

Farm Notes

April 2014

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USDA ANNOUNCES CROP INSURANCE DEADLINE FOR MARYLAND NURSERY PRODUCERS

The USDA's Risk Management Agency (RMA) reminds Maryland nursery producers to be aware that the final date for a new applicant to apply for 2015 nursery crop insurance is May 1, 2014.

New applications may be filed anytime. However, all applications including those for new or amended coverage are subject to a 30-day waiting period before commencement of coverage. Coverage begins 30 days after receipt of a signed application, a Plant Inventory Value Report (PIVR) for each insured practice, as applicable, and two copies of the producer's most recent wholesale catalog or price list. Premium will be prorated when PIVRs and/or catalogs or price lists are submitted with applications after the sales closing date. For existing policies, coverage will automatically begin on June 1, 2014.

The crop insurance year runs from June 1 through May 31. Growers may elect to insure field-grown and container-grown practices under separate policies. For example, one practice may be insured under the CAT policy and the other practice may be insured under a Buy-up policy. Crop insurance provides protection for field-grown and containerized nursery plants against losses due to adverse weather conditions, plus losses due to fire and wildlife. Insurance premium subsidies have increased significantly in recent years, particularly at the higher levels of coverage.

Crop insurance is sold and delivered solely through private crop insurance agents. Contact a local crop insurance agent for more information about the program. A list of crop insurance agents is available at all USDA Service Centers or on the RMA website at: www.rma.usda.gov/tools/agents/.

Source: RMA



UME CROP INSURANCE FACT SHEETS

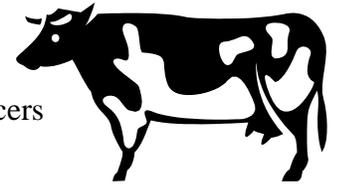
We've had some recent crop insurance publications finalized in the past few days. For those organic producers or those considering the switch to organic, RMA made some changes for the 2014 crop year and forward as to how crop insurance works for organic crops. That fact sheet is available at <https://extension.umd.edu/learn/2014-changes-organic-crop-insurance>.

Finally, RMA adopted NRCS's rules for cover crop termination. Producers with cover crops will need to make sure they stay in compliance with NRCS's rules to stay eligible for the crop insurance program and can insure the commodity crop. That factsheet is available at <https://extension.umd.edu/learn/crop-insurance-eligibility-and-marylands-cover-crop-program>.

Source: Paul Goeringer, Extension Legal Specialist and Economist, UME

USDA ANNOUNCES THE EXTENSION OF THE MILK INCOME LOSS CONTRACT PROGRAM FOR 2014

The extended MILC protects dairy farmers enrolled in the program against income loss through Sept. 1, 2014, or until a new Margin Protection Program for dairy producers (MPP), established by the 2014 Farm Bill, is operational.



Contracts for eligible producers enrolled in MILC on or before Sept. 30, 2013, are automatically extended until the termination date of the MILC program. Dairy operations with approved MILC contracts will continue to receive monthly payments if a payment rate is in effect.

Since MILC payments are limited to a maximum amount of milk production each fiscal year, dairy operations may select a production start month other than October 2013 (the start of fiscal year 2014). Producers who want to select a different production start month must visit their local FSA office between April 14, 2014, and May 30, 2014.

FSA will provide producers with information on program requirements, updates and sign-ups as the information becomes available. For more information on MILC, contact a local FSA county office or visit the FSA website at www.fsa.usda.gov.

Source: USDA

USDA ENCOURAGES EARLY REGISTRATION FOR FSA PROGRAMS

Producers are encouraged to report farm records and business structure changes to a [local FSA Service Center](#) before April 15, 2014.

Enrollment for the disaster programs authorized by the 2014 Farm Bill, including the Livestock Indemnity Program (LIP) and the Livestock Forage Disaster Program (LFDP) will begin by April 15, 2014.

Farm records can be updated during business hours at FSA Service Centers that administer the county where the farm or ranch is located. Producers can contact their local FSA Service Center in advance to find out what paperwork they may need. In addition, bank account information should be supplied or updated if necessary to ensure that producers receive payments as quickly as possible through direct deposit.

While any producer may report farm records and business structure changes, it is especially important for producers who suffered livestock, livestock grazing, honeybee, farm-raised fish, or tree/vine losses for 2011, 2012, 2013 or 2014, and may be eligible for assistance through one of the four disaster programs.

For further information about our disaster programs and USDA's Farm Bill implementation plan, visit FSA's [2014 Farm Bill Web page](#). FSA Service Center locations can be found on the [FSA website](#).

Source: USDA

USING BOVINE SOMATOTROPIN TO ENHANCE FERTILITY

Recombinant bovine somatotropin (bST) is most often associated with increased milk production by dairy cows. But recently, a team of researchers set out to evaluate the effects of administering either one or two low doses of slow-release bST on hormone concentrations, embryo development and fertility in dairy cows. The results were published in the January 2014 *Biology of Reproduction* journal.

The study followed 1,483 cows that were blocked by parity and assigned randomly to receive a single placebo injection at insemination (control), a single injection with 325 milligrams of bST (half the dosage of the commercially available product) at insemination (S-bST), or two injections with 325 milligrams of bST administered on days 0 and 14 (T-bST).

Results show that cows that received T-bST had an earlier rise in the pregnancy-specific protein B in plasma, increased embryo size and enhanced fertility. Cows that received S-bST did not show improvements in embryo development and fertility.

In conclusion, the researchers say that supplementation with two low doses of bST enhanced embryo development, reduced embryonic losses and improved fertility in dairy cows.

Source: March 2014 Dairy Cattle Reproduction Council Newsletter

WHAT IS ENOGEN CORN?

I've received several questions recently concerning "Enogen corn". This is a special type of corn developed by Syngenta for ethanol production. It contains a transgene from a bacteria that produces alpha amylase, an enzyme that breaks down corn starch into sugar. Presently alpha amylase enzyme is added to corn in a liquid form during the ethanol production process. Corn hybrids with the Enogen trait technology (i.e. Enogen corn) express alpha amylase enzyme directly in the corn kernel, eliminating the need for liquid alpha amylase in dry grind ethanol production. Various trade publications indicate that only 10-20% of an ethanol plant's total corn supply would need to be Enogen grain to produce the amount of alpha amylase required to break down corn starch to sugar.

According to Syngenta, use of the Enogen grain saves the cost of adding liquid enzymes, and facilitates the processing of higher dry solids levels, increasing yield and throughput (<http://www.syngenta.com/country/us/en/agriculture/seeds/corn/enogen/about/pages/enogentrait-technology.aspx>). In addition Syngenta reports that use of Enogen grain results in measurable reductions in water, electricity and natural gas usage on a per gallon basis.

Enogen corn has been receiving attention locally because Syngenta recently announced it has signed a commercial agreement with Three Rivers Energy, LLC that operates the ethanol plant in Coshocton, Ohio, to use grain containing Enogen trait technology following the 2014 corn harvest. Syngenta has similar agreements

with ethanol plants in other states. Farmers who grow Enogen under contract may receive premiums of about 40 cents per bushel over other corn. A local farm publication indicates that about 12,000 acres will be under contract in Ohio for the first year.

Unlike other transgenic corns introduced for insect and herbicide tolerance, Enogen corn was specifically developed for industrial purposes – ethanol production. A number of organizations ranging from the North American Millers Assoc. to the Union of Concerned Scientists opposed USDA’s 2011 approval of Enogen hybrids. These organizations warned that mixing (comingling) of Enogen corn with corn used for food could have significant adverse impacts on food product quality and performance, e.g. crumbling corn chips (resulting from starch breakdown caused by alpha amylase activity in Enogen grain).

Syngenta has established a stewardship program to prevent contamination of commodity grain by Enogen grain (<http://www.syngenta.com/country/us/en/agriculture/seeds/corn/enogen/stewardship/pages/stewardship-protocols.aspx>). Management practices that farmers under contract would be required to follow include planting buffers of non-Enogen corn around fields planted to Enogen corn, storing the Enogen grain in separate bins, and cleaning planters and combines between uses.

Syngenta indicates that the agronomic performance of hybrids containing Enogen trait technology is similar to conventional (non-Enogen hybrids) and that Enogen hybrids with insect and herbicide tolerance traits are available. I’m not aware of any university/extension tests that have evaluated the performance of hybrids with and without the Enogen trait.

Source: Dr. Peter Thomison, Professor Horticulture and Crop Science, Ohio State University, Email: thomison.1@osu.edu

CATTLE HANDLING POINTERS

Rick Machen and Ron Gill of Texas A&M share five basic principles of cattle behavior and turn them into ten handling pointers to help you become a better low-stress cattle handler.

Safe and effective cattle handling has always been important. In the last few years there has been a move toward what has been called low-stress handling or as we prefer to call it a return to sound effective stockmanship. The animal industries must not tolerate any form of abusive behavior or handling of livestock. The culture of handling on any operation originates from upper management and is expressed by the workers on the ground.



Most cattle handlers, and it does not matter if you are a “cowboy, cowgirl, buckaroo, cow hand, cow man, farm hand or stockman”, have learned by watching someone else work stock. Everyone thinks they know how to “work cattle” because they have always been able to get the job done. The moment you admit you do not know everything is the starting point for improving handling skills.

To read the entire article go to: <http://onpasture.com/2014/03/24/cattle-handling-pointers/>

Source: On-Pasture 3/24/14 and Texas A&M Extension

BROWN MARMORATED STINK BUG ODOR COMPOUNDS DO NOT TRANSFER INTO MILK BY FEEDING BUG-CONTAMINATED CORN SILAGE TO LACTATING DAIRY CATTLE

Brown marmorated stink bug (BMSB; *Halyomorpha halys*) is an emerging invasive species of grave concern to agriculture as a polyphagous plant pest with potential negative effects on the dairy industry. The purpose of this study was to determine the risk of including BMSB-contaminated silage in lactating dairy cow rations. First, 6 dairies, either highly infested ($n = 3$; 30 to 100 bugs per stalk) or not infested ($n = 3$), were sampled to assess the prevalence of bug secretion compounds tridecane (major component) and *E*-2-decenal (stink odor component) in silage and milk. Second, using wild BMSB, a mini-silo dose-response experiment (adding 100, 50, 25, 10, and 1 freshly crushed bugs/0.5 kg of chopped corn) was conducted to assess the effect of ensiling on BMSB stink odor compounds. Finally, synthetic BMSB stink odor compounds (10 g of tridecane and 5 g of *E*-2-decenal) were ruminally infused twice daily over 3 d, and samples of milk, urine, and rumen fluid were collected to evaluate disposition. Bug stink odor compounds were sampled by solid-phase microextraction (SPME) and analyzed by gas chromatography-mass spectrometry (GC-MS). Milk production and feed composition were unaffected when BMSB-contaminated silage was fed. Moreover, no *E*-2-decenal was detected in silage or milk (detection threshold = $0.00125 \mu\text{g/mL}$). The dose-response of tridecane in mini-silo samples exhibited a linear relationship ($R_2 = 0.78$) with the amount of BMSB added; however, *E*-2-decenal was completely decomposed and undetectable in spiked mini-silos after ensiling. Both synthetic secretion compounds infused into rumen were undetectable in all milk and urine samples. *E*-2-Decenal was not detectable in rumen fluid, whereas tridecane was detected only at 15 min post infusion but not present thereafter. Feed intake was unaffected by infusion treatment and BMSB secretion compounds (*E*-2-decenal and tridecane) were not observed in milk. *E*-2-Decenal and tridecane from the metathoracic gland of BMSB are not able to contaminate milk either due to the ensiling process or because of metabolism within the rumen. Concern over BMSB stink odor compounds contaminating the fluid milk supply, even on highly infested farms, is not warranted.

Source: *J. Dairy Sci.* 97 :1877–1884, R.L. Baldwin VI, A. Zhang, [S.W. Fultz](#), S. Abubeker, C. Harris, E.E. Connor, D.L. Van Hekken

EVALUATING WINTER WHEAT STAND

This year, many areas of Ohio experienced extremely low temperatures for several days. (-20° as I was driving to an Extension meeting in Coshocton County on January 28.) Snowfall was also above average in many areas causing standing water as the snow melted. Where does this leave our winter wheat crop?



Winter wheat is a cold season grass that can tolerate fairly harsh weather conditions. Wheat “hardens” in the fall to acclimate to cold conditions. Cold acclimation is variety-dependent and requires a period of growth when temperatures are between 30° and 60°F followed by slowly declining soil temperatures. After hardening, wheat can tolerate temperatures between 0 and 10°F especially when there is good snow cover. The growing point of wheat is below ground until conditions are warm in the spring, but extremely cold conditions can still cause damage to the plant. However, plants are only killed by low temperatures if the crown (lower stem) is damaged. Although, there were negative air temperatures, soil temperatures remained in the upper 20s to low 30s.

Some fields may have had damaged from areas where melting snow left standing water that later became ice. Standing water and especially ice on plants for several days may lead to “suffocation” of the crowns which may cause weakening of the stand in those areas or complete loss of plants.

Fields should not be evaluated until completely green from warmer temperatures for at least 10 to 14 days. Stand evaluations will be more accurate when made during weather periods that promote growth. Yield potential is reduced if tiller numbers fall below 25 per square foot after green up. Pick about 10 to 15 spots in the field and count the number of plants per foot of row. A stand with an average of about 12 plants per foot of row may still result in a good population of head-bearing tillers per acre. For those fields with tillers, 15 tillers per square foot is considered minimum for an economic crop. The number of tillers per square foot is equal to the number of tillers in 19.2 inches of 7.5-inch wide rows. Our studies have shown that under adequate weather conditions, tillering may compensate for relatively poor initial stand establishment.

Source: The Ohio State University Extension C.O.R.N. Newsletter, Laura Lindsey, Ed Lentz, & Pierce Paul

FARM LOAN PROGRAM MODIFICATIONS CREATE FLEXIBILITY FOR NEW AND EXISTING FARMERS AND RANCHERS ALIKE



A fact sheet outlining modifications to the U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA) Farm Loan Programs is available at (<http://www.usda.gov/documents/2014-farm-bill-changes-to-flp.pdf>).

The Farm Bill expands lending opportunities for thousands of farmers and ranchers to begin and continue operations, including greater flexibility in determining eligibility, raising loan limits, and emphasizing beginning and socially disadvantaged producers.

Changes that will take effect immediately include:

Elimination of loan term limits for guaranteed operating loans. Modification of the definition of beginning farmer, using the average farm size for the county as a qualifier instead of the median farm size. Modification of the Joint Financing Direct Farm Ownership Interest Rate to 2 percent less than regular Direct Farm Ownership rate, with a floor of 2.5 percent. Previously, the rate was established at 5 percent. Increase of the maximum loan amount for Direct Farm Ownership down payments from \$225,000 to \$300,000. Elimination of rural residency requirement for Youth Loans, allowing urban youth to benefit. Debt forgiveness on Youth Loans, which will not prevent borrowers from obtaining additional loans from the federal government. Increase of the guarantee amount on Conservation Loans from 75 to 80 percent and 90 percent for socially disadvantaged borrowers and beginning farmers. Microloans will not count toward loan term limits for veterans and beginning farmers.

Additional modifications must be implemented through the rulemaking processes. Visit the FSA Farm Bill website for detailed information and updates to farm loan programs.

Source: USDA

FREE-STALL STOCKING DENSITY AFFECTS PRODUCTIVITY

I was recently asked about the effect of stocking density in a freestall barn on dairy cow productivity. The incentive to utilize a stocking density above 100% (more than 1 cow per freestall space) is driven by economics; the fixed cost of the building and production facilities is allocated over a greater number of cows. However, this must be balanced by the impact upon cow comfort and cow behavior. Cow comfort and cow behavior have an economic correlation with milk production. Peter Krawczel from the University of Tennessee and Rick Grant of the William H. Miner Agricultural Research Institute in New York co-authored a very good article on this topic and I'll summarize some of their work to answer this stocking density question.

Let's start with these basics: dairy cow health, welfare, and productivity are related to the time that cow has to rest, eat, and ruminate. Normal daily behavior of a dairy cow is to rest 12 to 14 hours, eat for 3 to 5 hours over the course of 9 to 14 "meals" per day, and ruminate 7 to 10 hours. Much of that rumination time occurs during resting time. Then, of course, there is time allocated to milking, drinking, socializing, and other management activities.

Krawczel and Grant summarized the findings of a range of studies and research that looked at the effect of freestall stocking density on dairy cow resting time, feeding, and rumination. Resting time can be defined as the time the cow spends lying down in a stall. It is perhaps the most important factor to evaluate because it impacts other cow behaviors and cow productivity. The most pronounced negative impact upon cow resting or lying time can be seen when stocking density reaches 120% and greater. Cows will prioritize rest over feeding. In overcrowded situations, cows will spend more time standing idly waiting for a free stall space to become available so that they can lie down and rest. To make matters worse, cows deprived of normal lying time by a reduction of just 2 to 4 hours will attempt to recoup that lost resting time over the course of the next 40 hours. Therefore, when a stall becomes available, cows actually spend more time lying down resting, resulting in longer wait times for other cows.

The reduction in lying down time and increased standing time waiting for a stall to become available was found to have other detrimental health impacts, namely: 1) greater strain on hooves when cows are forced to stand on concrete for extended periods of time, in some cases leading to higher incidence of lameness, 2) increased levels of blood cortisol as a stress response and associated with suppression of the immune system, and 3) less blood flow to the uterine horn when standing as compared to lying down, possibly having an impact on fetal growth.

If overcrowding is accompanied with a decrease in feed bunk space per cow, then there are further negative impacts. A common recommendation is to provide at least 23 to 24 inches of bunk space per cow. In one study, increasing the bunk space to 40 inches per cow reduced the number of aggressive interactions per cow and increased the percentage of cows feeding during the first 90 minutes after delivery of a fresh batch of total mixed ration. However, in most cases, if stocking density is increased above 100%, no additional feed bunk space is made available, so there tends to be overcrowding at the feed bunk as well. In this situation, studies have shown that feeding time decreases and aggression increases.

Krawczel and Grant concluded that milk quality also was affected by overcrowding. Milk fat was reduced, somatic cell count increased, and the number of clinical cases of mastitis increased. They stated that overall milk production was not statistically affected, although they speculated that the short duration of most studies and/or the small number of cows involved may have affected the ability of those studies to detect changes in milk production. While I have not been involved in this type of research, my personal opinion leads me to believe that if a cow is under stress from overcrowding, the impact of reduced resting time, reduced feeding time, and increased aggression over a prolonged period of time will be decreased milk production.

For those who are interested, the entire article by Krawczel and Grant, including references to all the studies and research cited, can be found at: <http://go.osu.edu/extensiondairycowcomfort> .

Source: Rory Lewandowski, Extension Educator Wayne County, The Ohio State University Extension

GRAZING WINTER SMALL GRAINS

Grazing winter small grains can be an easy and profitable way to start grazing early in the season, but requires proper management of the crop and livestock for success.



Rye, triticale or wheat planted last fall is greening up, will soon be growing rapidly and be ready to graze in most areas.

These small grain pastures are an extremely important resource this spring. Not only will they relieve you from feeding hay and get your animals onto clean green grass, they also will help you wait longer before turning onto your other pastures, giving those pastures more time to recover from winter stresses.

To maximize grazing from small grain pastures, wait until grass is 4 to 8 inches tall before starting to graze. Then stock heavily enough to maintain plant height between 6 and 12 inches. To accomplish this, either adjust the number of animals according to grass growth or sub-divide the pasture into paddocks and graze rotationally. Grass stands, soils, fertility, and moisture all will affect stocking rate, so adjust stock numbers for your conditions. With careful management, you can have good grazing all the way to early June.

One concern when grazing small grain pasture is animal death from grass tetany. Tetany is more common in lactating cows than in dry cows or young stock. Reduce tetany by feeding magnesium oxide supplements mixed with salt, molasses, or grain. Monitor consumption carefully and adjust the mixture so cattle consume about one-quarter pound of magnesium oxide per cow each week.

Small grain pastures can be convenient and profitable. Just use good management to optimize production and prevent livestock losses.

Source: Marvin Hall, Professor of Forage Management, PNST Extension

OK TO EAT CLONED FOODS?

Best food Facts (<http://www.bestfoodfacts.org/>) received a reader question asking, "Has there been any research done in humans on eating cloned foods?" To answer this question, we reached out to [Daniel Pomp](#), PhD, Professor, Carolina Center for Genome Sciences, The University of North Carolina at Chapel Hill.

[Dr. Daniel Pomp](#) directed us to the [U.S. Food and Drug Administration's research on Animal Cloning and Food Safety](#) (see below for all details), and said:

"The key part of the research to date is that 'the composition of food products from cattle, swine, and goat clones, or the offspring of any animal clones, is no different from that of conventionally bred animals.' So while human trials have not been conducted, such trials seem unnecessary based on these FDA findings."

Here are the conclusions on [FDA's research on Animal Cloning and Food Safety](#):

After years of detailed study and analysis, the Food and Drug Administration has concluded that meat and milk from clones of cattle, swine (pigs), and goats, and the offspring of clones from any species traditionally consumed as food, are as safe to eat as food from conventionally bred animals. This conclusion stems from an extensive study of animal cloning and related food safety, culminating in the release of three FDA documents in January 2008: a risk assessment, a risk management plan, and guidance for industry.

Researchers have been cloning livestock species since 1996, starting with the famous sheep named Dolly. When it became apparent in 2001 that cloning could become a commercial venture to help improve the quality of herds, FDA's Center for Veterinary Medicine (CVM) asked livestock producers to voluntarily keep food from clones and their offspring out of the food chain until CVM could further evaluate the issue.

For more than five years, CVM scientists studied hundreds of published reports and other detailed information on clones of livestock animals to evaluate the safety of food from these animals. The resulting report, called a risk assessment, presents FDA's conclusions that:

- cloning poses no unique risks to animal health, compared to the risks found with other reproduction methods, including natural mating.*
- the composition of food products from cattle, swine, and goat clones, or the offspring of any animal clones, is no different from that of conventionally bred animals.*
- because of the preceding two conclusions, there are no additional risks to people eating food from cattle, swine, and goat clones or the offspring of any animal clones traditionally consumed as food.*

Source: [Best food Facts.org](http://BestFoodFacts.org), Food for Thought Blog, March 19, 2014.

SLOW SMALL GRAIN DEVELOPMENT AND CROPPING PLANS

The cold winter and late spring may impact small grain stands, development, and yield potential this season. Determining plant populations and tillering can help with harvest and management decisions for these crops.

The late spring is causing some concern about cover crop yield potential and whether it's worth investing in harvesting it late, and lower yielding cover crops like triticale for forage. Many folks apply N now to maximize production so they need to make some decisions now about double cropping. In our fields at the Agronomy Research Farm, our early planted small grains look real good, but the late planted fields are struggling. Some of the wheat has some winter mortality.

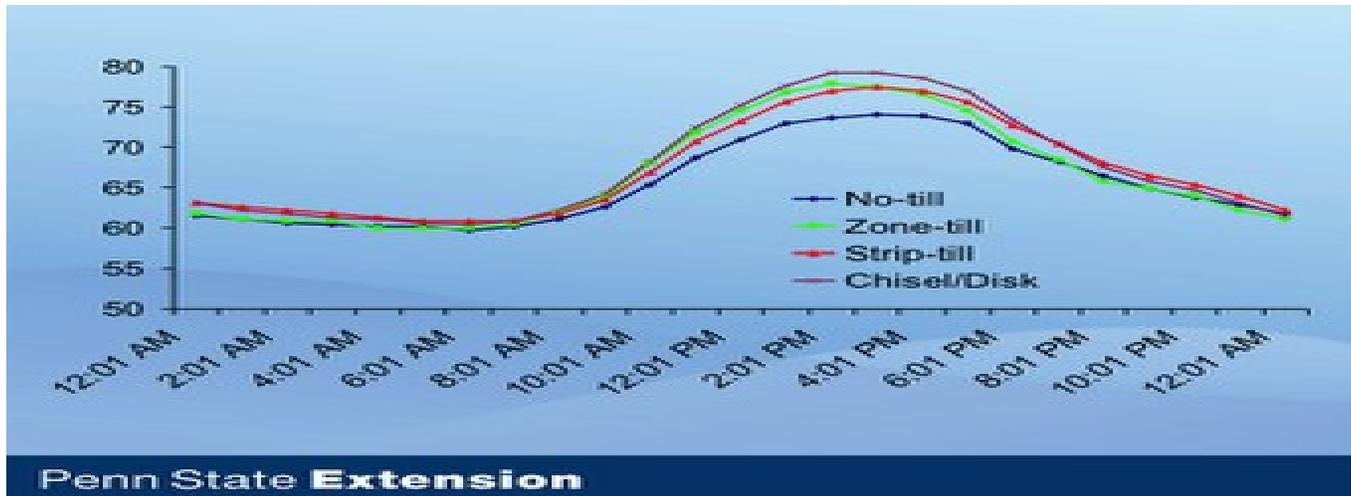
I am thinking that some of the later planted small grains planned for forage might be shifted to cover crop status, unless farms really needed the forage. I think the combination of poor conditions for small grain growth late in the fall, a cold March with little spring growth, and good forage inventories from last year may result in a reduction of the small grains chopped for forage this year.

Some late planted wheat fields should probably be assessed for grain production potential as well. In the agronomy guide we recommend that wheat should have at least 7-9 good plants per foot of row to achieve a reasonable yield- below that you should consider replanting to another crop. That recommendation is based on the fact that these plants can tiller and compensate for missing plants. In our fields, the late planted stands have some sick and dead looking plants in them, so tillering should be evaluated as well. A good field has 40 tillers/foot of row. This year the wheat may be challenged to tiller as well, with the later spring. A key will be to get N on these fields early to stimulate tillering. Hopefully as temperatures warm up this week we will see some good recovery on most fields.

Source: Greg Roth, Professor of Agronomy, PNST Extension

SOIL TEMPERATURES ARE INCHING UP

Soils are on a warming trend, though there is variability among soil temperatures across the state. While some producers want to plant as early as possible, it is important to plant when soil temperatures are ideal for the crop. Taking soil temperatures on your own field is the best way to monitor soil temperatures.



Soil temperatures throughout the day

April is the month to monitor soil temperature to determine when time is ripe for corn planting. Two inch soil temperature is provided on the [PA-PIPE web-site](#). The system provides average daily soil temperature (calculated as the average of daily minimum and maximum temperature) and minimum daily soil temperature. Soil temperature follows a typical sinusoidal rhythm every day as shown in Figure 1. Minimum soil temperature is typically reached at about 6 or 7 am, while maximum soil temperature is typically reached at about 2 or 3 pm. When determining if soils are warm enough to start planting corn, monitor the minimum soil temperature at 2 inches depth. This year soil temperatures have been low. In fact, last week minimum soil temperatures hardly inched above freezing in the Commonwealth. But PA-PIPE shows that yesterday (March 31st) minimum soil temperatures were already in the mid-fifties in southeastern PA, although in the northwest they were still below freezing. Soil temperature is affected by management and moisture, too. Under crop residue soil stays cooler due to the higher moisture content and the insulation provided by the crop residue. The effect is most pronounced for maximum soil temperatures. Living cover crops can dry out the soil faster compared with fallow soil, which would lead to faster warming. Corn planting can start when minimum soil temperatures are above 50F and the weather forecast calls for seasonal temperatures for the next 4-5 days. PA-PIPE can give general information, but it is important to check your own fields with a soil thermometer to capture the effects of local soil conditions.

Source: Sjoerd Duiker, Associate Professor of Soil Management and Applied Soil Physics, PNST Extension

DATES TO REMEMBER

April 18 & 19

2014 Maryland-Delaware Sheep Shearing School For Beginning Shearers-9:30 to 3:30 pm, Ridgely Thompson Farm, 1942 Uniontown Road, Westminster, MD 21158, Contact: David Greene at greelamb@gmail.com for more information.

- May 1 **Agribusiness Breakfast**-Growing Hops and Brewing Beer In Carroll County by Henry Ruhlman,, 8 am, Baughers Restaurant, Westminster, MD, Must call to register at 410-386-2760 to attend.
- June 5 **Agribusiness Breakfast**-Celebrate Dairy Month by Diane Flickinger, 8 am, Baughers Restaurant, Westminster, MD, Must call to register at 410-386-2760 to attend.
- October 23 **100th Anniversary Of Smith-Lever Act Extension Open House**-4 to 7 pm, Carroll County Extension Office, 700 Ag Center, Westminster, MD, Contact: 410-386 2760
- February 28 **2015 Maryland Dairy Convention**- FSK Mall Holiday Inn, Frederick, MD

*Visit our web site at <http://extension.umd.edu/carroll-county>
For more event listings visit
<http://www.agnr.umd.edu/AGNRCalendar/>*

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