



Agronomy Notes

Capital Region

112 Pleasant Acres Rd., York, PA 17402 (717) 840-7408

Capital Region Extension Agronomy Team

Mark Goodson, Editor

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Thinking of Saving Your Own Wheat Seed?

The seed quality in many areas has been threatened by disease this season. Fusarium head blight and Glume blotch were present in many fields, and both diseases can limit the germination of seed and cause disease in the young seedlings. The glume blotch damaged seed can also provide inoculum for the leaf phase of the disease (Stagonospora leaf blotch) during the following season.



The best way to ensure that you are using quality seed this fall is to purchase certified seed. In a year like this, questions arise about the potential impact of disease on wheat saved for seed.

Cleaning grain to remove the most heavily diseased kernels and the use of a fungicide seed treatment can improve the germination of a seed lot. But you have to get the seed treated with the right fungicide. It does not appear that the right fungicides products are available for a seed box

treatment. Most are formulated to be applied as a slurry in applicators made to do this type of treatment. Some commercial or custom seed cleaners are set up to do this type of treatment.

If you can get your seed treated, a combination of fungicides will be needed to control both scab and glume blotch. Two products that can be used for handling glume blotch are Raxil +thiram or Dividend XL. But in order to get effective control of scab, a second product called LSP (thiabendazole) would be needed.

Seed testing services for both germination and purity continue to be available from the Pennsylvania Department of Agriculture Seed Division.

Samples sent by mail or express must be enclosed in sturdy containers addressed to:

Seed Laboratory
PA Department of Agriculture
2301 North Cameron St.
Harrisburg, PA 17110-9408

A statement must accompany the seed stating the kind of test desired. A Pennsylvania noxious weed examination is included with a purity analysis. Seed samples treated with any material will not be tested unless the name of the substance is plainly marked on the container.

Kind of Seed	Purity	Germination	Combined
Barley, Rye, Wheat	\$7.00	\$5.50	\$12.00
Oats (including fluorescence test)	8.00	5.50	13.00

The fee may accompany the sample, or be billed the first of the month. Checks and money orders should be made payable to the Commonwealth of Pennsylvania. Cash **cannot** be accepted.

For more information on seed testing services, please contact Joe Garvey (717) 787-5609

John Rowehl, CCA

Grain Crops

Late Summer Weed Considerations

As the summer proceeds, many unwanted perennial weeds begin to develop to a stage in its life cycle that is most sensitive stage. It can be killed through mowing or herbicide applications. **NOW IS THE TIME TO CONTROL THEM!**

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 into September. The window for mowing or herbicide application in the fall is long. In fact, effectiveness of herbicides can be up until the first killing frost. Dicamba, triclopyr, metsulfuron, 2,4-D, diflufenzopyr and glyphosate are the key product 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 or early fall sets the stage for easy no till operations in the spring. After corn silks are brown, opportunities are open to apply herbicides such as 2,4-D 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 out of the field. Seed sources usually are hidden on the farm and hide out near manure storage structures, pastures, fence rows, etc. By managing these 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 and makes perfect sense not to allow them to go to seed.

August is also a 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 farm stead where a mower cannot reach.

The removal of the unwanted plants must follow a program to establish desirable plants or the application of herbicides will become a yearly program that can cause dependence on herbicides and possibly lead to resistant populations.

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

**Del Voight, CCA
Integrated Pest Management**

Get Ready for Corn Silage Harvest

Across the Capital Region, there are some mighty fine looking corn fields this summer, at least as of July 6th. All

indicators are that if the present weather trends continue, many of the earliest plantings will be ready for chopping by late August. Now is the time to get organized to take advantage of this potential crop.

First, make sure all harvesting equipment and storage facilities are ready to go. Clean out all old silage before adding this year's crop. Check all surfaces for cracks or holes. Check surface water drains to make sure they are opened to allow effluent to move away from silage. On upright silos check door seals, ladders and safety cages. Lubricate and adjust unloaders and make certain support cables are strong. Engineers note that any silo, older than 10 years, should be checked for structural integrity. A quick inspection may save lives and thousands of dollars in lost feed and damaged property.

Harvesting equipment should also be serviced at this time. The last thing a silage producer wants is a delay in harvest due to equipment failure. Check filters, hoses, fittings, belts, chains, bushings, sprockets and order replacement or spare parts. Sharpen knives and cutter bars and check the accuracy of cutter head adjustments.

Harvest Moisture Timing

Depending on storage structure type corn silage is harvested when whole plant moisture reaches 55 to 70%. Optimum moisture content for bunker silos is 65 to 70%; ag bags – 60 to 70%, conventional upright silos – 63 to 68% and oxygen-limiting silos – 55 to 60% moisture.

As a corn ear matures, sugar in the kernel will change to starch. When this starts, the kernel shrinks at the top and is in the dent stage. If an ear is broken in half and you observe the bottom side of the tip half you will notice a separation called the "milk line". When the milk line is ¼ of the way down the whole plant, moisture is approximately 70%. When the milk line is approximately ½ down the kernel, whole plant moistures are approximately 65%.

Proper moisture at harvest is critical and there is a wide variation in the actual moisture of the crop based simply on the milk layer. The most accurate measurement of whole plant moisture is to conduct moisture testing. Begin by taking a few plants from selected fields at dent stage. Run through some type of chopper or lawn mower and thoroughly mix together. Use a Koster tester or a microwave to determine whole plant moisture.

This moisture can then be used to predict harvest date. The expected dry down rate for corn silage is 0.5 to 0.6% per day. For example, if your crop tests at 70% and your target harvest moisture is 65% you need an additional dry down of 5%. Dividing by the dry down rate of 0.5 to 0.6% per day indicates that you can expect to be harvesting in 8 to 10 days. Be sure to test the actual moisture content again at and during harvest.

**Paul H. Craig, CCA
Forages**

Phosphorus and Nutrient Management

The Phosphorus Index is now the law of the land for Concentrated Animal Operations (greater than 2 Animal Units / Acre) and volunteers submitting new or revised Act 6 nutrient management plans for approval. Part A of the P-Index, identifies fields with greater than 200 ppm Soil Test Mehlich 3 P or fields with 150 feet or less contributing distance to a body of water as areas that have a high vulnerability or risk of P loss to surface waters. For more detailed information about the P-Index, please refer to the Penn State publication at http://panutrientmgmt.cas.psu.edu/pdf/phosphorus_index_factsheet.pdf or contact the Cooperative Extension of in your county and request a copy.

Please be careful where you spread manure in your fields.

Avoid Soil Compaction by Adjusting Tire Pressure

Many Capital Region dairy producers fertilize their fields with liquid dairy manure. The tankers that carry this manure into the fields can cause compaction to soil structure and reduce plant root growth, water infiltration and yields.

Dr. Sjoerd Duiker, Penn State Tillage Systems Specialist, reports that root penetration decreases as penetration resistance (compaction) increases. Sjoerd has developed a fact sheet (Agronomy Facts 63 Diagnosing Soil Compaction Using a Penetrometer) that describes how to use the type of penetrometer available from www.Gemplers.com and other agriculture supply sources.

According to Randy Raper of the USDA Soil Dynamics Lab, farmers are advised to reduce tire inflation pressure to reduce the amount of compaction. A tire reduced to its lowest recommended pressure will have a larger footprint and cause the least amount of compaction. Review your tire warranties. If properly loaded, some tire pressures can be reduced to 6 psi. Axle weights, the manufacturer's tire inflation recommendations, and use of a high-quality, low pressure gauge are required to correctly adjust tire pressure.

**Mark Goodson, CCA
Soils**

Crop Insurance Update

Damaged Crop Reporting Requirements:

The crop insurance policy requires producers to provide **written notice to your crop insurance agent** (by crop by farm):

- Within 72 hours of discovery of damage or loss,
- 15 days before harvest begins (if discovered after beginning of harvest-do it immediately), and
- Within 15 days after harvesting is completed, crop is destroyed or 10/3, which ever is earlier.

Make sure that you keep a copy of the notice for your file. Also be sure to get a clear understanding of what information you must have available for the loss adjuster.

Scoreboard Shouts

Record Policy Numbers in 2004: The number of 2004 policies increased to 16,161 from 15,288 for 2003 in PA. 2003 loss payments totaled about \$27 million.

What coverage paid off best in 2003: About 85% of corn and soybean loss payments were paid to producers who chose 70-85% levels of coverage. You'll remember that in 2003 there were many shallow losses and prevented planting claims in the bottomlands. USDA also provided a one-time extra \$6.5 million of premium cost share in addition to the normal amount and the \$2 million PA cost share. As a result, many producers increased their level of coverage from the traditional 65% of their historical farm yield average to 75 or 80%...with some going to the maximum 85% level of coverage.

DID IT PAY? To answer this question, we recalculated the 2003 corn and soybean claims, where producers had greater than the traditional 65% coverage to determine how much of the loss payments was due to having higher levels of coverage. The results were staggering! The actual corn and soybean losses paid (at the higher levels of coverage) was \$16.6 million. If these same producers only has 65% coverage the loss payments would have decreased from the Actual \$16.6 million to less than \$1 million. The table and chart below provides more details. But as you study them ask the question "what level of coverage should I buy so that the program meets my expectations in bad years?"

PA Corn & Soybean Producers Benefit From Lower Cost\Higher Coverage Crop Insurance in 2003

In 2003, PA corn and soybean producers benefited from higher crop insurance coverage which was affordable because of additional premium discounts (cost share) \$6.5 mil. by RMA\USDA, and \$2.0 mil. by Commonwealth of Pennsylvania. This resulted in \$20.7 million of increased protection and \$15.6 million in increased loss payments (compared to what would have been paid with the traditional 65% maximum level of coverage).



**Eugene Gantz,
Risk Management/USDA,
Ph: 717-787-4694;**

Fertility Management in the Summer

Once the corn is sidedressed and the hay fields are topdressed after first cutting, most people think that fertility management for the growing season is pretty much done. But summer does present a few opportunities that you might want to consider. First, don't forget grass fertilization. Our cool season grasses are not very productive in the heat of the summer, but they will be growing into the fall. Applying nitrogen to support this fall growth is usually a very profitable practice. Apply 50 lbs of N/A per ton of expected yield for the fall growth. If farmers need to get some manure spread in the summer, these grass hay fields are a good place to go. The grass will make good use of the manure nutrients.

In small grain fields, consider taking soil samples after harvest. This can be an excellent time to apply limestone if it is needed. Generally, the soils are dryer so compaction from lime trucks is less of a problem and it gives the limestone plenty of time to react and correct pH before the next crop. Also if late summer forage seedings are planned in these fields, be sure to get a soil test and apply any recommended lime and fertilizer before seeding.

If you have questions about whether corn plants are getting all of the nutrients that the soil test shows or that was applied in fertilizer or if they are getting adequate secondary and micronutrients consider taking some leaf samples for plant analysis. Sometimes plants can be suffering from hidden hunger where they do not show any clear deficiency symptoms but they are still short on a nutrient. Plant analysis can help spot this problem. For corn, the recommended sampling procedure is to collect the ear leaf at silking time. Collect a representative sample of leaves (10-20 leaves) and send this to the lab for analysis. You don't need to sample all fields to get useful information. Selecting a few fields that represent different nutrient management situations on the farm should be adequate. For example, maybe sample a field that gets lots of manure and another field that maybe does not get as much. Also, often the home farm and rented ground are managed differently.

Soil and plant analysis kits for the [Penn State Ag Analytical Services Laboratory](#) are available from local Penn State Cooperative Extension offices.

**Douglas Beegle, dbb@psu.edu
Soil Fertility and Nutrient Management
Crop and Soil Sciences**

Capital Region Cooperative Extension Offices

Adams	(717) 334-6271
Cumberland	(717) 240-6500
Dauphin	(717) 921-8803
Franklin	(717) 263-9226
Lancaster	(717) 394-6851
Lebanon	(717) 270-4391
York	(717) 840-7408

Capital Region Agronomy Team Extension Educators

Paul Craig, Forages
Dauphin County
Phc8@psu.edu

Mark Goodson, Soils
York County
Mwg1@psu.edu

John Rowehl, Grain
Cumberland County
jrowehl@psu.edu

Del Voight, IPM
Lebanon County
Dgv1@psu.edu

Landisville Research and Extension Center, Lancaster County (717) 653-4728

Dave Johnson, Director
Landisville Research and Extension Center, Lancaster County
Dhj3@psu.edu

Jere Wingert, Agronomy
Franklin County
Jlw261@psu.edu

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