



Agronomy Notes

Capital Region

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Capital Region Extension Agronomy Team

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Small Grains Variety Test Reports

Check the results of our latest variety tests this month on the Penn State Small Grain Management web page. <http://smallgrains.psu.edu/> If you don't have access to the internet, give your county extension office a call. We'll send one out.

Crop Insurance Update

Double-Check Acreage Report Summary

A "Summary of Protection" or "Schedule of Insurance" is received about a month after your acreage report information is filed with your crop insurance. This form reflects the insurance company's record of your insurance protection for 2005 spring crops. It's a good rule of thumb to compare it to your completed acreage form to make sure that the information was interpreted and transferred correctly. Contact your insurance agent immediately to get any discrepancies corrected immediately, otherwise it could adversely affect your premium billing or claim payment.

Corn Silage Harvesting – crop insurance tips

Silage harvesting is just around the corner. Most acreage looks good but NASS reports (at the time of this writing) about 20% of corn acreage in only fair to poor condition. If you have mediocre yield prospect on any insurance units, don't forget to file notice of damage to be eligible for a possible claims payment. The rules are that damage be reported within 72 hours of discovery. A notice of

damage is also required 15 days prior to the beginning of harvesting, if you are aware of damage before harvesting begins (to give insurance adjuster opportunity to evaluate damage while crop is in the field). If you have damage that may make you eligible for a claims payment, you'll need a field appraisal before harvesting or from sample rows. The purpose of the appraisal is to document the low yield if insured as grain or on tonnage basis (if grain is less than 4.5 bu./ton production is eligible for quality adjustment). **Remember too, if you insure with the popular CRC (Crop Revenue Coverage) plan, you may be eligible for a loss payment with a normal yield, if the harvesttime CBOT grain price compared to the base spring CBOT price declines more than your insurance deductible (i.e. if producer has 75% coverage and harvest price CBOT price declines more than 25% from the \$2.83/Bu. base spring price).**

2006 Enrollment/Policy Changes Deadlines – 9/30

The deadline to enroll or change your existing policy for fall seeded barley, wheat and forage production crop insurance is September 30. Forage crop insurance is available state wide for the first time in 2006. Many producers have experienced small grain quality losses over the past few years. The pay back to insured producers has averaged about \$5 for each \$1 of farmer paid premium.

Details on reporting crop damage reporting and coverage details on barley, wheat and forages are available from authorized crop insurance agents.



Eugene Gantz
Risk Management/USDA
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Optimizing In-Bin Grain Drying

Everyone wants to minimize corn drying costs. But if grain is to be stored, it must also be done correctly to ensure that it is not lost to spoilage. The following is an excerpt from Grain Quality Fact Sheet #15-Optimizing Grain Dryer Operations written by D. Maier and R. Bartosik, Purdue University. Due to space limitations, I have only included the section for low temperature, in-bin drying.

Before loading a drying bin, cleaning of the grain should be considered. High concentration of fine material in the center of the bin can produce uneven airflow. Up to 30%

difference in airflow between center and side wall locations have been documented. Uneven airflow produces uneven movement of the drying front through the grain bulk. In addition, fine material tends to be wetter than grain. Thus, the combination of lower airflow and higher moisture content in the center result in significantly slower drying and greater potential for spoilage in the center compared to grain close to the sidewall. Although fines are more difficult to remove from wet than from dry corn, wet corn should be screen-cleaned if it is to remain in the same bin for storage. A spreader is generally the only feasible way to coming close to a level fill, which is critical in assuring even air distribution for drying. Some hand leveling may be needed at times to compensate for uneven spreading.

The drying front must be monitored closely.....a reading of 18% moisture on one day may increase to a reading of 20% the next day as the drying front pushes through the different moisture layers.

The biggest mistake while operating a natural air/low temperature (NA/LT) drying system (i.e., bin dryers operating with natural air, or air heated up to 10°F) is filling it too quickly. Drying time is directly related to the airflow rate, which is a function of grain depth and fan power. The optimum combination of airflow and fan power typically results in a grain depth of 14-16 ft. However, grain depths of 18-21 ft are most typical for NA/LT drying systems. Although more expensive initially, buying diameter is preferable over buying depth,

and results in lower operating costs and better system performance.

If the bin is completely filled with corn above 20% in a single batch, by the time the drying front reaches the top layer, the grain could be spoiled and mycotoxins could develop. If moisture contents are above 20%, a drying bin should not be filled in a single batch but rather in layers. The wetter the grain, the shallower the layers should be (see Table 1). Better yet, if several bin dryers are available, layers of grain should be spread into all of them. Distributing the drying load over more than one bin maximizes the drying capacity. Also, early in the season the moisture content is highest. Thus, the wettest grain can be dried closest to the bottom of each bin where the drying potential of the air is highest.

The drying front must be monitored closely. Often layers of higher and lower moisture content grain are added on top of each other. As the drying front moves up through the grain, moisture is added to some layers and removed from others. Monitoring the top layer of the grain mass has to occur over several days. A reading of 18% moisture on one day may increase to a reading of 20% the next day as the drying front pushes through the different moisture layers. When the moisture readings remain consistently below 16-17% for several days, drying is nearing completion.

**John Rowehl, CCA
Grain Crops**

Table 1. Schedule for layer drying of corn given warm high humidity ambient conditions with humidity control to obtain a desired final moisture content of 16%.

Grain: corn; initial moisture: 24%; bin diameter: 24.0 ft; bin eave: 16 ft; fan: ID XL430-7 (10 HP); drying air relative humidity: 55.0%; drying air temperature: 68°F

Layer No.	Layer Depth (ft)	Total Depth (ft)	Bu/Layer	Bu Total	Drying Days/Layer	Drying Days Total	CFM/undried Bu
1	4.0	4.0	1,448	1,448	3.8	3.8	11.2
2	3.0	7.0	1,086	2,533	3.7	7.5	11.6
3	2.5	9.5	905	3,438	3.6	11.1	12.1
4	2.0	11.5	720	4,162	3.3	14.5	13.9
5	2.0	13.5	720	4,886	3.5	18.0	12.7
6	2.0	15.5	724	5,610	3.7	21.6	11.8
7	0.5	16.0	181	5,791	1.9	23.5	46.3

From: O.J. Loewer, T.C. Bridges, and R.A. Bucklin. 1994. On Farm Drying and Storage Systems

Late Summer Pest Considerations

As the summer proceeds, many unwanted perennial weeds and crops are reaching a stage in their life cycle when they are very susceptible to mowing or herbicide applications. NOW IS THE TIME TO TAKE ACTION TO CONTROL THEM! The removal of the unwanted plants must follow a program to establish desirable plants or the application of herbicides will become a yearly program and cause dependence on herbicides and possibly lead to resistant populations.

There are many effective herbicides on the market that will effectively control perennial weeds if applied when

the weeds are at bud to bloom stage. In many areas of the region, this occurs in late August and early September. The window for mowing or herbicide application in the fall is long. In fact, herbicides can be effective up until the first killing frost. Dicamba, triclopyr, metsulfuron, 2,4-D, diflufenzopyr and glyphosate are the key products utilized to manage weeds like hemp dogbane, thistles, tree of heaven, and numerous other perennials. In addition, the killing off of sod and alfalfa fields in the late summer and early fall sets the stage for easy no-till operations in the spring. After corn silks are brown, opportunities are open to apply herbicides with a high boy to eliminate escaped perennials. This practice is effective in controlling many escapes without getting injury to the crop.

Don't forget seed sources in locations other than the field. Sources can also be found near manure storage structures and in pastures, fence rows, etc. By managing these additional seed sources, the spread into cultivated fields can be lessened or eliminated before a problem occurs. This is also true of annuals, capable of 100,000 seeds per plant. It makes perfect sense not to allow them to go to seed.

Late summer is also the time to kill existing vegetation and overseed with desirable perennial species to cover the soil. Hard to manage areas may benefit from tactics used by the Department of Transportation where an application of glyphosate is completed at the same time as the over seeding of short stature low maintenance grasses such as hard fescue. This would be ideal under high tensile fences where tall grasses interfere or on banks and around the farmstead where a mower cannot reach.

Assess that alfalfa stand now! Determine the amount of stems or plants per foot and decide now how to best manage the stand. Less than 4 plants or 40 stems per foot should indicate rotation. Now is the time for planning to remove the stand and preparing for the corn crop to be grown in that field. This spring, some growers had difficulty eliminating alfalfa regrowth in corn. Fall applications are much more successful than spring.

By acting now, future problems can be avoided and the effects of weeds may be diminished or eliminated.

**Del Voight, CCA
Integrated Pest Management**

Alfalfa Stand Evaluation

All hay producers recognize the fact that as an alfalfa stand ages, it eventually thin out. There are many factors that cause stand thinning. These include diseases, insect and weed pressure, poor fertility and poor harvest management. The big question is not why the stand is failing but rather is the existing older stand thick enough to keep for another season?

How thick a stand is directly affects both the yield and quality of the cutting; however economics of existing forage supplies and costs of reseeding compound the decision on individual farms. Unfortunately, at some point, a decision must be made. The current evaluation tool is based on work done at The University of Wisconsin by Dr. Dan Undersander and evaluated in Pennsylvania by Dr. Marvin Hall at Penn State.

These forage agronomists recommend looking at alfalfa stands in the fall for the best method for stand assessment. They note that a second appraisal is helpful in the spring after the stand breaks dormancy. Fall evaluations help to identify troubled stands that may be prone to winter injury. This can allow for tillage or fall applied herbicides for optimum rotation affects. Spring evaluations reveal winter injury damage.

Wisconsin research notes that stem counts are more accurate for estimating yield potentials than crown counts. A stand may have density of 5 to 8 crowns but individual crowns may have few, poorly growing shoots. Research indicates that total stem counts per square foot is a better method. Their conclusions are that stands with more than 55 stems per square foot will have maximum yields; stands with fewer than 40 stems per square foot were not profitable and needed to be replaced; and densities between 40 and 55 will need additional considerations.

In addition to counting stems, agronomists recommend evaluating the condition of crowns and roots stand at the same time. By considering the crown and root health, an estimate of the long range yield potential can be part of the final decision. Healthy crowns and roots are large, symmetrical or balanced in shape, have many roots and shoots, are resistant to bark peeling and have creamy bright internal coloration. Crowns and roots with few roots, a soft feel and/or darken spots are damaged and prone to decline. Healthy stands have less than 30% injured crowns.

To evaluate your alfalfa stands this fall, make a simple 12 inch x 12 inch frame of wire or small PVC pipe. Select 3 or 4 areas of the field, toss the frame and then count alfalfa stems in this area. An alfalfa height of about 6 inches helps. Keep track of your results and then average the counts across the field. The most reliable estimate will result from multiple tosses. Then dig a few crowns from the nearby area and look for signs of weak crowns.

Stands with stem densities of greater than 55 per square foot can still be high yielding with some crown damage. However, many stands with densities in the lower 40's/square foot may also have a high yield potential if those stems are growing on healthy vigor crowns. There is no magical number to make this decision error free. Nevertheless, taking the time to walk (or 4-wheel) over your stands this fall may help you identify potentially poorer stands in time to modify cropping plans for 2006.

**Paul H. Craig, CCA
Forages**

New No-Till Publications

Two excellent Pennsylvania publications are now available: *Better Soils with the No-Till System* and *Steps toward a Successful Transition to No-Till*.

To obtain a copy or to join the PA No-Till Alliance, contact Susan Parry at the Capital Resource Conservation and Development Area Council office at (717) 948-6633, or email susan.parry@pa.usda.gov.

Calendar of State-Wide Events

- **Field Diagnostic Clinics**, September 13 and 15, Agronomy Farm, Russell Larson Research and Education Center at Rock Springs
- **No-Till Systems Training**, October 4 – 6, Agronomy Farm, Russell Larson Research and Education Center at Rock Springs Agronomy Farm, Contact Jay Braund, (717) 705-4784 for more information.
- **Keystone Crop & Soils School** (formerly CCA School) October 26 & 27, Holiday Inn, Grantville, Everyone Welcome. Contact: Amy Bradford, (717) 651-5920
- **Pennsylvania Farm Show**, January 7-14, 2006, Farm Show Complex, Harrisburg.
- **Keystone Farm Show**, January 10 – 12, 2006, York Expo Center, York
- **Corn, Soybean & Mid Atlantic No-Till Conference**, January 27, 2006, Holiday Inn, New Cumberland

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