

Agronomy Notes

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Capital Region Extension Agronomy Team



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Alfalfa Stand Assessment

As alfalfa stands age and thin, producers are faced with the question: "Is this stand good enough to keep?" Research at Penn State and Wisconsin has been looking at this situation for many years. Specific guidelines are now available to answer this question.

Most stands are evaluated in the spring after surviving the winter. Current research shows that fall is the best time to evaluate stands because it allows more time for planning and possible fall herbicide options.

Fall evaluation helps identify potentially less profitable fields and those stands more likely to suffer winter injury. Earlier evaluation permits development of alternative cropping strategies and management for next year. These strategies include fertilizing, herbicide applications and new seeding plans. Spring stand evaluation is still suggested to assess the extent of winter injury from weather that is unknown at this time.

Stand evaluation is based on two factors: stand density and stand health. Stand density is based on plant count and stem count in a 2-foot square area. A 2-foot square can be constructed using PVC tubing 17 inches by 17 inches. To determine your stem count, walk into your fields and toss the frame to the ground. Closely count the number of stems inside the frame. Repeat this procedure again in at least 5 representative areas across the field. It is important to count stems and not just the crowns in the frame because individual plants may have a few shoots and thus contribute little to yield.

The second step in this evaluation process is to assess the root and crown health of the stand. Looking at the health of the plant helps to anticipate which fields are likely to suffer yield loss due to winterkill. To assess plant health, dig representative plants from 3 to 4 areas of the field. When collecting plants, be sure to include the top 6 inches of the root below the crown area. Examine the crown for size, symmetry of development and the number of shoots present. Then cut the root lengthwise and check the crown and root for discoloration and rot development.

Healthy plants have large crowns, symmetrical shape and lots of shoots. The crown and roots will have an off-white color with few signs of any discoloration. Unhealthy plants can be observed that have weak crowns, uneven development, few shoots and significant crown and root discoloration. When 50% or more of the root diameter is affected by rot, the plant is unlikely to survive the winter.

Penn State recommends considering stand rotation if the stem count in the 2-foot square averages 45 or less. Wisconsin's recommendation is more than 55 stems, no need to rotate out. Less than 39 stems, definitely consider replacing. When stem count is between 40 and 55, take a closer look at the plant health. If 30% of the crowns and roots show significant rot then rotation is probably necessary. With either system, you still need to base final decisions on yields normally obtained and your forage alternatives for the coming season. For additional information visit <http://learningstore.uwex.edu/pdf/A3620.pdf>

Paul H. Craig, CCA
Forages - Dauphin County



BETTER CROPS AND PROFITABILITY

PENNSTATE



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program of
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No-till Transplanter Field Tested

Agronomy Notes

John Stoltzfus and his father A.K. have been no-till farming for about 18 years on their farm in the rolling river hills near Peach Bottom, Lancaster County. What began as a way to fight the deep gullies in cornfields, has today become a goal to completely no-till all their crops, including tobacco and alfalfa. John says, "The biggest benefit to no-till is no erosion," however, he also states, "no-till is easier on the horses and mules, no plowing and at harvest, the wagons pull much easier."

Their 2006 tobacco crop was planted with a conventional transplanter that followed behind a slitter or single tooth chisel. This method worked so well that John and A.K. wondered if a no-till transplanter could be constructed. With assistance from the Lancaster County Extension office and funding from the "Park-The-Plow" program, a prototype no-till transplanter was designed and built late last winter.



No-till tobacco at J. Stoltzfus farm in Peach Bottom, PA

When construction was finished, an article was printed in a local farm magazine offering the planter for trial use on a first come first served basis. ***"We had no idea how popular the planter might be, nor what complications we might encounter out in the field."*** From mid-May through mid-June, hardly a day passed that the planter wasn't used. In total, 25 farmers (23 Amish) tested the planter with over 60 acres of no-till crops produced. Twenty farmers planted between 1 and 6 acres each of tobacco, while 3 farmers planted a total of 9 acres of pumpkins, and finally two growers planted approximately 3 acres of broccoli and cauliflower.

How well did it work? Most of the growers were very satisfied with the results. In fact, some indicated the crop was among the heaviest and best tobacco they have ever produced. The most successful farms had several of the following in common:

- If manure was used, it was applied in the fall.
- Field had been in successful no-till for more than just 1 season.
- A well established cover crop was essential.
- Rye worked well; however, Hairy Vetch, Crimson Clover and Ryegrass worked equally well or even better.
- Cover crop was burned down at least 2, preferably 3 weeks prior to transplant.
- Used a complete herbicide program including Command or Spartan, along with Prowl.
- Used Admire in the transplant water if plants were not pre-treated.
- Followed the fertility and disease control program the buyer recommended.
- A few growers added extra weight to the planter when planting into very dry and hard soil. Several were able to slide railroad iron into the planter frame.

Because of an extremely dry end of May and first 3 weeks of June this year, some fields of no-till tobacco were a little slow and uneven compared to those that were conventionally planted. However, as the season continued, the benefits of no-till began to show. Increased soil water holding capacity and slower release of nutrients in the no-till seemed to help most fields finish strong with excellent crops.



No-till Transplanter

We have learned that no-till vegetable and tobacco production can be very successful. It takes a commitment to good soil stewardship and with cultivation unnecessary, it can save time and labor. A large benefit is reduced soil erosion and less runoff. The residue also improved field conditions for easier harvest during wet periods. Not only does the soil stay in the field, it doesn't splash up onto the plants, improving plant health and marketability.

The no-till transplanter is available again this season. If you are interested in using the planter or have questions about no-till tobacco and vegetable production on your farm, please call Jeff Graybill, Lancaster Co. Extension, 717-394-6851; John and A.K. Stoltzfus, 717-548-3527; or Axel Linde, SOLANCO Young Farmers, 717-529-6963.

Crop Insurance Update

Report Crop Damage Promptly

As you complete fall harvesting, remember that crop insurance claims are determined on a farm (insurance) unit basis. Your protection includes the combination of yield and quality. If you have CRC or AGR/AGR-Lite, price changes may also apply. Report damage by insurance unit immediately to your insurance agent. The policy requires that damage be reported within 72 hours of discovery. Notice of damage must again be reported not later than 15 days after harvesting is completed for each insurance unit but not later than the insurance period (12/10 for grain corn and soybeans). If you experience poor grain quality, it is best to ask an adjuster to look at it before harvesting the acreage.

Acreage Reporting Deadlines – 11/15/07

Acreage reports for Forage Production (GYC), fall seeded barley and wheat must be filed with your crop insurance agent by 11/15. It is important that any differences between acreage reports for FSA/USDA and crop insurance be well documented with both organizations.

If you have good yields, your detailed records are needed to support your yields and boost your average actual production history (APH). If you suffer yield, quality or price losses (if you have CRC), your detailed records are a requirement to support your claim. Records must separately reflect the production for each insurance unit. Don't forget to use pack factors in your final calculations. Pack factors and an approved record system are available to you at <http://cropins.aers.psu.edu/> Direct questions on this subject to your crop insurance agent.



Enrollment/Policy Change Deadlines for 2008

The deadlines for Group Risk Forage policies are 11/30. The deadlines for apple, peach and grape policies are 11/20. Also note that the AGR/AGR-Lite 2008 rates are filed so the information is available to consider these programs in addition to other crop insurance policies.

Insurance Protection Increases

The amount of insurance protection in Pennsylvania for 2008 is estimated to exceed \$331 million, up from \$248 million in 2007.



Gene Gantz
RMA/USDA
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Growing Corn After Corn?

Mainly attributed to the rise in ethanol production, there has been a significant shift in the Midwest to more acres of corn. Pennsylvania reportedly followed this trend in 2007 but to a lesser degree. Whatever the cause, growing non-rotated corn is not new and proper crop management compared to rotated corn is important in order to maximize returns.

Hybrid selection is the most important consideration in managing corn after corn. You should talk with your seed company representatives and get your order in early.

The most important consideration in managing corn after corn is selection of the hybrids.

Desirable characteristics of a hybrid for corn after corn are:

- Early seedling vigor - under cool conditions particularly if planted early in high residue fields
- Resistance to diseases - a broad range of resistance is always good but especially to gray leaf spot and northern corn leaf blight when planted in high residue fields
- Corn rootworm resistant traits - not the only way to deal with the problem but probably the most reliable under high insect pressure and or early planting situations
- Yields well in tests where corn was the previous crop - seek out hybrid trials grown under those conditions

Once you have selected an appropriate hybrid, consider how to best manage the following:

- Increased Crop Residues - consider row cleaners
- Increased chance of stalk rot - scout and plan harvest schedule accordingly
- Timeliness - covering more acres, you'll need to get started earlier & plant later
- Soil Fertility - N rates are +30 - 50 units higher, P, K needs also change vs soybeans

Crop rotation studies almost always show lower yield potential, in non-rotated corn, typically 7-10%. My observation is that yield loss due to lack of rotation is less on very high producing soils. Avoid dropping the rotation on your fields that are less than top notch.

John Rowehl, CCA
Grain Crops-Cumberland County

Cover Crop Walks Announced

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Cover crops are a key component to manage soil health and productivity. Come see, touch and learn about the management and benefits of both traditional and non-traditional species such as: Oats, Rye, Ryegrass, Vetch, Peas, Forage Radishes and Red, Crimson and Berseem Clovers.

Informal informational "Walks" will be held at no cost at the following locations:

Lancaster County 9:30 AM - 11:30 AM

Hot Cider Provided

Nov. 6th Landisville Res. Farm: 1446 Auction Rd., Manheim

Nov. 7th Pequea Planter: 561 White Horse Rd., Gap

Nov. 8th D. Hershberger farm: Center & Conowingo Rd.

Contact: Jeff Graybill at 717-394-6851

Franklin County 10:00 AM - 12:00 PM

Nov. 16th Dennis Musser farm: across from Dream Hwy. Heifer farm

Contact: Jere Wingert at 717-977-7620

Cumberland County 10:00 AM - 12:00 PM

Nov. 13th Multiple stops to include various legumes and several types of rye.

Contact: John Rowehl at 717-240-6500 for more details and directions.

Dauphin County 10:00AM - 12:00 PM

First week of November at farm near Gratz.

Contact: Paul Craig at 717-921-8803 for details.

Lebanon County: 10:00 AM - 12:00 PM

Nov. 6th Kirby Reichert Farm

Nov. 13th Jim Hoffman Farm

Nov. 20th Dick Kreider Farm

Contact: Lebanon at 717-270-4391 for flyer and directions.

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