

Livestock Links

A Statewide Newsletter for Alabamians

Spring 2011

A Salute to Dr. Don Ball

Kent Stanford, Extension Specialist



The recent retirement of Dr. Don Ball marks the end of his distinguished career as an Extension forage

agronomist in Alabama. What adjectives accurately describe this man who has left such a mark on the world of forages? Professional, humble, charismatic, dedicated? Though these words certainly are applicable, they do not portray Dr. Ball completely.

The desire for others to learn about forage management to be successful has always been a driving force behind Dr. Ball's work. Time and time again, he has published and presented information with real-world applications. The book he co-authored, "Southern Forages," is widely accepted as the must-have manual for success in raising forages. His list of accomplishments is lengthy, and his impact is great. And as fellow Extension professionals, I and my colleagues would like to offer a personal salute to Dr. Ball for what he has meant to us.

For a young agent, a phone call or personal interaction with Dr. Ball meant you had spoken with the highest authority on the subject and there was no need to look further for more information. His knowledge and experience always provide the right answers, but his ease of conversation and professionalism is what makes you admire and

respect him. The term colleague best describes the relationship he has shared with Cooperative Extension agents. It is that relationship we cherish as a trusted memory of his time spent in service.

Retirement will not take Dr. Ball entirely out of the forage ranks. He will continue to offer wise counsel through endeavors in private industry. We all know that old saying "the grass is greener on the other side." I think it is safe to say that Dr. Don Ball probably offered advice on how to make that grass greener. As you reach that "green grass on the other side," Dr. Ball, the Animal Science and Forages team offers our congratulations. It has been an honor to call you a colleague and to have learned from the best.

Where Have All the Forages Gone?

Henry D. Dorough, Regional Extension Agent

The most common issue presented to me on farm visits in recent years is the lack of forage production. Many farmers boast of times when fescue pastures were belly-deep to cattle and bermudagrass hayfields were pure and lush. Now, the waning fescue pastures have been invaded by foxtail, crabgrass and common bermudagrass. Bermudagrass hayfields also in decline are falling victim to a number of less palatable and inferior grasses in addition to noxious and invasive weeds.

These once-thriving landscapes have fallen prey to environmental and economic circumstances. Severe drought in 2006 and 2007, and the continuance of drought conditions since then, has contributed to the recent deterioration of forage stands. It is the economy, however, especially fuel and fertilizer prices, that has dealt a far greater blow to forage health and vigor. In the time of relatively cheap fertilizer, producers were quick to order plenty of 17-17-17 every spring and a couple hundred pounds of ammonium nitrate or N-Sol after every cutting of hay. When the price of nitrogen spiked due to high oil prices, however, many livestock producers were no longer able to afford the extra nitrogen. Even worse, phosphorus and potassium prices escalated due to high demand in China and India, forcing some producers to cut fertilizer from their management routine. The price of lime has also increased considerably over the past few years, causing farmers to have to choose between lime and fertilizer. Most choose to apply fertilizer.

In general, the cost of doing business on a livestock farm has far outpaced the returns, leading to a vicious cycle with respect to forages. The reduction in capital to invest in fertilizer and lime has impaired forage production, and less forage to graze has in turn led to overgrazing and an increased need for stored feed. Also, hay yields are lowered with low soil fertility and drought, and less available grazing and hay lead producers into the dilemma of either purchasing feed or adjusting their stocking rate. In the long run, the cost of the operation increases, which leads to a decision not to lime and fertilize to soil-test recommendations. The end result is that forages take the fall and noxious weeds take their place.

Soil is the foundation of every livestock operation, and like the foundation of a building, it must be maintained or everything above will fail. Soil fertility must be a priority, and a soil test is the first step. Applying lime, nitrogen, phosphorus and

potassium to soil-test recommendations is the next step because soil pH affects the growth of plant roots and their ability to take up nutrients from the soil. It also affects the availability of nutrients to the plants.

Nitrogen (N) is vital to the formation of all plant proteins, and many of the compounds in plants must have it. Phosphorus (P) is also used in proteins and helps stems stay erect to hold foliage up to the sunlight. It is also critical to flowering and seed formation. Potassium (K) serves many important roles in plants, including the formation of tubers and roots and preparing the plant for winter survival.

Soil fertility is relatively easy to maintain in pastures in which 300 pounds of beef removes only 9 pounds of N, 7 pounds of P, and 1 pound of K. Fertilizing once in the spring at green-up is usually all that is required. Once soil-test recommendations for P and K are adequate, there is no need to apply more until another soil test recommends it.

Hayfields, especially bermudagrass, require a little more attention. Each ton of bermudagrass hay removes 50 pounds of N, 10 pounds of P, and 40 pounds of K. Hay yield is easily related to the amount of N applied for each cutting. But equally, if not more important, is the application of K, which must be replaced every year to avoid stand loss. A K deficiency is likely what had many bermudagrass hayfields in decline before the drought, and that only sped up the process, allowing weeds to intrude at an accelerated rate. Weeds tolerant of low-soil fertility starve desirable plants for sunlight, water and nutrition, further compounding the situation.

So what's the solution? For the dry conditions, all I can say is pay your preacher every Sunday and hope he turns it in. We have no control over the weather, but we can influence soil fertility and weed prevalence. First things first, soil test! When a soil-test report calls for lime and fertilizer but limited capital will not allow both to be applied, go with the lime. Residual fertility will increase forage production if soil pH is corrected. That's not to say lime is all that is needed to grow forages. If the money is not there, put out the lime this year and fertilize next year. Fertilizing cannot be overlooked, but it can wait until soil pH is adequate.

Research the various sources of N from commercial fertilizers, or possibly animal manures, and apply P and K to soil-test recommendations. After that, save the money on P and K until a soil test recommends otherwise. Soil testing every other year will more than pay for itself with fertilizer savings alone.

As for the weeds, modern chemistry makes broadleaf weed control relatively cheap and easy in grass forages. New and emerging products have some promise for controlling grass weeds in grass pastures and hayfields, but that chore is still difficult and complex.

Surveying the landscape and developing a plan will make the managing the process easier. If you need help evaluating your forages, contact your regional Extension agent for animal science and forages. She or he can also help with soil-sampling procedures, interpreting soil-test recommendations and making weed-management decisions.

Haylage or Baleage Versus Conventional Hay

Brenda Glover, Regional Extension Agent

Haylage or baleage, also known as round bale silage, is another approach to preserving forage. It is simply forage that is baled at a higher moisture content than dry hay and then stored in a sealed plastic wrap. Because of the higher moisture level and air-tight environment, the forage ferments and is preserved by acid production during fermentation.

Haylage is made by cutting the forage as if for hay-making but is baled at 40 to 60 percent moisture rather than at 18 to 20 percent moisture. Baling at the proper moisture content is the single-most important variable. Baling haylage with too much moisture reduces the feed quality of the forage and reduces the amount of dry matter stored per bag, greatly increasing storage costs. Baling haylage with inadequate moisture reduces fermentation and increases mold production, which greatly increases storage losses.

Adequate storage conditions may be challenging. Some tips for successful storage are as follows: Clear the storage site of stubble and sharp objects. Avoid laying plastic on the ground before placing the bales because rodents can chew through the plastic wrap or bag. Spray the perimeter of the stack to kill weeds that harbor rodents and insects. Do not cover the bales with an extra layer of plastic because it makes an ideal nesting for rodents. Find a shady area, preferably on a north-facing slope, to avoid temperature fluctuations that can degrade both haylage and plastic. Look for holes in bagged bales, and patch the holes as soon as possible. Keep wind from loosening the plastic and causing it to billow out, thus providing an air exchange that may spoil the outer layer of the bale.

Feeding haylage is similar to feeding large round bales of hay in that conventional hay rings can be used. With the high investment in wrapping bales, it is essential to control feeding losses. Some studies have shown up to a 50 percent loss when large round silage bales are not placed in a ring feeder. The use of a simple ring feeder can reduce this loss by to 10 to 20 percent, and the use of an elevated hay wagon can reduce feeding losses to below 10 percent.

Haylage can be safely fed to cattle, sheep and goats. It is not recommended for horses because of the risk of mold. If the haylage is improperly harvested or the plastic is damaged during storage, mold and mycotoxins can form in the bale. This can be toxic to horses. When feeding individually wrapped haylage bales to any species, it is best to feed to a sufficient number of animals so they can eat an entire bale within two or three days.

Listed below are some advantages and disadvantages of haylage or baleage.

Advantages:

- lower field losses
- less tedding
- lower storage losses
- timely harvesting of grass

- higher-quality forages
- less equipment
- high consumption
- reduced grain feeding
- improved animal performance

Disadvantages:

- cost of wrappers, bale movers, baleage kits or silage balers
- cost of plastic
- increased labor
- disposal of the plastic
- short shelf life
- ensiling failures
- increase in cost per pound of dry matter

I Will Look Out for My Side of the Fence

Rickey G. Hudson, Regional Extension Agent

The popularity of Dr. Don Ball, Extension forage specialist, with cattle producers came to mind recently, following the announcement of his retirement. Why is Dr. Don Ball held with such reverence? Sure, he is a talented Extension educator who has a wealth of knowledge and who delivers a presentation with great conviction and humor. I have concluded, however, that his subject matter of forages and grazing is in part responsible for his popularity. The importance of forages and grazing to cattle producers cannot be overstated and should never be taken for granted. Thanks, Dr. Ball, for helping to keep cattle producers on target.

You may have heard the line, “The grass is greener on the other side of the fence.” In Alabama, however, cattle producers are much better served to remember and practice another phrase—“I will look out for my side of the fence.” So, how do you make improvements on your side of the fence? The first step is to determine what lies on your side of the fence. Is it abundant forages? Is it quality forages? Is it adequate fencing and water to utilize grazing methods? Is it a forage system with the animals integrated into the grazing management plan?

Due to space constraints of this newsletter, we’ll only examine the last question. The question rephrased is, “Are your animals matched to the forage and grazing environment on your side of the fence?” While this might not be your first thought, this consideration is extremely important to the sustainability of any cow-calf beef enterprise. A goal of closely matching the correct number, size and traits of animals to the forages and grazing resources of the operation is required for profitability.

The number of head and the size of the cattle are linked components in a cow-calf beef operation. Does the animal size matter? You bet! Large animals usually require greater feed resources. However, large animals usually produce more pounds of weaned calf per head to sell. The reverse is true for small animals; therefore, the number of head will depend on the size of the animals selected for the herd.

What is the correct size? Actually, it is a correct range of sizes. The size of breeding stock (bulls and cows) selected should be to produce calves that fit the size range of the beef-industry standards for carcass weights. However, this size must also fit the nutrition resources (primarily forages and grazing) of the operation. The recommended size is small enough to not limit growth and production performance by nutrition resources but large enough to maximize the use of nutrition resources and limit the waste of available resources.

What traits are important? Cattle need the physical traits of good eyes and teeth, along with sound feet and legs, to harvest large quantities of forages. In addition, cattle need high-volume bodies with the space to process large quantities of forages and to carry a calf during the 9-month period of pregnancy each year. Furthermore, cattle need the genetic traits to efficiently convert forages into animal nutrients necessary for milk production and growth.

The improvement of herd genetics usually occurs through the selection and addition of new herd bulls. The genetic contribution of an individual bull often affects herd production for the next 10 to 12 years if replacement heifers are saved from the herd. Moreover, the bull directly contributes half of the genetics to 25 to 30 calves per year while in service, which is why bull selection is vitally important to the improvement of herd genetics.

Do you want to look out for your side of the fence? If so, look for herd bulls that have the genetics to make the most efficient use of your forage resources and the correct size to match your cowherd to produce calves that fit industry standards for carcass size. Look for herd bulls with growth-performance data to improve your bull-selection decisions, and look for herd bulls that are acclimated, measured and developed in environmental conditions similar to those on your side of the fence.

Where can you find help to improve your side of the fence? The Alabama Beef Cattle Improvement Association (BCIA) is a great place to start. You can visit the Alabama BCIA website, www.albcia.com or contact Michelle Elmore at (205) 646-0115 for more information. Another great contact is the Alabama Cooperative Extension System. Check out the numerous resources on line at www.aces.edu or contact your county Extension office.

Key Points for Thistle Control in Pastures

Stephen Enloe, Extension Invasive Weed Specialist

“How do I control thistles in my pasture?” is one of the most common questions many Extension personnel get each year. The questions typically start coming in the spring when thistle flower stalks elongate, or bolt, emerge above the grass canopy and initiate flowering. Questions typically continue to increase until thistle seed are blowing in the wind in May and June. For the rest of the year, though, thistles are often an issue that is “out of sight, out of mind” for producers. This annual cycle often results in many frustrated producers who want to control thistles but always seem to wait until it is too late to do so. Furthermore,

mowing is often the last-minute control method of choice and is done after thistle seed production, which only serves to spread the problem even more.

Producers need to understand that it doesn't have to be this way. With recent developments in herbicide technology and a little planning, effective thistle control in pastures is achievable. Here are a few simple points to get thistle control and get your pastures back.

Point #1. There are no silver bullets. Thistle seeds persist in the soil for several years, and new seeds are dispersed each year by wind, water and birds, which means that annual thistle management is necessary, and no single treatment will knock thistle out forever.

Point #2. Plan ahead for thistle control. If your pasture had a thistle problem last year, it will have it again this year. If your upwind neighbors had a thistle problem last year, it will likely be your problem this year. Get out early and look for thistle rosettes hiding in the grass. Do not wait for them to bolt and flower before doing anything. If you are going to have a custom spray business treat your pastures, get on their calendar early so you aren't at the end of their list.

Point #3. Treating early will provide better spring forage production. While some of the newer herbicides are effective on large thistles that have already bolted, early treatment when thistles are in the rosette stage will eliminate thistle competition and free up resources for forage growth. The bigger the thistle gets before treatment, the less spring forage you will produce.

Point #4. Effective herbicide choices have greatly increased in the last few years. Several newer herbicides are extremely effective on thistles and are just as good as picloram + 2,4-D (Grazon P+D and generics). These include GrazonNext, Milestone, Chaparral, and Surmount. All of these will provide excellent thistle control and have enough soil residual activity to keep pastures mostly thistle-free through the rest of the growing season. These herbicides are also effective on large bolted thistles.

Point #5. All of the newer herbicides are still lethal to clovers. It is sad but true. We do not yet have a good thistle herbicide that is safe on clovers. The only redeeming factor is that clovers tend to recover from the soil seedbank for much longer than thistles do.

Point #6. There is an optimal mowing timing. If you are going to mow, do it after bolting but before thistle flowers open. This timing will reduce thistle seed production as much as is possible with mowing. However, expect some regrowth and flowering later in the summer.

In conclusion, thistles in pastures are not an insurmountable problem and can be dealt with. For more information on thistle control, check out www.aces.edu/timelyinfo/#Agronomy and look for the thistle control sheet.

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