

Agronomy Notes

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Capital Region Extension Agronomy Team

DEC 2006

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Corn Silage Variation

Recently, a field study was conducted that attempted to answer the question “is a multi-pass feedout system acceptable to use when feeding corn silage out of a large pile or bunker silo?” Envision a large pile or bunker of silage. Using a defacer, create a pass completely through the pile, removing daily feedout in a managed procedure. Upon reaching the back of the pile, a new feedout pass is started back at the front of the pile. This results in an exposed wall of silage for a short time period of 3 to 6 weeks. The exposed sidewall silage is removed and discarded, ahead of the feed off face.

“How much variation exists between days within the same silo?”



The study resulted in some interesting conclusions. First, it was possible for large silage pile or bunker managers to maximize feedout efficiency with a multi-pass feedout system if silage with limited exposure is removed and discarded. Results also confirmed that within the silage mass, there was significant variation in quality factors during the feedout period, which in this study, was November through July. Finally, significant differences were noted in silage density from the top of the mass to the bottom.

As an agronomist, I frequently get glazy-eyed when forage analysis numbers are tossed around. One forage quality consideration that I have learned from this study is that within a silage mass, there are significant variations of the silage that can greatly affect feed efficiencies. These varia-

tions can be caused by harvest moisture levels, maturities, hybrid differences, planting populations, weed control, soil conditions, insects, disease, deer and many others.

Dr. Larry Chase from Cornell University asked, “How much variation exists between days within the same silo?” He reported his finding at a Silage for Dairy Farms Conference that took place in January 2006 in Camp Hill, PA. Dr. Chase took samples from the top, middle and bottom location of a bunker silo. All forage quality factors showed differences between levels. Dry matter content had the greatest variation. The average difference between levels was 12.3% and one bunker had a difference of 55.0% between dry matter content at the top, middle and bottom levels. No wonder nutritionists and dairy feeders have challenges maintaining ration consistency.

Dr. Chase pointed out that large variations in silage composition can affect feed nutrient composition, alter feed intake levels and can be linked to some herd health issues. Alterations in silage fermentation and fermentation end products are frequently observed in many silage and haylage crops. What should a dairyman do??

Dr. Chase’s suggestions emphasized the importance of implementing an on-farm system to monitor changes in silage DM. He recommends making dry matter determinations at least weekly. He noted that many farms he works with are changing to daily determinations. Fermentation analysis can be extremely beneficial in solving problem situations.

Whether you have a 22,000 ton silage pile or a 20 x 75 upright silo, you know that there has to be significant differences in that silage quality. This variation makes forage sampling procedures and monitoring procedures vital to maintaining silage consistency. Take time to frequently test your silage and haylage crops for dry matter content. Make a record of your results and note how variable they will be.

For additional information on the Silage Pile Feedout Study give me a call at 717-921-8803 or email phc8@psu.edu.

Paul H. Craig, CCA
Forages - Dauphin County

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December 2006

Still Time to Park the Plow

If you received this newsletter, you also recently received a flyer for the *Park the Plow for Profit* program. If you were into the rush of the harvest season at that time, you may have laid it aside. But it's not too late. The program is still for open for enrollment.

Park the Plow for Profit is a no-till practice cost share incentive program. The objective is to help overcome the barriers to adopting no-till in Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon and York Co.

Combining Park the Plow with EQIP opens up as much as an additional forty five dollars (\$45.00) per acre incentive payment.

Park the Plow for Profit was designed to help pay for the cost of technical assistance to make the transition to no-till successful. You can receive \$250.00 toward the cost for a Certified Crop Advisor to work directly with you and develop a transition plan, tailored to the acreage enrolled in the program. The reason for this comes from the fundamental principle that no-till farming has to be done by managing a total cropping system in order to be successful. Decisions about crop varieties, manure and fertilizer application, pest control tactics, crop rotations and the use of cover crops all need made in recognition that no-till systems are not the same as tilled systems without tillage. The plan for transitioning to no-till will be done to provide sound agronomic advice and increase the likelihood of success with the system.

In addition to the transition plan payment, *Park the Plow for Profit* also provides an additional eight dollars (\$8.00) per acre incentive per year for additional technical assistance. Farmers that are successful in no-till know that no-till works best when it is continuous no-till. Consequently, continuous no-till is a fundamental goal of this program and participation in it means that you will need to commit the acreage to no-till for three years.



Park the Plow for Profit was also designed to coordinate with the USDA **EQIP** program. Combining *Park the Plow* with **EQIP** opens up as much as an additional forty five dollars (\$45.00) per acre incentive payments for practices related to no-till.

If you are not currently using no-till continuously on over half of your acreage and your farm is in Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon or York county, you are eligible to apply for *Park the Plow for Profit*. Call your county Conservation District office for more details. (You may be referred to NRCS.)

No-till cropping is a very cost effective soil erosion control practice. It has always been a way to reduce fuel use. And with the time you save by no-tilling, you will probably find some extra time to get some other things done around the farm. Or, as some farm families find, you just might have a little more time to relax. There has never been a better time to try it. No-till: Save soil, Save fuel, Save time.

John Rowehl, CCA
Grain Crops - Cumberland County

Lancaster Co. Opportunities

With commercial nitrogen prices going higher and water quality pressures growing more intense, finding ways to improve fertilizer and manure efficiency is the smart thing to do. It makes sense from an economic and environmental standpoint. The *Lancaster Farms Project* has been helping farmers to do this for the past two years. It is a nutrient management program and not tied to no-till requirements. The program has recently been opened to additional participants for 2007.

Program Overview

You will work with a crop scout of your choice or a Lancaster Co. Conservation District staff member to closely monitor and track nutrients on your farm. Tools such as a Pre-Sidedress Nitrate Test (PSNT) or chlorophyll meter tests are used to estimate the N needs of your corn crop. These tests are based on nitrate concentration in the top 12 inches of soil when corn is 6 to 12 inches tall. The test determines how much, if any, additional nitrogen the crop needs. A winter meeting will be held to review and discuss results with others in the program. All information remains confidential.

Not only will you get N, P & K recommendations for your farm, a \$10 per acre incentive payment and a basic nutrient management plan are also included with the *Lancaster Farms Project*.

If you are interested in moving to no-till corn production, you can receive additional incentives up to \$45.00 per acre for no-till planting, cover crop planting and cover crop cost sharing. This program is called EQIP and is available to the entire region. There is a maximum of 250 acres per farm, but no minimum. For more information or to apply to the *Lancaster Farms Project*, contact Brad Michael at 717-299-1563 Ext. 110.

Heather Conley
Lancaster County NRCS

Seasons Greetings

December 2006

PA Crop Insurance Premium Subsidy Discount Rates

The PA Dept. of Agriculture announced that each producer who purchases a USDA backed “buy-up” crop insurance policy, for any insurable crop for the 2007 crop year, will receive an estimated additional 15% discount of their net premium. This is the individual producer’s portion of the \$3 million that the Commonwealth has provided in an effort to make the higher, better performing coverages more affordable. The PA discount applies after the federal premium cost sharing is deducted. Example: \$500 total (gross premium) less \$275 (55% federal subsidy) = \$225 less \$33.75 (15% PA Subsidy) = \$191.25 net producer’s cost.

Free Boost in Protection

The 2006 CRC harvest time price was \$3.03, up from \$2.59 in the spring. This provided a free 17 percent increase in coverage without additional premium for corn CRC policyholders. Example: 120 bu./a. APH X 75% level X \$2.59 Spring CRC Price = \$233 of revenue protection. Protection is automatically recalculated when the fall price is higher (without additional premium charge) resulting in \$273 of protection at the \$3.03 harvest time price.

Yield Records Pay Big Dividends

Now is the time to get your 2006 production records up to speed. The challenge is to make sure your production records meet the crop insurance requirements to ensure you receive full benefit when you update your crop insurance actual production records (APH) with your crop insurance agent. Make sure that acreage and production from each insurance unit are included for 2006 and each prior year of your crop insurance databases. Financial accounting systems seldom include the required acreage and production information for each insurance unit. Crop insurance rules require verifiable written records that are carefully recorded during the harvesting season. A detailed system that meets RMA/USDA standards is available at the website: cropins.aers.psu.edu. The guide contains methods of calculating the bushels/tons of farm-stored production. Don’t forget to apply “pack factors” to farm stored grains as it increases the bushels. They are also available at the website.

Liberalized Sectional Equivalent Insurance Units

The common system of establishing insurance units for most grain and certain other annual field crops is by FSA farm serial numbers (FSN).

However, there are instances where numerous farms scattered over a wide geographical area have been consolidated into one FSN. For 2007, these producers have another option to consider – units by section equivalent.

This method requires plotting the farms on a county map and then overlaying the map with a transparency, on the same scale as the map, showing mile square grids (looks like a checkerboard). If your farms are in different grids (squares) and you can provide separate acreage and production records for at least 2006 for the farms in each grid, you may be eligible for a separate unit for each farm. If the idea of units by section equivalent appeals to you, contact your agent well ahead of enrollment deadlines because implementing it requires some extra initial paperwork and additional levels approval.

Report Crop Damage Before End of Insurance Period

If your production/revenue is less than the guarantee or you have acreage of corn or soybeans that could not be harvested by the end of the insurance period (12/10 grain corn and soybeans) due to adverse weather, be sure to file a notice of damage with your crop insurance agent by this date. The policy requires that damage be reported within 72 hours of discovery and not later than the earlier of within 15 days after harvesting is completed on the insurance unit or the end of the insurance period (12/10 for grain corn and soybeans).

**Gene Gantz
USDA/RMA
717-497-6398**

Educational Opportunities

Forage Production School:

Dec. 12 at Lebanon Co. Extension Office
Dec. 15 at Franklin Co. Extension Office
9:30-12:00 noon, Contact: Paul Craig at Dauphin Co. Extension at 717-921-8803. Registration is required.

Managing Manure and Nitrogen in No-till Crop Systems

Dec. 4 at Gratz Community Center
Dec. 12 at Lancaster Farm and Home Center
Dec. 15 at Cumberland Co. Extension Office
9:30-12:00 noon, Contact: Jeff Graybill at Lancaster Co. Extension at 717-394-6851. Registration is required.

Newsletter Continuation Notice:

If you wish to continue receiving the “**Agronomy Notes**” newsletter, you must have returned the flyer from the November edition. Otherwise, send a note saying “**Please keep me on the mailing list**” to: Linda Kulp, Dauphin Co. Extension Office, 1451 Peters Mountain Rd., Dauphin, PA 17018.

Act 38 Winter Manure Application Requirements

Pennsylvania's Nutrient Management Law (referred to as Act 6) was originally passed in the spring of 1993. It became effective October 1, 1997 when the State Conservation Commission's (SCC) regulations detailing the requirements under Act 6 went into effect in Pennsylvania. In 2005, Act 6 was revised and is now referred to as Act 38. In addition, the SCC has revised the nutrient management regulations, which became effective on October 1, 2006.

There are several significant changes to the PA Nutrient Management Program. A summary of the changes, along with a comprehensive source of information on the program can be found at <http://panutrientmgmt.cas.psu.edu/>. A direct link to "Revisions to PA Nutrient Management Regulations" http://panutrientmgmt.cas.psu.edu/pdf/lr_act38_Reg_Sum.pdf.

A key area of change relates to manure application setbacks and winter manure application requirements. The revision of Act 6 to Act 38 incorporated year-round manure application setbacks. The Act 38 requirements are:

- Year-round 100 foot setback from streams, lakes, ponds and open sinkholes.
- Unless there is at least a 35 foot permanent vegetated buffer next to the stream, etc., in which case manure may not be applied within 35 feet of the stream, lake, pond or sinkhole.

- Year-round 100 foot setback from active drinking water sources (wells, springs)

Specific Requirement Revisions

In addition, following are the revisions to the nutrient management regulations related to the winter application of manure.

Definition of winter: It is winter if one or more of the following conditions exist: between the calendar dates of December 15 – February 28, or when the ground is frozen to a 4-inch depth, or when the ground is snow-covered.

Fields that will receive winter applied manure must have a minimum of 25% ground cover.

Additional application setbacks are required for winter applied manure.

- 100 feet from prior delineated wetlands adjacent to exceptional value streams.
- 100 feet from intakes to ag drainage systems.

In summary, an Act 38 nutrient management plan for agricultural operations planning to apply manure during the winter must include a "Winter Manure Spreading Procedures" section. The section must outline the fields or crop management units where winter application is either planned or restricted, the manure application procedures to be used including application and applicable setbacks. The ground cover, the type of manure to be applied and the field conditions during application must also be recorded.

Jerry Martin
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