FALL SOIL NITRATE TEST (FSNT) – IT’S THE LAW!!!!!!

Starting Fall 2013, Maryland Nutrient Management regulations requires Fall Soil Nitrate Test before nitrogen application can be justified on wheat and barley grain crops. The test can be done in an Extension office. Please see the attached Extension Brief (EBR-15 2013) for more information.

Source: UME

MARYLAND RECYCLES PESTICIDE CONTAINERS

For 20 years, Maryland’s pesticide container recycling program, offered by the Maryland Department of Agriculture (MDA), has helped prevent pesticide residues from entering the soil and local waterways and has saved valuable landfill space by recycling more than 743,000 empty, plastic pesticide containers. The program will open its 21st year of operation in June. MDA asks farmers, pesticide applicators and others to properly rinse and recycle their empty pesticide containers. A total of 24 collection days are scheduled in June through September at six locations throughout the state. A schedule of collection dates and sites is available on the MDA website.

Please see the attached brochure for more information and a list of collection sites, dates, and times.

Source: MDA

EB237- 2009-2010 PEST MANAGEMENT RECOMMENDATIONS FOR FIELD CROPS

Below is the web address for EB237:
http://extension.umd.edu/learn/pest-management-recommendations-field-crops

Source: UME
RESPONSIBLE HORSE OWNERSHIP WEEK WEBINARS RECORDED

Did you miss seeing one of our webinars live last week? Wondering again about the details of one of the presentations? We are excited to announce that all of the webinars from last week's Responsible Horse Ownership Week series are now online! View them here [http://www.ansc.umd.edu/equinestudies/index.cfm?directory=webinars.cfm](http://www.ansc.umd.edu/equinestudies/index.cfm?directory=webinars.cfm) along with our previous webinars. All of these online seminars are divided into categories of General Horse Information, Pasture and Facilities, Equine Nutrition, and Equine Health.

Source: Jennifer Reynolds, Coordinator-Equine and Poultry Extension Activities, Dept. of Animal and Avian Sciences

UPDATING YOUR ESTATE AND SUCCESSION PLAN

The American Taxpayer Relief Act of 2012 (ATRA) addressed many of the tax issues concerning taxpayers. ATRA made permanent many of the tax provisions that were scheduled to expire. For example, it provided a permanent exemption amount for the alternative minimum tax (AMT) and, more importantly, it indexed it for inflation.

In the estate tax area, ATRA made a $5 million federal exemption permanent and also indexed the exemption for inflation. For deaths in 2013, the exemption amount is $5.25 million. This provides relief for many farm families and will mean the farm can pass to the next generation. It also made the portability permanent. Portability allows an estate to pass through any unused federal exemption to the surviving spouse. The following example illustrates how portability works.

Oliver and Lisa owned a farm in Hooterville. Oliver had an estate valued at $1 million and Lisa has an estate valued at $7 million due to an inheritance from her Hungarian parents. Oliver died in 2013. His estate will have no federal estate tax and has a $4.25 million excess federal exemption amount. If the executor of Oliver's estate files an estate return, they can elect the portability provision and pass the unused $4.25 million exemption amount to Lisa. Assuming Lisa has not remarried before her death, she can have a federal estate of $9.5 million ($5.25 million + $4.25 million) without having an estate tax liability.

Many taxpayers mistakenly believe they no longer need to prepare an estate plan because of the lack of any federal estate tax liability (FET). This may be flawed thinking on their part. First, they may have state transfer tax. This is the estate tax assessed by the state in which they live. Many states do not have an exemption amount as large as the federal exemption. For example, Illinois only has a $4 million exemption for 2013.

The second reason to remain concerned about estate planning is that Congress may change the rules at any time. Beginning in 2019, the President's 2014 budget would return FET to 2009 levels. This would mean a $3.5 million exemption and a top tax rate of 45%.

Many farm families have estate plans that were drafted years ago. Unless these are amended to comply with the current laws, they can create serious problems for the surviving spouse as shown in the following example.

Ted and Rhota Tiller's attorney drafted a trust for them in 1985. The trust was a standard AB trust. At the death of the first spouse, their assets up to the federal exemption amount will go into the B trust or "bypass trust." The remaining assets will go into the A trust, or "marital trust". Because the B trust utilizes the federal exemption amount, there will not be any FET on those assets. The assets going into the A trust are also exempt. These
assets are available to the surviving spouse and consequently qualify for the unlimited marital deduction. However, they will be subject to FET on the spouse's death.

This was an excellent planning tool in 1985 when the federal exemption amount was $400,000. If Ted had a $900,000 estate at the time of his death, $400,000 would go to the B trust and $500,000 to the A trust. Any appreciation on the B trust assets would not be taxed at Rhota's death.

However, Ted dies in 2013. His assets are now valued at $3 million. Under the old trust document, all $3 million will go into the B trust, leaving no assets for Rhota. This may not leave Rhota with enough assets to maintain her lifestyle.

A person that dies with no will is said to die "intestate." Only assets that would normally transfer under a will are included in the intestate succession laws. These include the following:

- property owned in joint tenancy or tenancy by the entirety
- real estate held by a transfer-on-death deed
- funds in a retirement plan
- life insurance proceeds
- property in a living trust
- payable-on-death bank accounts
- securities held in a transfer-on-death account

In Illinois, the deceased's assets, other than those listed above, are transferred as follows if there is no will:

<table>
<thead>
<tr>
<th>Asset held at death:</th>
<th>Transferred to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse but no descendants</td>
<td>All to spouse</td>
</tr>
<tr>
<td>Children but no spouse</td>
<td>All to children</td>
</tr>
<tr>
<td>Spouse and children</td>
<td>½ to spouse and ½ to children</td>
</tr>
<tr>
<td>Parents but no spouse, descendants or siblings</td>
<td>All to parents</td>
</tr>
<tr>
<td>Siblings but no spouse, descendants or parents</td>
<td>All to siblings</td>
</tr>
<tr>
<td>Parents and siblings</td>
<td>Split between parents and siblings. If only one surviving parent, surviving parent inherits double amount.</td>
</tr>
</tbody>
</table>

Chuck and Pat Rost reside in Illinois and have no estate plan or will. Chuck's only asset is $800,000 in a savings account. Chuck has a son Arthur from a former marriage but has not had contact with him for 40 years. When Chuck dies intestate, Pat will inherit $400,000 and Arthur will inherit $400,000. This may not be the result Chuck wants, but the only solution would be to have a will drafted and executed before his death.

A will is important for more reasons than the distribution of assets. If both parents of a minor child are deceased and custody has not been stated in a will, the court decides who will have custody.
This article has discussed only a few of the possible adverse results from having no estate plan or an old plan. Families should have their estate or succession plan reviewed by a competent attorney on a regular basis or whenever there is a major change in the law.

The University of Illinois Tax School and Farm Credit are holding an estate and succession planning conference, *Protecting the Family Farm Legacy*, in Normal, Illinois, on June 24, 2013. If you want to learn more about dealing with both farming and nonfarming heirs, selection of the best entity for a succession plan, financing your retirement, understanding estate terminology and various types of trusts, you are encouraged to attend this upcoming conference. Details are available at: [http://www.taxschool.illinois.edu/legacy](http://www.taxschool.illinois.edu/legacy)

**AG RISK & FARM MANAGEMENT LIBRARY**

The Ag Risk & Farm Management Library [http://agrisk.umn.edu/](http://agrisk.umn.edu/) organizes thousands of materials to help agricultural producers and professionals quickly find the information you need on risk management, marketing, financial management and more.

*Source: Center for farm Financial Management and the RMA*

**MALATHION**

The insecticide Malathion is undergoing a review at EPA, and USDA is continuing to seek feedback on usage and needs from stakeholders (growers, extension personnel, research scientists, pesticide regulators, independent crop advisors, R&D/sales specialists, pesticide retailers, etc.). If you did not respond to an earlier request for input (deadline was May 12), you can still offer your insights via an anonymous on-line survey, available at [https://vce.qualtrics.com/SE/?SID=SV_aVl0yHawmH1Gppj](https://vce.qualtrics.com/SE/?SID=SV_aVl0yHawmH1Gppj)

The deadline for responding to the survey is June 26, 2013.

*Source: Dr. Amy Brown, Pesticide Education & Assessment, UME*

**SPRING PLANTS THAT ARE POISONOUS TO HORSES, DOGS AND BARN CATS**

Did you know that Tulip, hyacinth and daffodil bulbs can damage a dog’s mouth and esophagus, leading to drooling, vomiting, severe diarrhea and even abnormal heart rhythms? Asiatic and Japanese lilies can cause severe kidney failure in cats. Just one or two leaves can kill them. Be sure to keep bulbs out of reach before planting them.

- **Rhododendron** - vomiting, diarrhea, hypersalivation, weakness, coma, hypotension, CNS depression, cardiovascular collapse and death.
- **Azalea** - vomiting, diarrhea, hypersalivation, weakness, coma, hypotension, CNS depression, cardiovascular collapse and death.
- **Crocus** - excessive salivation, abdominal pain, diarrhea, vomiting, gastrointestinal disorders, lack of appetite, tremors, convulsions, seizures.
- **Gladiola** - popularly used in floral arrangements - the corm (bulb) is most toxic to dogs and cats - salivation, vomiting, drooling, lethargy, and diarrhea.
- **Hosta** - the plant is toxic to both dogs and cats - vomiting, diarrhea, depression.
• Morning Glory - can cause hallucinations, gastrointestinal upset, agitation, tremors, disorientation, ataxia, anorexia.
• Oleander is pretty and poisonous – can severely affect cats, dogs, and even horses. All parts contain a highly toxic cardiac glycoside and can cause a number of problems - colic, diarrhea (possibly bloody), sweating, incoordination, shallow/difficult breathing, muscle tremors, recumbence, and possibly death from cardiac failure.
• Ivy (California, Branching, Glacier, Needlepoint, Sweetheart, English Ivy) - Ivy foliage is more toxic than its berries - vomiting, abdominal pain, hypersalivation, diarrhea.
• Lilies - highly toxic to cats, even when very small portions are ingested. Many types of lily (Tiger, Asian, Japanese Show, Easter, Stargazer, and Casa Blanca) can cause kidney failure in cats. Curiously, lilies are not toxic to dogs - kidney failure.
• Sago Palm - popular landscaping plant. They are apparently very tasty to animals, and unfortunately highly toxic, all parts poisonous, but especially the seeds - vomiting, melena, icterus, increased thirst, hemorrhagic gastroenteritis, bruising, coagulopathy, liver damage, liver failure, death.
• Tomato Plant - although it won’t prove lethal for your pet, they can provide a good dose of discomfort. - hypersalivation, inappetence, severe gastrointestinal upset, diarrhea, drowsiness, central nervous system depression, confusion, behavioral change, weakness, dilated pupils, slow heart rate.
• Tulip/Narcissus - bulb of the tulip and narcissus plants have the highest concentration of toxins. This means: if you have a dog that digs, be cautious - intense gastrointestinal irritation, drooling, loss of appetite, depression of the central nervous system, convulsions and cardiac abnormalities.
• Lilly-of-the-Valley - excessive salivation, watery eyes, sweating, abdominal pain, weakness, convulsions and death. This plant is largely an ornamental plant, but may grow wild near old home sites. The plant is highly toxic to all animals.
• Yew - The bark and leaves of this very popular evergreen provided the basis for the cancer-treatment drug paclitaxel, but general ingestion of any part of the tree (except the flesh of the berry) can be very dangerous to animals. Horses have an especially low tolerance to yew - central nervous system effects such as trembling, incoordination, and difficulty breathing, can cause significant gastrointestinal irritation and cardiac failure, which can result in death.

In conclusion, when landscaping the stable area you may be better off to just plant grass: and plant the ornamental plants around your home. But, in doing so, watch the pets and children. To help make sure you know what is toxic to your horses and pets, here are several references with very long list of plants that can cause harm:

• http://www.aspca.org/Pet-care/poison-control/plant-list-horses.aspx
• http://www.nujournal.com/page/blogs.detail/display/177/These-Plants-are-Toxic-or-Lethal-to-Pets---.html
• http://www.esc.rutgers.edu/ask_expert/ate_pp.htm
• http://www.ansci.cornell.edu/plants/php/plants.php?action=display&ispecies=horses

Source: Ann Swinker, PSU Extension Equine Specialist, aswinker@gmail.com
Spring rains have helped tall fescue pastures turn green. However, during foaling season, fescue pastures can create problems for pregnant mares.

Tall fescue (TF) is a grass which grows on millions of acres of land in the USA. Many horses graze fescue pastures or are fed fescue hay each year. Many of these TF pastures contain fescue that is infected with an endophyte fungus that can be toxic to horses. When the horse ingests the grass or hay, it is steadily ingesting alkaloids produced by the endophyte fungus.

Horse owners might not realize that there are some significant health risks associated with broodmares and young horses eating endophyte fungus-infected (EI) tall fescue pasture or hay. Both the mare and foal can be affected by these toxic alkaloids. Some health problems associated with fescue toxicity include:

- Prolonged gestation in mares;
- Dystocia (foaling difficulty);
- Decreased to no colostrum or milk production; and
- Decreased growth rates in weanlings and yearlings, if forage is not supplemented with grain.

Some of these problems can be minimized with careful management of both horses and pastures. Follow these management tips from the American Association of Equine Practitioners to reduce the risks of health problems caused by EI tall fescue:

- Have your pasture tested to determine the level of infection;
- Mow fields prior to the development of seed heads, which contain the highest levels of toxins in the plant;
- Remove horses from EI fescue pastures in conditions of extreme heat and drought;
- Remove broodmares from EI fescue pastures 30 days prior to breeding and a minimum of 60 to 90 days prior to foaling;
- Keep accurate records of breeding and anticipated foaling dates;
- Notify your veterinarian for initiation of drug therapy if your mare has been grazing EI fescue prior to foaling;
- Monitor the mare closely during late pregnancy;
- Contact your veterinarian if impending signs of birth, including udder development, relaxation of vulva, and muscles around the tailhead fail to develop within the expected timeframe;
- Attend the birth. If mare fails to show signs of normal birth progression, contact your veterinarian immediately; and
- Keep mares and foals off EI fescue until after weaning to prevent poor milk production.

Converting EI fescue to endophyte-free pasture is a challenging task. Changing to endophyte-free fescue might not be the most practical idea in some cases, because the endophyte increases the forage's hardiness and promotes growth on marginal soils. If replanting a pasture, it is extremely important that all infected plants and seeds be destroyed prior to sowing.
Another option is to diversify a pasture with other forages. This helps reduce fescue toxicity by diluting the concentration of infected fescue. Discuss the best methods for eliminating stands of infected fescue with an agronomist or toxicologist.

A video on fescue toxicity is available at [http://www.youtube.com/watch?v=Blowykvh-34&feature=youtu.be](http://www.youtube.com/watch?v=Blowykvh-34&feature=youtu.be)

Source: The Horse, May 19, 2013 • Article #31905

**I HAVE BUTTERCUP IN MY PASTURE. HOW DO I GET RID OF IT?**

A number of buttercup species (*Ranunculus* sp.) are quite visible in many pastures this time of year. This genus includes about 600 species. They are mostly herbaceous perennials with bright yellow or white flowers, but some are annual or biennial. Buttercups are poisonous to livestock, but are generally left uneaten because of their acrid taste.

Buttercups in pasture are generally a symptom of overgrazing and in general not enough attention paid to pasture management. Due to the poisonous nature of this weed and its ability to cause harm to humans the physical removal of this weed should be avoided unless appropriate PPE is available in the form of gloves and goggles. The tiny seeds are easily dislodged and manual or mechanical control or removal will facilitate weed seed spread unless the weed is not in a reproductive state which is mainly over the winter period. Due to the requirement for high soil moisture levels, targeting this weed during time of drought may assist in its control.

You can control or reduce the buttercups with several herbicides, but they will return the next season if additional management is not included (rotational grazing, fertility and pH, drainage, overseeding, etc.). If you are willing to use an herbicide, when is the best time is to control buttercups in pasture? For both annuals and perennials, trying to control or suppress them prior to seed production in early summer would be helpful. However, as it is for most perennials, a well-timed late summer application may be most effective.

**Chemicals (per acre): Treatment and Rate (2,4D rate based on 3.8 lb/gallon formulation)**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Rate</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>2, 4-D</td>
<td>1.0 to 1.5 qt</td>
<td>Good</td>
</tr>
<tr>
<td>Dicamba (Banvel or Clarity)</td>
<td>2.0 pt</td>
<td>Fair to Good</td>
</tr>
<tr>
<td>2, 4-D + dicamba</td>
<td>1.0 to 1.5 qt + 1.0 pt</td>
<td>Good</td>
</tr>
<tr>
<td>Overdrive</td>
<td>8.0 oz</td>
<td>Fair</td>
</tr>
<tr>
<td>MCPA</td>
<td>1.0 pt</td>
<td>Fair</td>
</tr>
<tr>
<td>Methsulfuron</td>
<td>0.1 to 0.2 oz</td>
<td>Fair to Good</td>
</tr>
<tr>
<td>Crossbow</td>
<td>1.0 to 2.0 qt</td>
<td>Fair to Good</td>
</tr>
<tr>
<td>PastureGard HL</td>
<td>0.75 to 1.0 pt</td>
<td>Fair</td>
</tr>
<tr>
<td>Remedy</td>
<td>2.0 to 4.0 pt</td>
<td>Fair</td>
</tr>
</tbody>
</table>

MARYLAND POTATO LATE BLIGHT ADVISORY

Late blight forecasts are being generated for eight locations across the state based on the programs Blightcast and Simcast. A preventative late blight fungicide application such as mancozeb or chlorothalonil is recommended once 18 Disease Severity Values (DSVs) accumulate from 50% crop emergence. A 50% emergence date of May 1 was estimated for Dorchester Co., Clinton, Owings, Severn, Mechanicsville, and White Marsh. A 50% emergence date of May 5 was estimated for Germantown, and May 10 for Oakland. **All locations have reached the threshold for the initial fungicide spray.** If no protectant has been applied, one should be applied now. Once the first fungicide is applied, subsequent late blight sprays are based on the Simcast program. This program requires information on specific fungicide applications in a field. Therefore, I am reporting the Simcast spray interval as a guideline only. It is based on the assumption that a susceptible cultivar is being grown and that a protectant such as chlorothalonil is being applied whenever DSV’s indicate that another application is warranted.

Currently there are no confirmed reports of late blight on either tomato or potato outside of Florida. However, there is one **unconfirmed** report of a tomato greenhouse outbreak in Berkeley Springs, West Virginia. The potato crop should continue to be protected with a preventative application of mancozeb or chlorothalonil. In addition, tomatoes in the proximity of the potential outbreak area should also be protected. Growers in the area near Berkeley Springs should increase the scouting frequency of fields.

### Late Blight Disease Severity Value (DSV) Report

<table>
<thead>
<tr>
<th>Location</th>
<th>DSV</th>
<th>Simcast spray interval recommendation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorchester County</td>
<td>29</td>
<td>7-day</td>
</tr>
<tr>
<td>Germantown</td>
<td>37</td>
<td>5-day</td>
</tr>
<tr>
<td>Clinton</td>
<td>37</td>
<td>5-day</td>
</tr>
<tr>
<td>Owings</td>
<td>31</td>
<td>10-day</td>
</tr>
<tr>
<td>Severn</td>
<td>37</td>
<td>5-day</td>
</tr>
<tr>
<td>White Marsh</td>
<td>20</td>
<td>8-day</td>
</tr>
<tr>
<td>Mechanicsville</td>
<td>31</td>
<td>10-day</td>
</tr>
<tr>
<td>Oakland</td>
<td>14</td>
<td>10-day</td>
</tr>
</tbody>
</table>

*Spray interval recommendation is based on production of a susceptible cultivar and application of a protectant fungicide such as chlorothalonil.

Growers opting not to use the forecast system should put the first late blight fungicide application on when the plants are 6 inches tall, and repeat every 7 days. There are numerous fungicides now labeled for late blight control. See the 2013 Commercial Vegetable Production Recommendations, Maryland [http://extension.umd.edu/mdvegetables/2013-commercial-vegetable-production-recommendations](http://extension.umd.edu/mdvegetables/2013-commercial-vegetable-production-recommendations).

Source: Dr. Kathyne Everts, University of Maryland Extension, May 28, 2013
Be aware of the danger posed by many common household chemicals and make sure they are kept safely away from children and pets. Although drugs, caustic chemicals such as drain cleaner, and poisons such as insect sprays are commonly of most concern to parents and pet owners, other materials are also dangerous and may be stored in less secure areas.

Consumers will soon be stocking up on lawn and garden chemicals for spring. Outdoor chemicals are sometimes stored in locations that are out of sight of adults, but those locations, such as barns and sheds, may be appealing to curious children. Dangerous substances in those areas should also be secured.

A pesticide is any bait, liquid, powder or spray used to kill a pest. Commonly used pesticides include insecticides, herbicides (weed killers) and rodenticides.

Product labels are the key to safely storing, handling and disposing of chemicals. Consumers are urged to read and follow all label instructions and to adhere to the following general rules:

- Store products out of reach of children and pets. Keep all pesticides and harmful household products locked in a cabinet, a utility area with lots of ventilation or air flow, and/or in a garden shed. Child-proof safety latches may also be installed on cabinets and can be purchased at your local hardware store.

- Store flammable products outside your living area and far away from places where they could catch fire. Keep flammable products away from portable heaters, electric baseboard heaters, around furnaces and outdoor grills.

- Never store pesticides or other household products in cabinets where food is stored, or near food intended for people or animals. Never store pesticides where you keep medicines.

- Always store household products in their original containers so that you can read the label for directions.

- Never transfer pesticides or other household products to other containers that children may associate with food or drink.

- Teach children that “pesticides are poisons” and something they should not touch.

- Before applying pesticides (indoors or outdoors), always remove children and their toys as well as pets from the area and keep them away until the pesticide has dried or as long as is recommended by the label.

- If your use of a pesticide is interrupted (perhaps by a phone call), always make sure to leave the container out of the reach of children while you are gone.

The National Poison Center hotline is 1-800-222-1222. Call this number any time if you think someone has been exposed to toxic substances. If the person is not breathing, is unconscious, or having seizures, call 911 right away. For general information on poison control, visit [www.mdpoison.com](http://www.mdpoison.com).
The National Pesticide Information Center provides objective, science-based information about pesticides and pesticide-related topics to enable people to make informed decisions about pesticides and their use. Call 1-800-858-7378 or visit npic.orst.edu.

Pesticides, to be effective, are toxic to plants or animals and vary in the range of toxicity to humans. The degree of hazard to humans or pets can be reduced if pesticides are applied according to label directions and if the appropriate precautions are followed by the applicator and the customer. Therefore, selecting a pest control service is just as important as selecting any other professional service. To help protect consumers and ensure they are getting the service they paid for, MDA reminds consumers to deal only with a MDA-licensed firm.

For general information on pesticides, contact MDA’s Pesticide Regulation Section at 410-841-5710.

**EASTERN SHORE HOLSTEIN FIELD DAY**

Eastern Shore Holstein Field Day - Monday, July 15 10:00 a.m. (not July 16 as listed in earlier document)

*Source: Gail P. Yeiser*


Yours for better farming from your
Carroll County Agriculture Extension Educators,

Michael R. Bell               Bryan R. Butler, Sr.               Steve Allgeier
Extension Agent                Extension Agent                Extension Educator
Agriculture & Natural Resources Commercial Horticulture/ Home Horticulture/ Master Gardener Coordinator
mbell@umd.edu                mbutlers@umd.edu                hortman@umd.edu

*If you would like to be removed from our mailing list, please call: 410-386-2760 or 1-888-326-9645.*

If you have a disability that requires special assistance for your participation in a program please contact the Carroll County Extension Office at 410-386-2760, Fax: 410-876-0132, two weeks prior to the program.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by University of Maryland Extension is implied.
# Fall Soil Nitrate Test (FSNT)

## Introduction
Recent research has demonstrated that winter wheat and barley grain yields and economic return to fertilizer applications are not reliably improved by a fall nitrogen application when an adequate amount of nitrate already exists in the soil.

Regulations effective October 2012 require that farmers who plant wheat and barley for grain production must test for soil nitrate concentration before they may apply nitrogen in fall.

## What is it?
The Fall Soil Nitrate Test (FSNT) is a test that measures the concentration of nitrate in the soil as an indicator of whether a fall nitrogen application is needed at the time of planting wheat and barley.

## Where can samples be tested for nitrate?
Soils can be tested for nitrate concentration by most soil testing laboratories for a nominal fee. Many private-sector nutrient management consultants and nutrient management advisors in each University of Maryland Extension office are equipped to analyze soil samples for nitrate using a field-based meter.

## How should samples be collected?
1. Randomly collect 15 – 20 soil cores to a depth of 8 inches across each field or management unit. Avoid areas that are not representative of the entire field (rock outcrops, wet areas, etc.). Sampling within 2 weeks of intended planting date is recommended.
2. Put all of the soil cores in a clean plastic bucket, making sure to break up any clods. Mix the soil thoroughly.
3. Collect a sub-sample (approximately 1 cup) by scooping soil from several different locations in the bucket.
4. Spread soil in a thin layer on clean plastic or paper and dry quickly (over several hours) to prevent further microbial activity which could affect test results. Use of a fan is acceptable to hasten drying. However, never use a microwave or conventional oven to dry soil.
5. Place soil in a soil test bag or a plastic bag, labeling the bag with field name or number.
6. For nitrate analysis: a) send soil sample to a soil testing laboratory, b) deliver it to the private-sector nutrient management consultant who developed your nutrient management plan, or c) deliver it to the University of Maryland Extension office in your county for soil nitrate analysis.

If testing will be performed by a University of Maryland Extension nutrient management advisor, please coordinate with the advisor before delivering samples.

## Must a sample be collected from each wheat and barley field?
Under some circumstances, several fields may be aggregated into one management unit for sampling. If all the following are true, soils from up to three fields may be aggregated into one sample (management unit):

1. same cropping history for 5 years;
2. same fertility history (fertilizer and manure applications) for at least the past 5 years; and
3. similar complex of soil types.

Make sure to take soil cores from each field that will be included in the management unit.

## How is the test interpreted?
The interpretation of the numerical soil nitrate test results depends upon whether the soil extract is analyzed with precise laboratory equipment or field-based equipment like a Nitrachek™ meter. See the decision-making flowchart in Figure 1 to determine if fall nitrogen should be applied.
This publication, Fall Soil Nitrate Test (FSNT), Extension Brief (EBR-15) is a publication of the University of Maryland Extension, the Department of Plant Science and Landscape Architecture, and the Agricultural Nutrient Management Program in the Department of Environmental Science and Technology. The information presented has met UME peer review standards, including internal and external technical review. For more information on related publications and programs, visit: www.extension.umd.edu/anmp.

The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, veteran's information, political affiliation, or gender identity or expression.

For more information on this and other topics visit the University of Maryland Extension website at www.extension.umd.edu
# Maryland Department of Agriculture’s 2013 Pesticide Container Recycling Collection Dates

## Eastern Shore

<table>
<thead>
<tr>
<th>Location</th>
<th>Dates</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent County - Chestertown</td>
<td>June 14</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Nicholson Transfer</td>
<td>July 12</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Facility on August 9</td>
<td></td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Earl Nicholson Road</td>
<td>September 13</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Talbot County - Easton*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MidShore</td>
<td>June 21</td>
<td>8:00 - 12:00</td>
</tr>
<tr>
<td>Regional Solid</td>
<td>July 19</td>
<td>8:00 - 12:00</td>
</tr>
<tr>
<td>Waste Facility on Barker’s</td>
<td>August 16</td>
<td>8:00 - 12:00</td>
</tr>
<tr>
<td>Landing Road</td>
<td>September 20</td>
<td>8:00 - 12:00</td>
</tr>
</tbody>
</table>

## Central Maryland

<table>
<thead>
<tr>
<th>Location</th>
<th>Dates</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harford County - Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scarborough Landfill</td>
<td>June 7</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>3241 Scarborough Road</td>
<td>August 2</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Road</td>
<td>September 6</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Harford County - White Hall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Mill of Black Horse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4551 Norrisville Road</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Western Maryland

<table>
<thead>
<tr>
<th>Location</th>
<th>Dates</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frederick County - Frederick**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frederick County Landfill</td>
<td>June 25</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>Landfill</td>
<td>July 23</td>
<td>9:00 - 3:00</td>
</tr>
<tr>
<td>9031 Reich’s Ford Road</td>
<td>September 24</td>
<td>9:00 - 3:00</td>
</tr>
</tbody>
</table>

## Inspection Checklist

- All containers must be made from high density polyethylene (HDPE).
- The container must have held an EPA-registered pesticide or adjuvant, crop oil, etc.
- Any size container will be accepted. All containers over 30 gallons must be cut prior to recycling (contact MDA for instructions).
- Pesticide containers must be properly rinsed (pressure-rinsed or triple-rinsed).
- Caps and other non-HDPE parts, such as metal handles and rubber linings, cannot be recycled.
- Stained containers are acceptable provided no material can be smeared or removed when touched by a rubber glove.
- Please remove lids and label booklets prior to recycling.

### Notes

- **Note** - Because of legal restraints, only residents from Caroline, Kent, Queen Anne’s and Talbot counties are able to use the collection site in Easton. Lower Shore residents must use the collection site in Salisbury.
The Maryland Department of Agriculture (MDA) is offering the empty plastic pesticide container recycling program in 2013.

Maryland’s pesticide container recycling program is a combined effort of state, county, and federal agencies and private industry working together to protect the environment. Rinsing and recycling empty pesticide containers will help to reduce the potential for contamination of ground water and the Chesapeake Bay while saving valuable landfill space.

A schedule of collection sites and dates is enclosed. **Triple-rinsed (or equivalent), clean, plastic, pesticide containers** will be collected on the scheduled days and times at these sites. Containers acceptable for recycling will be chipped and transported by the contractor, under contract with the Ag Container Recycling Council (ACRC), for processing at an approved recycling facility.

To ensure a successful program, each individual container will be inspected by MDA personnel and only **triple-rinsed (or equivalent), clean, pesticide containers** will be accepted. Any container that is not clean will be returned to the owner, who will be responsible for disposing of the container in a legal manner.

Additional information on the rinsing of empty pesticide containers and recycling program can be obtained from the following MDA publications: *Rinsing & Recycling Empty Pesticide Containers, and Pesticide Information Sheet No. 7 - Pesticide Container Recycling Program*. For further information, contact the Maryland Department of Agriculture, Pesticide Regulation Section at 410-841-5710 or visit our website at www.mda.maryland.gov.

To ensure a successful program, each individual container will be inspected by MDA personnel and only **triple-rinsed (or equivalent), clean, pesticide containers** will be accepted. Any container that is not clean will be returned to the owner, who will be responsible for disposing of the container in a legal manner.

Additional information on the rinsing of empty pesticide containers and recycling program can be obtained from the following MDA publications: *Rinsing & Recycling Empty Pesticide Containers, and Pesticide Information Sheet No. 7 - Pesticide Container Recycling Program*. For further information, contact the Maryland Department of Agriculture, Pesticide Regulation Section at 410-841-5710 or visit our website at www.mda.maryland.gov.

The Maryland Department of Agriculture, Pesticide Regulation Section would like to thank all of its private cooperators and participants for making this a successful and worthwhile program. We would like to especially thank the Ag Container Recycling Council (ACRC) and USAg Recycling, Inc. Without their assistance and dedication, this program would not be possible.