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Wheat Pasture Hopes Fading Fast

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Tenuous hopes for wheat pasture are fading fast as summer returns to the southern plains. September rain in many parts of the state that raised the potential for wheat pasture establishment and development has been followed by unseasonably warm and dry weather with lots of wind. Temperatures this week are mid to upper 90s across all of Oklahoma. As of October 2, 51 percent of Oklahoma wheat has been planted, ten percent below the five-year average for this date. More critically, only 22 percent of Oklahoma wheat has emerged, 11 percent less than the five-year average of 33 percent emerged on this date.

The wheat that has emerged is extremely vulnerable to continued dry conditions. There are reports that some small wheat has blown out with recent winds and will have to be replanted. Emerged wheat needs moisture very soon to avoid losing the young stands. In other cases, dry-planted wheat is still waiting for moisture to germinate. In still other cases, the locally heavy September rains washed out some dry-planted wheat that has or will be replanted. All of this confirms that fall wheat forage production for grazing will be minimal.

Needless to say, not much demand for wheat pasture stockers has developed so far nor seems eminent. There are reports that some wheat producers who routinely plan on dual-purpose wheat cropping, that is, winter grazing followed by wheat grain have abandoned any plans for winter stockers and are

focusing on trying to get a wheat grain crop. By not trying for fall forage growth, producers are in less of a hurry to plant and will adjust seeding rates and fertilizer applications to a wheat for grain only enterprise. Especially under current dry conditions, it makes sense to reduce fall fertilization and wait to top dress in the spring if conditions improve to increase grain yield potential.

Oklahoma feeder markets have developed a weaker undertone the past two weeks with lack of wheat pasture demand for stockers compounded by limited feeder demand due to swelling feedlot inventories. Feeder cattle auction volumes are still at or above last year's levels but should moderate in the coming weeks as earlier drought-induced sales is expected to result in reduced weaning calf runs in October and early November. This should help moderate seasonal calf price decreases but the poor wheat pasture prospects described above may mean that demand weakens more than supply thereby keeping prices on the defensive.

Fall N Requirements for Wheat

Jeff Edwards, Bill Raun, Chad Godsey, and Randy Taylor

There are several benefits of split applications (fall + spring) of nitrogen to small grains. When compared to single, pre-plant N applications, split applications make more efficient use of N and allow the producer to better gauge the yield potential of his/her crop prior to deciding on an N top-dress rate.

Once farmers have made the decision to split-apply their N fertilizer, however, many are left with the question of how to allocate nitrogen in a split application. Apply too much in the fall and lose some of the efficiencies offered by the split application. Apply too little in the fall and one runs the risk of the crop "running out" of N prior to top-dress applications in the spring. In this publication we will provide some guidelines regarding the fall N requirement of wheat and discuss how your management system will influence this decision.

So, how much fall nitrogen does winter wheat in the Southern Great Plains require? Just like the total N requirement for wheat varies from year to year, the fall N requirement varies too. Factors such as the amount of N mineralized from soil organic matter, residual soil nitrate N, previous crop, and whether or not the crop will be grazed influence fall N requirement for wheat. Among these, whether or not the crop will be grazed probably has the biggest influence on fall N requirements for wheat.

Success of dual-purpose wheat depends on having enough N to fuel rapid leaf expansion and biomass production, re-growth during grazing, and re-growth after grazing. The N requirement for wheat in this system depends largely upon how much forage is produced. Preliminary research at OSU, however, indicates that around 60 to 70 lb/ac of nitrogen is

generally enough to produce ample fall forage and carry the crop through until top-dress time in February.

In grain-only wheat production, the objectives are slightly different. In fact, the prolific tillering and canopy expansion that are desirable in dual-purpose wheat can be detrimental to grain-only production in a dry year. The goal in grain-only production is for the crop to have enough N to produce 2-3 large tillers per plant and keep these tillers healthy and viable until top-dress time in February.

This can usually be accomplished by having around 30 to 40 lb/ac of fall N available to the crop. In some years this might already be present in the soil profile and no supplemental fertilizer will be required. Most years, however, a small amount of supplemental N fertilizer will be required at the time of planting. The fact that we use the terms "around" and "approximately" prior to our estimates of fall N requirements for wheat illustrates that there is no one-size-fits-all recommendation regarding N fertilization of wheat. If there is a large amount of crop residue on the soil surface, for example, more N than indicated in the previous paragraph could be

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required due to immobilization of N during the microbial decomposition of crop residue. Likewise, a bumper fall-forage crop would likely benefit from higher pre-plant N rates than a mediocre crop.

So, how can the individual producer fine-tune his/her fall N program to adapt to these changing situations? The answer is to use a three-pronged offensive consisting of:

1. A recent soil test that includes surface (0-6") and sub-surface (6-24") nitrate nitrogen levels. Whatever soil N is present can be subtracted from the approximate fall nitrogen requirements listed on the previous page. .

2. A nitrogen-rich strip (a.k.a. N-Rich Strip, RAMP Strip, or Greenseeker Strip). An N-rich strip is simply an area where N is not limiting, and having an N-rich strip is essential to accurately gauge if the pre-plant application was "enough" or if it is "running out". Gauging the difference (or lack thereof) in color between the N-rich strip and the rest of the field will let the producer know if supplemental N is needed and how early it is needed. Hand-held Greenseeker sensor readings taken in February from the N Rich Strip and the farmer practice will let the producer know how much additional topdress N is needed. For more information contact your local extension office and ask for publication # PT 2005-3 Get your nitrogen-rich strips out early or visit www.nue.okstate.edu for a downloadable copy.

3. The third and final component is commitment on the part of the farmer. Similar to providing mineral supplementation to beef cattle, the easy approach to N fertility is to "put plenty out there". This is, however, not the most economical nor environmentally-friendly approach. Just like a good herd manager, a well-trained agronomist will use the tools available to them to determine what the crop needs and how to supply that need. Whether we are talking about cattle or wheat, this takes commitment, dedication, and perseverance.

This article was reprinted from *Production Technology Report 2006-10.*

Contact your county extension agent for a copy.

Conservation Tillage Web Site

Jeff Edwards

Many of you are already familiar with the Conservation Technology Information Center or CTIC. Their web site http://www.ctic.purdue.edu/ is a great resource for information on conservation tillage and a great way to see what techniques others are using to make no-till work in their operation. While many of the featured operations are in the Midwest, I believe you will find several ideas and techniques that apply directly to our farming operations in the Southern Great Plains

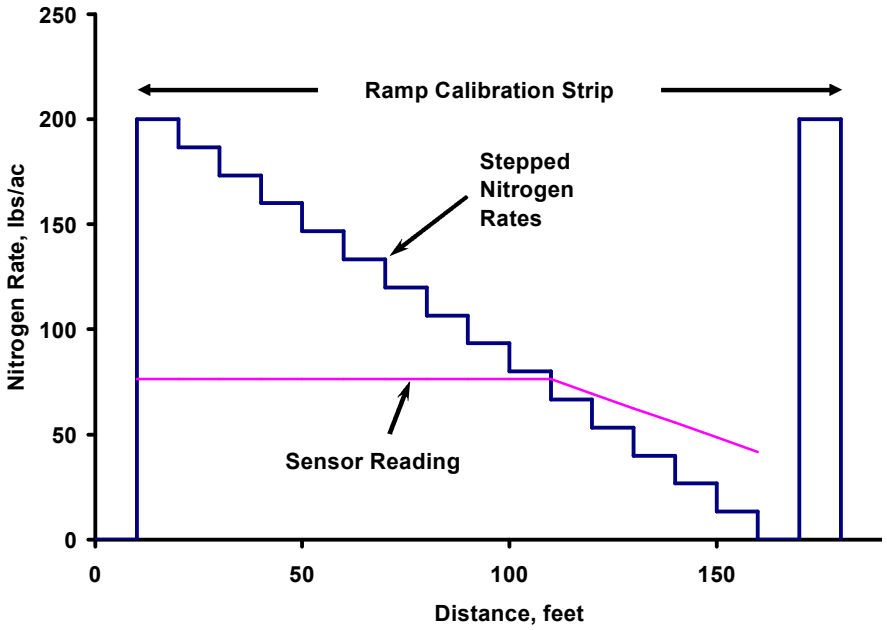
This group also produces a great magazine called ***Partners*** that you can receive via email. So, next time you are surfing the web, take a look.

Ramped Calibration Strips

Randy Taylor

Many Oklahoma crop producers have taken advantage of Nitrogen Rich Strips and hand held GreenSeeker sensors to determine appropriate topdress nitrogen rates for wheat. The N-Rich strip is one uniformly applied high rate of nitrogen. GreenSeeker sensors are used to compare plant growth in this strip to plant growth in an area where less nitrogen is applied. Comparing these two levels of nitrogen fertilization (N Rich and Farmer Practice) helps to predict the most profitable nitrogen rate for that season. The potential savings from this technology have been well documented by OSU.

The latest method to take advantage of Sensor Based In-Season Nitrogen Management is the Ramped Calibration Strip (RCS). OSU's Biosystems and Agricultural Engineering and Plant and Soil Sciences Departments have built two applicators that will change nitrogen rates every 10 feet to create the pattern shown to the upper right. The advantage of the RCS is the visual aspect of nitrogen needs. Producers should be able to walk the strip and see the response to nitrogen. The multiple rates along the RCS should also improve the predictive capabilities of sensors.



A Ramped Calibration Strip (RCS) has a reduced application rate every 10 feet. The maximum rate at the two ends should make the RCS easy to locate. If the ends aren't clearly visible, then nitrogen is not limiting plant growth.

The GreenSeeker sensor estimates biomass as an indication of nitrogen needs. The sensor readings will level off at some nitrogen rate with the RCS as shown by the pink line in the figure above. The nitrogen rate where sensor readings level off is the optimum rate for that year.

The ramp calibration strips are created using a 3-point mounted sprayer as seen in the picture on the left from a field in Harper County. To accomplish this, the RCS applicator uses a set of four nozzles at each location on the boom to allow a wide range of rate changes.

Subscription Information

The *Wheat Production Newsletter* is published in electronic format on an as needed basis throughout the year. To receive an electronic copy in pdf format, send an email with **subscribe** as the subject line to jeff.edwards@okstate.edu

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