kline-receives-high-marks/> and <http://www.arec.vaes.vt.edu/southern-piedmont/forages/camtasia/2010madgc.html>.

Feed hay. The most efficient way to harvest forage is with the animal. In the Mid-Atlantic region, we should strive to reduce or eliminate hay feeding in our grazing systems. This doesn't mean that we will not ever need hay. It does mean that in most cases you are better off to let someone else make it. Drought is certainly one of those cases that hay will likely be required. A common problem with the hay feeding strategy is that when you need it, everybody needs it and there is little to go around. In addition, the price of hay during a drought can be high. One thing to think about is buying hay during a good year and storing it under cover. It is kind of like having money in the bank. Hay that was well cured will keep for years if it is kept off the ground and out of the weather. A key to successfully using hay is to start to feed it before pastures have been overgrazed. Hay feeding should be done in one paddock so that damage from overgrazing is confined to this area.

Utilize commodities to extend pastures. Commodities such as brewer's grain, corn gluten, and soybean hulls can be used to supplement and extend hay and pasture during

drought periods. Things to consider are the availability, storage, handling, feeding, and price of commodities. The ability to readily get commodities and efficiently feed them is critical if they are going to be a key component in your drought management strategy.

Stock for five year drought. Having a perpetually light stocking density that underutilizes pastures in most years, but gets you through drought years is a viable drought management strategy. However, the opportunity cost for using this strategy is high. In most cases, you are better off to stock for an “average” year and focus on other strategies for drought years.

Wean and sell calves early. This has a two-fold effect, first it reduces the number of grazing units and the total forage needed, and second it reduces the nutritional requirements of the brood cows. A dry brood cow requires 14% less DM, 15% less energy, and 24% less crude protein. The downside is that you may be selling small calves when the prices are low.

Cull cows. This could be a good time to get rid of those older cows that you have been meaning to cull. Ideally, culling decisions should be based on long-term records and take into account reproduction, functionality, and production. This may also be a good time to assess if your cows fit your system. A good example is body weight and frame size. There has been an increasing interest in moderating cow size. Simply put smaller cows will tend to eat less. At this winter’s beef conference held at Virginia Tech’s Southern Piedmont AREC, Scott Greiner, Extension Animal Scientist from Virginia Tech, said that mature cow weight and calf weaning weight are not well correlated. In a nutshell, this means that smaller cows don’t always wean the smaller calves and vice versa. Dr. Greiner’s presentation on utilizing EPDs can be viewed at <http://www.arec.vaes.vt.edu/southern-piedmont/forages/camtasia/sparecbeef2011.html>.

Once you have settled on a drought management strategy, it is important that you are ready to implement it in a timely manner. If you are selling cattle, sell them before the price is rock bottom. If you are feeding hay, feed it before the cattle loose condition and pastures have been damaged from overgrazing. To accomplish this, you will need to set quantifiable benchmarks. These could be days without rain, available forage on hand, days on hay, pounds of weight loss or change in condition. Regardless of what you have set as a benchmark, you need to be ready to implement your drought plan when you reach it.

To learn more about managing pastures and livestock contact your local extension agent or visit Dr. Teutsch’s website at the Southern Piedmont Agricultural Research and Extension Center at <http://www.arec.vaes.vt.edu/southern-piedmont/forages/index.html>.

**“Grandin, Provenza, and Anderson”
Available on DVD**

This winter’s *Virginia Forage and Grassland Council’s Winter Forage Conferences* were well attended with more than 1,100 people participating. Speakers include Temple Grandin, Fred Provenza, and John Anderson. Topics covered at this winter’s conferences included animal handling and welfare, grazing behavior and nutrition, and the impact of global economics on livestock agriculture in the U.S. If you missed this meeting don’t despair, we were able to capture all of the presentations as Camtasia videos and they along with handouts and an electronic copy of the proceedings are available on DVD. All you need to do is slip the DVD into your personal computer and click on the talk you would like to hear or the handout you would like to view. For more information on purchasing a DVD from this year’s or past year’s winter conferences, please visit our web page at www.vafortages.org or contact Margaret Kenny at 434-292-5331 or makenny@vt.edu.



FORAGE VARIETY TEST REPORTS
From: University of Kentucky Forage News,
December 2010 Edition

Gene Olson, coordinator of UK's forage variety testing program, has been working hard over the last month to complete the 2010 Forage Variety Test reports. These will be available over the next month at the UK Forage Website www.uky.edu/Ag/Forage under the "Forage Variety Trials" section. Your local county agent will also have copies of these reports or he/she can easily print them off for you. We continue to publish our summary report which includes the average performance of all the named varieties that UK has tested over the last 12 years. The summary report is the best way to compare variety performance over years and to narrow down the varieties that will work best on your farm. Our individual reports contain the detailed yield, maturity, and persistence data from all the entries in our current trials. If pasture survival is an important criteria for you in selecting a variety, refer to the Grazing Tolerance Reports to determine which varieties show the best long term survival in pastures.

VALUE OF LEGUMES IN PASTURE
From: University of Kentucky Forage News,
February 2011 Edition

Over the years, many stocker grazing studies have been conducted at Auburn University. Under the leadership of Dr. Don Ball, a detailed summary of thirty grazing studies has been completed. A summary (see table) shows that eight of the top ten involved legumes. A copy of this publication is on our website <http://www.uky.edu/Ag/Forage/STOCKER%20CATTLE%20PUB%20ANR-1348.pdf>

Ten Lowest Calculated Pasture Costs/lb of Gain.				
Pasture type	Grazing days	ADG	Pasture cost/ac	Pasture cost/lb
Tall Fescue w/Ladino	205	1.53	\$172.26	\$0.30
Orchardgrass w/Ladino	238	1.62	\$172.08	\$0.30
Tall Fescue w/Birdsfoot	194	1.51	\$173.38	\$0.44
Bermudgrass w/Vetch	161	1.29	\$230.75	\$0.47
Sericea Lespedeza	139	1.87	\$148.84	\$0.49
Sericea Lespedeza	139	1.65	\$148.84	\$0.54
Sericea Lespedeza	139	1.39	\$148.84	\$0.60
Rye & Ryegrass	153	1.36	\$318.34	\$0.60
Bermudagrass w/Rye	161	1.30	\$328.35	\$0.62
Rye, Oats & Crimson Clover	121	1.37	\$352.78	\$0.65

Ball, D.M. and W. Prevatt, Stocker Cattle Performance and Calculated Pasture Costs, Auburn University, ANR-1348, June 2009.

2011
Upcoming Meetings

April 19, 2011
Growing Your Own N: Improving Legume Cover Crop Management, Abundant Life Farms, Clayton, NC. Contact Molly Hamilton at 828-273-1041 or email: molly_hamilton@ncsu.edu

Come learn how to manage legume cover crops to maximize fertility. We will discuss inoculation, cover crop types and varieties, how they perform on different soil types, how

cost compares with other fertility sources, and how to tell you are getting the most out of your cover crop.

April 19, 2011

2011 Fencing for Controlled Grazing Systems, Middleburg AREC (equine fencing), Middleburg, VA. To register (\$30/person if by March 10) contact Margaret Kenny 434-292-5331 ext 240 during business hours or contact Shea Porr at (540) 687-5362.

April 21, 2011

Renovating Pastures for a Thicker Grass Stand, Central Maryland Research and Education Center, Ellicott City, MD. Contact Jennifer Reynolds at 301-405-1547 or by email at jenreyn@umd.edu or visit the website: www.ansc.umd.edu/ERG

Your pastures may be green, but is your grass stand as healthy as it can be? Learn how to assess whether a renovation would benefit your pasture and how to increase the growth you've already established.

April 26, 2011

Organic/Sustainable Farming in DE Workshop, Dover, DE at the Kent County UD Paradee Building from 5:30 pm to 7:30 pm. Preregistration required by April 20, 2011. Contact the Kent County Extension Office at 302-730-4000.

May 26, 2011

Using Pasture to Reduce Feed Costs, Central Maryland Research and Education Center, Ellicott City, MD. Contact Jennifer Reynolds at 301-405-1547 or by email at jenreyn@umd.edu or visit the website: www.ansc.umd.edu/ERG

Horses are natural grazers and under the right conditions a healthy pasture can provide all the nutrition a horse needs. Learn how to use pasture to its full potential and keep those extra dollars in your pocket.

June 22, 2011

NE SARE Dairy Cropping Systems Field Day, State College, PA. Contact Ron Hoover at 814-865-6672 or by email at rjh7@psu.edu

June 23, 2011

Best Management Practices for Healthy Pastures, Central Maryland Research and Education Center, Ellicott City, MD. Contact Jennifer Reynolds at 301-405-1547 or by email at jenreyn@umd.edu or visit the website: www.ansc.umd.edu/ERG

Knowing how and when to rotate, mow, harrow, and over-seed pastures can be tricky. Experts will discuss tips for keeping your pastures in top condition.

July 21, 2011

Weed Identification and Control, Central Maryland Research and Education Center, Ellicott City, MD. Contact Jennifer Reynolds at 301-405-1547 or by email at jenreyn@umd.edu or visit the website: www.ansc.umd.edu/ERG

What weeds are common in horse pastures and how can you control them? Develop your skills in weed identification and learn which weeds are toxic.

September 10, 2011

2011 Horse Pasture Management Seminar, Central Maryland Research and Education Center, Ellicott City, MD. Contact Jennifer Reynolds at 301-405-1547 or by email at jenreyn@umd.edu or visit the website: www.ansc.umd.edu/ERG

The cost of this seminar is \$25 per person and includes all materials and lunch. This full-day event will help you learn about a variety of pasture-related topics including:

- pasture management: a year-round approach
- weed control methods
- getting control of water and mud in pastures
- best suited grass species for horse pastures
- strategies for managing all that manure
- where and how to apply for money for pasture improvements
- rotational grazing

This unique opportunity will prepare you with the knowledge and resources you need to make your own managed grazing project a success.

Forage Bits is a publication of the Maryland-Delaware Forage Council. It is compiled and edited by Ben Beale, Agricultural Extension Educator-St. Mary's Co. and Richard Taylor, Extension Agronomist, University of Delaware. Please send any comments, questions or submissions to Ben at the St. Mary's Extension Office: PO Box 663, Leonardtown, MD 20650, fax 301 475 4483, phone 301 475 4484 or e-mail at bbeale@umd.edu

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Leonardtown, MD 20650

Join the Maryland-Delaware Forage Council

To join the MDFC, send your name and a check for \$15, payable to the Maryland-Delaware Forage Council, to Gabe Zepp, Carroll County Economic Development, 225 North Center Street, Westminster, MD 21157. The Maryland-Delaware Forage Council is an affiliate of the American Forage and Grasslands Council. Members receive two publications-the Forage Leader and the Hay and Forage Grower.