Stockpile Production: Does it Pay to Fertilize in Fall Given the High Cost of Nitrogen Fertilizer?

It is that time of year when we need to start thinking about growing stockpile for winter feeding. However, I must admit that stockpile production is not for everyone. For example, producers that are stocked sufficiently might not have the pasture resources available in order to produce stockpile during the late summer and early fall months, and in many situations cattle may need to be placed in a dry lot situation in order to produce stockpile. In a case like this stockpile production may not be the wisest use of your resources. However, for the majority of cow/calf producers stockpile production is feasible and will help reduce winter feed costs.

I have received many calls over the spring and summer from individuals that have questioned the use of chemical nitrogen sources because of the increased cost of these products. The question they raise deserves further discussion, and can be addressed by answering how much additional forage can be produce per pound of N applied. The response of applied N is fairly linear in the range of 0 to 100 pounds of applied N per acre. Using data from experiments conducted on the Center over the past several years, we have determined that for each 50 pounds of N applied in early August we can expect approximately 1250 pounds of stockpile production. By coincidence, unfertilized tall fescue also produces approximately 1250 pounds of stockpile. Fifty pounds of N as ammonium nitrate is currently running about $23 ($0.46/lb of N). If you can purchase hay at $50 per ton and it costs you another $5 per bale to get it to the farm (the average in our area is nearly $10/bale for freight) then the real cost of hay delivered to the farm is $36.25 per bale ($41.25 per bale if your freight is $10 per bale). Additional costs for hay would also include the need for a tractor or truck to move bales at feeding time. The bottom line is that fertilizing for stockpile production is still less expensive than hay feeding. (SOURCE: Dave Davis, Missouri Forage Systems Update, July-September 2006, Vol. 15, No. 3)

Can You Successfully “Thicken-Up” Old Alfalfa Stands?

University and private alfalfa researchers do not recommend the practice of interseeding new alfalfa into old, thin alfalfa stands (“thickening-up”). However, we continue to receive many inquiries on this practice year after year, and always give the same answer: Don’t do it! There are very few situations where a grower has any chance of success when thickening-up an old alfalfa stand, and although we’d love to sell you the seed, we also have a vested interest in keeping our grower-customers profitable! Let’s review why the odds are strongly against success when alfalfa growers attempt to thicken-up old stands.

What kills new seedlings in established alfalfa stands? The environment surrounding a germinating alfalfa seed in an old, established alfalfa stand is as hostile as one could imagine. Diseases, insects, and nematodes specific to alfalfa have had years to build up in the soil and in the root and crown tissue of older plants. As soon as young, fresh tissue is available (the germinating alfalfa seedling), these pathogens attack, and the new seedlings “melt” away within a few months of seeding.

Another reason why young alfalfa seedlings seem to melt away after interseeding is the presence of competition from old alfalfa plants. This competition takes on two forms: competition for light, water and nutrients; and autotoxicity. Even very thin older stands provide stiff competition for light and water as new seedlings attempt to establish. In addition, the older plants will excrete compounds from their roots and top growth which are autotoxic to the germination and growth of new alfalfa seedlings.

What should a grower do? For producers with thin alfalfa stands, the best advice is to destroy the stand (plow or herbicide) and rotate to a different crop for at least one year. This allows pest pressures and autotoxic compounds in the soil to dissipate completely before new alfalfa seedlings attempt to establish. Although the practice of thickening-up old alfalfa stands looks attractive on paper (lower seedbed preparation costs and lower seed costs (e.g. 8-10 lbs/acre vs. 18-19 lbs/acre)), it is not cost effective. Thicken-up stands will quickly revert to their thin, run-out condition, and become weedy and unproductive. Your best bet is to plow the old stand, take the nitrogen credit and rotation benefit on a subsequent cereal crop, and establish new alfalfa acres on ground that’s been out of alfalfa for at least one year. (SOURCE: The Haymaker Newsletter, Spring 2006)
FALL SEEDING GRASSES
Late-summer/fall establishment of grass is often desired in the Midwest. Most farmers do not realize how much fall seeding date affects the yield of the grasses the next year. We seeded six forage grasses at several late summer dates at three sites in Wisconsin (River Falls, Arlington, and Lancaster) over three years. Seeding dates were spaced approximately every 2 to 3 weeks from late about August 1 to late November 1. Species included orchardgrass, smooth bromegrass, timothy, reed canarygrass, perennial ryegrass, and tall fescue.

All of the grasses seeded by mid- to late-September produced stands with visible plants by killing frost most years and that usually survived the winter. Later seedings did not produce visible plants until spring, if at all. Slow establishing species, particularly reed canarygrass, produced better stands when seeded by early September. Timothy tended to be the most variable with regard to seeding date and next year yield. In only one trial out of nine did a November seeding, where the seed lay dormant over winter, produce a stand the next spring.

The most important finding is that earlier seeding dates (early through mid August) usually had more tillers per square foot, more tillers per plant, and higher dry matter yield the following season. As shown, in the figure, average first cutting yields of grasses the spring after late summer seeding, when harvested at the boot stage, ranged from 1.5 t/a for some grasses down to less than 0.5 t/a on first cutting depending on when they were sown the previous fall. By later cuttings the stands had recovered and all yielded well. However, delaying late summer seeding from mid August to mid September generally resulted in 1 t/acre less yield the next year.

This study clearly shows that delaying grass seeding in the late summer or early fall not only increases the risk of establishment failure but reduces yield of the stand the next year. Therefore we recommend seeding grasses as early as possible during the month of August.

(SOURCE: Dan Undersander, University of Wisconsin)

MONITOR WET HAY TO PREVENT FIRE
Hay fires are a danger anytime small bales are stacked at 20% moisture or higher, or big bales at more than 16% moisture, warn Cornell University safety experts. They say the quickest way to detect hot hay is to drive a long pipe or rod into the center of the stack. Leave it in for 20 minutes and pull it out. If it’s too hot to hold in your hand, the hot hay should be removed immediately.

If you think you have a problem, monitor the stack temperature with a homemade probe. Take a 10; piece of ½” diameter steel pipe and drill eight holes about 3” from one end. Hammer that end together to form a sharp edge, drive the pipe into the stack and lower a thermometer to the end. Retrieve it after 10-15 minutes.

Check the temperature daily if it’s above 120 degrees; twice a day if it’s 140-150 degrees, say the experts. At 150 degrees, the hay is entering the danger zone; check the temperature every two hours. If it’s between 150-160 degrees, start moving hay out of the stack. At 160 degrees or higher, call the fire department. Have firemen on site before moving any hay.

(SOURCE: Hay Grower’s Notebook, August 2006)

FORAGE SPOKESMAN NOMINATIONS
The Kentucky Forage & Grassland Council is now accepting nominations for the Forage Spokesman Contest to be held during the 7th Kentucky Grazing Conference in Lexington on November 21, 2006. Mr. Bill Payne from Lincoln County is our reigning Kentucky winner and also the national AFGC Forage Spokesman. Kentucky has more National Forage Spokesman winners than any other state.

If you would like to nominate a producer who has an outstanding forage program and who would be willing to share his/her experiences, please send a one-page nomination to Dr. Ray Smith, Plant & Soil Science Dept., 105 Plant Science Bldg., 1405 Veterans Road, University of Kentucky, Lexington, KY 40546-0312 or e-mail at raysmith1@uky.edu on or before November 1, 2006. If you have any questions, feel free to contact us.

RAKE DESIGN DOESN’T IMPACT HAY QUALITY
The type of rake you use to windrow hay doesn’t have much effect on its drying rate or quality. That’s according to an Ohio State University study. The researchers compared bar, rotary and wheel rakes on an alfalfa-orchardgrass mixture and on pure alfalfa. Samples were taken prior to raking and 24 hours after round baling.

The raking and baling process lowered crude protein by 5% and raised NDF by 6.4%. But rake design had no significant effect on the dry matter content, crude protein or NDF or either type of hay.

(SOURCE: Hay Grower’s Notebook, August 2006)

KFGC AWARDS NOMINATIONS
Nominations are now being accepted for all KFGC Awards including: Producer, Industry and Public (State and County). The awards will be presented at the 7th Kentucky Grazing Conference in Lexington on November 21, 2006. A list of previous award winners is available at www.uky.edu/Ag/Forage go directly to KFGC Award History.

If you want to nominate a deserving individual, send a one page nomination to Garry Lacefield, Research & Education Center, P.O. Box 469, Princeton, KY 42445 or by e-mail to glacefield@uky.edu. Nomination deadline is October 1, 2006.

UPCOMING EVENTS
SEP 12 KFGC Field Day, Dobbs Shady Meadow Farm, Campbell County
SEP 28 UK College of Ag Field Day, Robinson Station
NOV 21 Kentucky Grazing Conference, Lexington
DEC 10-13 Third National Conference on Grazing Lands, St. Louis, MO

2007
JAN 11-13 KCA Annual Convention & Trade Show, Lexington
JAN 24-25 Heart of America Grazing Conference, Mt. Vernon, IL
FEB 22 27th Kentucky Alfalfa Conference, Cave City

Garry D. Lacefield
Extension Forage Specialist
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