

# Weekly Pile for Week of July 29 2012

## Howdy Folks,

Included is the **Weekly Pile** of Information for the Week of July 29, 2012, Extension's Equine related educational information & announcements for Rockingham & Guilford Counties. To have something included in the **WeeklyPile**, please follow these simple guidelines.

- Information included needs to be educational in nature &/or directly related to Rockingham or Guilford Counties.
- provided information is a resource to the citizens of Rockingham/Guilford Counties.
- provided information does not require extra time or effort to be listed.
- Listings for Swap Shop will not list pricing details.
- Please E-mail information to me by Wednesday each Week.
- Please keep ads or events as short as possible – with NO FORMATTING, NO unnecessary Capitalization's, and NO ATTACHED DOCUMENTS.  
(If sent in that way, it may not be included)
- Please include contact information - Phone, Email and alike.
- PLEASE PUT WEEKLY PILE IN SUBJECT LINE when you send into me.
- The Weekly Pile is not for listings for Commercial type properties or products.

If I forgot to include anything in this email it was probably an oversight on my part, but please let me know!

If you have a question or ideas that you would like covered in the Weekly Pile, please let me know and I will try to include. As Always – I would like to hear your comments about the Weekly Pile or the Extension Horse Program in Rockingham or Guilford Counties! **I NEED YOUR FEEDBACK!**

Included in This Weeks Pile:

1. **1. Fall Planting & Reseeding**
2. **2. Grubs In Manure Applied Pasture**
3. **3. POISONOUS PLANTS**
4. **4. You Asked**
5. **5. A Guide to Composting Horse Manure**
6. **6. HEAT, HUMIDITY and HORSES**
7. **7. Colic Prevention Tips**
8. **8. Piedmont Horseman's Association**
9. **9. Weed Control in  
Blackberries/Grapes/Blueberries August 28**
10. **10. *Cooler Natural Horsemanship Schedule***
11. **11. Blind Horse Rescue Run at Bur-Mil Park -  
Saturday, September 29th**
12. **12. HAY DIRECTORY**

## 13. SWAP SHOP

## 14. Take A Load Off

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### 1. 1. Fall Planting & Reseeding

It is really hard to believe that August is here and the Fall planting dates for our pastures and hay fields are fast approaching. With that said there are things that need to be done to make sure your planting and reseeding efforts are successful. Below are some suggestions that I hope will do that.

- To get maximum use of available grass, utilize cross fencing. This will stretch out your forage and decrease wastage.
- Evaluate your current situation and consider overseeding or planting for fall & winter grazing with rye, ryegrass, etc. in late September. Small grains can provide grazing from December through May
- With the high price of fertilizer it is very important to take soil samples for fall plantings. Come by and pick up your free soil sample boxes and sheets. If you need help with these forms please ask. It is important that they are filled out correctly.
- Fertilize and lime cool season grasses. Apply lime to pastures with pH below 5.8., if proper ph is not maintained, fertilizer may not be utilized by the plant.
- Plant cool season grasses (fescue, orchardgrass, clovers, etc.) during the best recommended dates of August 25 – September 15 with possible dates as late as October 25.
- Mow or Graze down existing forage low before seeding. *Fescue seedlings are slow to develop and can be shaded out and overwhelmed by larger existing plants.*
- Select the forage that you will be able to manage.
- Follow proper seeding recommendations as far as seeding rate per acre and planting depth.
- Finish grazing warm season grasses before grazing cool season.

- Control weeds - herbicides can be applied to control troublesome winter and spring annual weeds after fescue seedlings have fully tillered. Seedling fescue plants are much more susceptible to weed competition than well-established fescue or orchardgrass.
- Be aware of potential of Nitrate & Prussic Acid poisoning from animals if grazing stunted, highly fertilized summer annuals.
- Keep good forage records.
- If going over pastures DRAG PASTURES TO BREAK UP/Spread MANURE PILES (This helps with fertility and flies).
- Practice or Utilize Grazing Management - Rotate/Clip pastures as needed. After grazing or haying leave 3 - 4" of forage growth. This has a huge impact on sugar reserves in the plant and root development.
- Be cautious of combustion - Hay Fires - Hay in round bales should not contain no more than 18% moisture and square bales no more than 20%.

Grazing Management - Established fescue can withstand heavy grazing during its peak production. In general, grazing should be started between 6-8 inches and maintain a 3-4 inch stubble as practical to achieve the best animal performance and persistence of the plant. Continuous grazing below 2 inches will reduce animal performance, slow the growth rate of cool season grasses and may result in stand thinning. During the peak spring growth period, take special care to reduce wasted forage and developing seed heads. Cross-fencing which will restrict acreage available to the animals and, in turn, allow the harvest of excess growth for hay can do this.

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## **2. Grubs In Manure Applied Pasture**

**S. Bambara, Extension Entomologist**

**General Information - Reports of white beetle grubs in pastures are not uncommon across the state. Most of these pastures have a history of applying organic fertilizers, especially poultry litter, dairy manure or sludge. However, the presence of grubs in a pasture does not automatically mean a problem. Identification of the grubs is important. Often, more than one species of grub is present at the same time. Detailed species identification can be difficult in some cases and is often determined by hair patterns on the tail section of**

**the grub (raster patterns). Problems sometimes arise later as the field is planted into corn or another crop. One point to remember is that in most cases these grubs are doing what we want, that is breaking down the manure and organic matter. There is a limit as to how much manure a field can handle, however.**

### **Green June Beetle Grubs- (*Cotinis nitida*)**

**If you have seen many adults, and have high organically fertilized pastures, you may be at risk for GJB damage. Green June beetle grubs feed on organic matter in the root zone. Most damage is thought to be a result of heavy tunnelling and dislodging of roots. Cattle and other grazing animals may uproot poorly anchored plants. Separation of roots with soil contact especially stresses the plants during periods of drought, resulting in brown and dying patches. The grubs of green June beetle are the only larvae that leave the soil and crawl along the surface on their backs. Holes with small earthen turrets about the diameter of a finger are sometimes evident in late spring. Adults are metallic green, about one inch long, and are low, slow, morning flyers, often making a dull buzz as they go. They have a one year life cycle.**

### **Manure Grubs- (*Aphodius* sp.)**

**These dung beetle grubs are in the genus *Aphodius* and are common in heavily manured fields. They are rarely responsible for stand loss since they mostly feed on the manure in the soil. The small grubs are about the size of a slightly flattened B-B with red heads. A University of Sydney study claims control of certain grubs in pasture using a strain of *Mettarrhizium* fungus, but there has been no such study in the U.S.**

### **Japanese Beetle Grubs- (*Popillia japonica*)**

Larvae hatch in mid-late summer and feed through the fall, then move lower in the soil as winter temperatures drop. The grubs move back toward the soil surface in the spring and feed on organic matter and root hairs. Too much root feeding can cause problems with water and mineral uptake especially during drought stress and on young plants. When feeding is completed, the grubs pupate, and adults emerge in early summer. Egg laying follows shortly after to complete the one year life cycle.

### **Chafer Grubs- (Cyclocephala sp.)**

Many chafers are in the genus *Cyclocephala* and may appear more similar to Japanese beetles in shape than the other scarab beetles. Adults tend to be more plainly colored. They are typically not as abundant nor considered as damaging as Japanese beetle grubs, by themselves. The grubs in this one year life cycle lack the zipper raster pattern.

### **White Grubs- (Phyllophaga sp.)**

May and June beetles belong to the genus *Phyllophaga*. There are several species and they may occur together. This group has the typical "zipper" raster pattern. This is the group often referred to as "true white grubs". Life cycles are typically three years. A.M. Dix & C.R. Carol showed that *Phyllophaga* beetles had a strong preference for buried corn stalks and fresh poultry manure over old manure and live corn roots. There is insufficient evidence of treatable damage to pasture by white grubs and there is no threshold.

### **Control**

There is little that can be done in pastures for most of these grubs. There are no soil insecticides labeled in pastures that would control grubs when in the soil. However, since green June beetle grubs come to the surface, soil surface applications of carbaryl

**(Sevin) can be useful in their case. Chemical treatment may be hard to justify, but if needed, is most effective in September. Timing may vary, so treat infested areas based on scouting. Be sure to use adequate water and observe the 14-day grazing interval. The best time of day to treat is in late afternoon when temperatures are above 70 degrees F.**

**GREEN JUNE BEETLE GRUBS -**

<http://www.ces.ncsu.edu/depts/ent/notes/forage/gjbnote02/note02.htm>

**JAPANESE BEETLE**

<http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/note44/note44.html>

**White Grubs in Turf**

<http://www.ces.ncsu.edu/depts/ent/notes/O&T/lawn/note67/note67.html>

**Biology and Control of the Green June Beetle**

<http://www.aces.edu/pubs/docs/A/ANR-0991/ANR-0991.pdf>

<http://www.aces.edu/pubs/docs/A/ANR-0991/>

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**3. POISONOUS PLANTS**

D. L. Ace, L. J. Hutchinson, Pennsylvania State U., University Park; G. F. W. Haenlein, U. of Delaware, Newark

(Modified and updated by J-M. Luginbuhl, August 11) MGP05-31

Factors contributing to plant poisoning are starvation, accidental eating and browsing habits of animals. Starvation is the most common reason. Most woodland or swampy-ground pastures contain many species of poisonous plants. These are usually eaten only when animals have nothing else to eat.

Animals accidentally eat certain plants as they graze. A notable example of this is water hemlock. This plant emerges in wet areas, which are the first to become green in early spring. Animals eager to eat the fresh young grass may accidentally bite off the crown of this plant with fatal results. Another type of accidental poisoning occurs when large amounts of cockle are present in wheat, which is fed as grain.

Some animals on good feed in a dry lot or excellent pasture become bored with the same regular diet. They may eat unpalatable weeds or ornamental plants growing along fences. Goats and cattle like to vary the best kind of diet with a little "browse". Many ornamental or wild shrubs may be consumed, not because they are palatable but because the animal craves variation in its diet.

The severity of poisoning is related to the quantity of material eaten, the specie of animal eating the plant, portion of the plant and condition of the plant eaten, level of ground moisture, general health of the animal prior to ingesting the substance and the age and size of the animal. Therefore some livestock can eat some of the bad plants and under several of the mentioned conditions, fail to show symptoms of injury or poisoning. At other times death may occur.

Scores of plants contain material toxic to animals if eaten in sufficient quantity. Some of the plants are well known, some quite rare, some are useful, others are valued ornamentals. They may be grouped by the type

of poison contained, the effect of their toxins or the part of the plant containing the poison. Some plants may contain several poisonous principles.

### Cyanogenetic Plants

These contain under certain conditions, prussic acid (hydrocyanic acid), a deadly poison which interferes with the oxygen-carrying ability of the blood. Death in these cases is usually rapid and with little outward symptoms. Members of the prunus family of plants, especially wild cherries, are dangerous. Peaches, plums, wild cherry, and other stone fruits belong to this group of plants. Wilting of the green leaves caused by frost, storm damage, or by cutting, changes a glucoside (glycoside) found in the leaves to hydrocyanic acid (HCN) and sugar. The sweet, wilted leaves are thus more attractive to animals than normal foliage. Hydrocyanic acid content varies widely, but under some conditions a few handfuls of leaves may be enough to kill a horse or cow. This type of poisoning should be suspected when sudden death of animals follows windstorms or early sharp frosts. These leaves apparently lose their poison after they have become dry; the limp, green or partially yellowed leaves are the most dangerous. Sudan grass and sorghums are also cyanogenetic plants. These plants are usually deadly when damaged or frozen. Aftermath sprouts following an early frost are particularly dangerous. Very little sudan grass poisoning occurs from animals trampling down plants and later eating them although this is often listed as dangerous. In dry weather, sudan grass is often pastured to the ground without ill effects. After Sudan grass has been repeatedly frozen and the plants are completely dead, it is safe but not very valuable for pasture.

Once frozen, sorghum, sorghum sudan hybrids, or their aftermath should never be pastured. As long as the plants show any green color they may be very poisonous. Both frosted sorghum and sudan grass can be best and most safely utilized by ensiling them for at least two weeks before

feeding. Normal ensilage fermentation safely eliminates the poisonous principle.

Common milkweed, a perennial that grows three or four feet high, has a heavy stem and leaves and is frequently found in pastures. The milky white sap is sticky and has a bitter taste but livestock eat the topmost, tender leaves if good forage isn't abundant. Remove plants by spading, pulling, cutting or plowing extensive areas and planting to cultivated crops for a year or two.

Horse nettle is a perennial plant, two-feet-high, with spiny stems and leaves, and smooth, orange-yellow berries. Fruits are more toxic than the foliage. It's a common plant in grasslands and fields and is a member of the nightshade family.

Black nightshade is an annual plant, two-feet high, with many branches. Leaves are variably smooth or hairy. The stems are angled in cross-section and sometimes spiny. Clusters of white flowers, one-fourth inch across, bloom in midsummer and are followed by small, black fruits. Both the foliage and green berries are toxic. The ripe berries are not poisonous. Black nightshade is widely distributed.

Mountain laurels and rhododendrons are evergreen shrubs of the Appalachian Mountain region. Plants grow five-feet tall and have glossy green leaves. Flowers appear in clusters at the ends of branches. Livestock eat the leaves in early spring when little other foliage is available. Piedmont Azaleas are deciduous plants of the Piedmont. Several varieties of *Leucothea*, also called Fetterbush or Dog-hobble, are

evergreen or deciduous plants found in most regions of North Carolina. Weakness, nausea, salivation and vomiting are symptoms of poisoning. The preventative is to keep livestock out of areas where these plants are abundant.

### Plants Containing Deadly Alkaloids

Fortunately these plants are unpalatable for most wild and domestic animals. Water hemlock and poison hemlock are deadly. Poisoning rarely occurs except in early spring when young plants are accidentally eaten, but the roots, stems, leaves and flowers are always poisonous. Look for and learn to identify these plants in the summer when they are large and showy. The hemlocks are members of the carrot family and have showy, white, umbrella-like flower heads. The roots are the most poisonous parts of the plants. Cut the thick rootstocks lengthwise and you'll find air cavities separated by plate-like partitions of solid tissue. Drops of yellowish, aromatic, resin-like exudates containing the poisonous alkaloid appear at the cuts. Leaves and seeds contain little of the toxic substance and eaten in small quantities, either green or in hay, do little harm.

Poison hemlock needs dry land to grow and is often found in gardens as an ornamental plant. Flowers are often incorporated into large mixed flower sprays in rural churches and at social events.

Water hemlock - a perennial frequently found in wet, fertile soil - is a five-foot-tall plant with thick rootstocks, doubly compound leaves (fernlike) and small white flowers in umbrella-like clusters.

Water hemlock starts growth in early spring. Its green foliage may show up before most other plants leaf out. Livestock tug at the tender leaves and pull roots from the soil which are still soft from late winter rains. The combinations of foliage and roots in considerable quantity can be fatal. As a preventative, pull water hemlock plants from the soil during the summer when they can readily be found and destroy them. Plants usually are not numerous in an area.

Poison hemlock is a hollow-stemmed biennial, four-feet high, with double compound leaves resembling parsley and a large, white taproot like parsnip, Flowers are showy, umbrella-like clusters and appear in late summer. The poison is a volatile alkaloid, coniine, found in the foliage all season and in the seeds in late summer. Most livestock poisoning comes in the spring from eating fresh foliage.

Mayapple, bloodroot, pokeweed, nightshade and hellebore are other alkaloid-containing plants. They are rarely eaten except when animals are starving for better feed. Deaths from alkaloid-containing plants usually result from severe digestive disturbances, pain and nervous symptoms. Animals usually die in convulsions.

### Plants That Are Photodynamic

This means photo-sensitive animals get a reaction. Conditions necessary for a reaction to occur are: 1) the animals must have white areas of skin (unpigmented); 2) the animals must eat a sufficient quantity of the plants; and 3) the animals must be exposed to bright sun. In typical cases, an animal suddenly becomes sore on the white areas of their bodies. Whole areas of white skin may raise up and slough off. White goats may become severely affected and die from this condition.

Some common plants, which cause photosensitization, are rape, alsike clover, buckwheat, lantana, St. John's wort, and ornamental hypericums. Both St. John's wort and ornamental hypericums have showy, golden-yellow flowers. Animals do not readily eat them. White goats frequently become badly "sunburned" when they are on rape pasture in bright, sunny weather with little or no shade. Alsike clover or other legumes may produce these symptoms in dairy goats under the above conditions.

### Plants That Produce Mechanical Injury

A number of plants may have a spiny covering, long beards, fine hairs and when eaten may cause mechanical injuries or form hairballs in the stomach and intestines. Sand bur, downy brome grass, squirrel-tail grass, poverty grass, mesquite, and cocklebur are some of the offending plants.

### Some Other Poisonous Plants

Comparatively few plants containing poisons grow in areas usually used as pastures.

Bracken fern is very common in wooded areas and unimproved pastures. Most animals will not eat bracken fern if there is adequate pasture or other feed. In ruminants, such as goats, bracken fern must be consumed over a period of several weeks before toxicity signs develop. Affected animals are listless, show weight loss and may exhibit small hemorrhages on the mucous membranes. They may die from internal hemorrhages.

Buttercups contain an acrid, volatile alkaloid-amenenol, strong enough to blister the skin and cause inflammation of the intestinal tract. Cattle and goats poisoned by buttercups produce bitter milk and a reddish color. The toxic material volatilizes and is lost when buttercups are dried as in hay. A heavy growth of buttercup is an indication of low soil fertility. Have the soil analyzed and apply ground lime and fertilizers as their need is shown. The increased grass growth soon crowds out buttercups.

Poison ivy is widespread over most of the United States. It's a shrub or vine with woody stems that climb by attaching aerial rootlets to fences, walls, trees, etc. Leaves have three leaflets, glossy green and smooth at the edges.

Inflammation of the skin from contact with the plants is an affliction of goat keepers more frequently than of goats. The infection can become serious and may need medical attention.

Several ornamental plants that are green outdoors or indoors are highly toxic. Goats should not be fed clippings from ornamental plants. Common poisonous ornamentals are yew, delphinium, oleander, larkspur and lily-of-thevalley. Goats should not be allowed access to these plants.

A Listing of Some Plants Known to Cause Problems When Eaten by Livestock

Plants Poisonous to Livestock and Pets in North Carolina, Bulletin No. 414 (revised), by James W. Hardin and Cecil F. Brownie. <http://ceres.cals.ncsu.edu/wetland/poisonousplants/>

Poisonous Plants of North

Carolina <http://www.ces.ncsu.edu/depts/hort/consumer/poison/polson.htm>

Cornell University Poisonous Plants Informational

Database <http://www.ansci.comell.edu/plants/>

Poisonous Plants of the Southern United States <http://www.caf.wvu.edu/-forage/library/polsonous/content.htm>

Plants Poisonous to Livestock in the Western States, USDA Information Bulletin No. 415.

Poisonous Plants of Pennsylvania, Bulletin No. 53, PA Department of Agriculture).

Cyanogenetic Plants (*Glucosides - Glycosides*)

Arrow grass, Black Locust, Blue Cohosh, Broomcarn, Buckeye (Horse chestnut), Cherry, Choke Cherry, Corn Cockle, Dogbane, Elderberry, Hemp, Horse Nettle, Indian Hemp, Ivy, Johnsongrass, Kafir, Laurel, Leucothoe, Lily of the Valley, Maleberry, Marijuana, Milkweeds, Milo, Nightshade, Oleander, Rhododendron, Sevenbark, Silver, Sneezewood,

Sorghum, Stagger brush, Sudan grass, Velvet grass, White snakeroot, Wild Black Cherry, Wild Hydrangea.

### Alkaloid Containing Plants

Aconite, Allspice, Black Snake Root, Bloodroot, Blue Cohosh, Boxwood, Celandine, Common Poppy, Crotalaria, Crow Poison, Death Camas, Dicentra, False Hellebore, False Jessamine, Fume wort, Hellebore, Hemp, Horse Nettle, Indian Hemp, Indian poke, Jimson weed, Larkspur, Lobelia, Lupines, Marijuana,

Monkshood, Moonseed, Night shade, Pink Death, Camas, Poison Darnel, Poison Hemlock, Rattieweed, Rock Poppy, Spider Lily, Spotted cowbane, Spotted Water Hemlock, Stagger grass, Staggerweed, Sweet Shrub, Thorn Apple, Virebellis, Wild Parsnip, Wolfs-bane, Yellow Jessamine.

### Volatile or Essential Oils as Poisonous Principle

Baneberry, Buttercups, Crowfoot, Ground Ivy, Lobelia, Snakeberry, Spurge, White Cohish.

### Saponin-Containing Plants

Bagpod, Coffee weed, Purple sesban, Rattlebox, Soapwort.

### Photosensitizing Plants

Buckwheat, Goat weed, Klamath weed, Lantana, Rape, St. John's Wort.

## Plants That Cause Mechanical Injury

Cocklebur, Downy Brome grass, Sand Bur, Squirrel tail grass.

Tannin (Tannic Acid) as Poisonous Principle Oaks, Black locust.

Poisonous Principle Not Exactly Known Inkberry, Poke weed.

## Plants & Weeds Toxic to Horses

<http://polk.ces.ncsu.edu/PlantsWeedsToxicToHorses/>

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### 4. You Asked:

#### What part of a black walnut tree is toxic to horses?

I am fencing in an area near my barn to make a stone dust paddock for my horses. This is where they will be fed and fenced in when the field is too muddy for turnout. There is a very large black walnut tree about 15 feet away from the fence line with branches hanging over where the paddock will be. I am aware that this tree can be very toxic but have read some conflicting information as to whether the tree should be removed or not. Some information states that it is better to leave the tree intact and just clean up the

walnuts and branches when they fall, because to cut it down will create sawdust which is far more dangerous. It is a very large tree and will be difficult to remove completely. Would it be best to just remove the branches that hang over the paddock?

The bark and wood of the black walnut tree contain the toxin juglone, which has been thought to cause edema of the lower legs and even laminitis. Since your horses will be in a drylot paddock, they are more likely to "sample" anything they can get their teeth on. I would strongly suggest trimming the branches that overhang the paddock back at least 10 feet from the paddock. You could even contact a woodworker or cabinetry shop to see if they might be interested in buying the trimmed wood if the branches are really large because black walnut is prized for wood working. Do watch for leaves (though they do not seem to be as toxic) that might blow into the paddock in the fall. The sawdust from the trimming should remain on the outside of the fence and therefore will not be an issue. Another safeguard will be to feed the horses free choice hay in the paddock in feeders that are well away from the tree.

This answer was written by Sarah Ralston, VMD, Ph.D., dACVN, Rutgers University, Equine Science Center.

## Are Holly trees (berries, leaves, stems, etc.) poisonous to horses?

It does appear that Holly is moderately toxic to horses. Some of the symptoms would include digestive upset, or colic, more severely leading to tremors or seizures. The toxic parts of the plant include but are not limited to the berries. I would recommend not planting Holly trees where horses can gain access to them. Most horses will not eat trees if given a choice of other fresh hay or forage; however, some horses can acquire a taste for anything. Most toxic plants are unpalatable and give off a bitter taste and/or smell.

Answer provided by Carey Williams, Ph.D., Rutgers Cooperative Extension.

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## 5. A Guide to Composting Horse Manure

Jessica Paige, WSU Cooperative Extension

If you've been stockpiling your manure in a single pile for as long as you can remember, you may have found that if you dig into the middle of the pile, you'll find something that resembles dirt more than it does manure. If this is the case, at least some of your manure has already gone through the decomposition, or composting, process. Manure that has been left uncovered in large, spread out piles will eventually compost. However, this version of composting often creates unpleasant odors because there is not enough air reaching the inside of the pile. These piles also rarely reach high enough temperatures to kill parasites, fly larvae, weed seeds, and pathogens. The following information on composting will help you learn how to compost all of your manure, instead of what's just in the middle, speed up the process dramatically, and help heat manure up to temperatures that will kill parasites, fly larvae, weed seeds, and pathogens.

### The Benefits of Composting

#### Horse Health

**Reduce flies.** A well-managed compost pile will reach temperatures high enough to kill fly eggs and larvae in manure. By reducing the amount of uncomposted manure you have, you'll also reduce breeding grounds for flies.

**Kill parasites and pathogens.** The high temperatures achieved through composting also kill worms and pathogens (organisms such as bacteria, viruses, fungi, and protozoa that are capable of producing an infection or disease). This is especially important if you are spreading your manure in the same fields your horses graze in or on vegetable gardens.

#### Convenience and Aesthetics

**Reduce odors.** A well-managed compost pile will be free of the odors often

associated with an uncomposted manure pile.

**Cut your pile in half.** Composting reduces bulk and has 40 to 60 percent less volume and weight than uncomposted manure. That means you can reduce the amount of your manure pile by about 50 percent by composting!

**Kill weed seeds.** The high temperatures achieved through composting will kill most weed seeds.

**Improve marketability.** Compost is much more marketable than uncomposted manure and is often used by topsoil companies, landscapers, nurseries, and organic farmers. You may be able to sell your compost and actually make money out of that mountain of manure!

**Even out grazing patterns.** Horses grazing in pastures spread with composted manure (instead of fresh manure) are more likely to graze normally and are less likely to restrict grazing to areas with the thinnest application rates.

## Healthy Soil

**Improve aeration and water retention.** Adding compost to soil builds good soil structure and texture, increasing the amount of air that can infiltrate and the amount of water it can hold. Adding compost to heavy clay soil loosens the packed soil by opening up pore spaces that, like little tunnels, carry air and water down into the soil. Sandy soils, which tend to let water drain away too rapidly, are also improved with the addition of compost. The fine particles are united into larger ones that can hold a greater amount of water-100 pounds of compost can hold about 195 pounds of water! By increasing the soil's moisture-holding capacity, compost also helps control erosion that would otherwise wash topsoil away.

**Supply nutrients.** When fresh manure is spread on a field, about 50 percent of the nitrogen is in a highly soluble form and will be washed out by rain when it is spread on a pasture. In compost, however, 95 to 97 percent of nitrogen has been converted to a much more stable form and will be slowly released, allowing plants to use it over a longer period of time. Compost doles out nutrients slowly when plants are small and at greater rates as soil temperatures warm up and the major growth period begins. (Soil microorganisms that release the nutrients from compost work harder as temperatures increase.) The benefits of adding compost will also last for more than one season. Composted manure releases about 50 percent of its nutrients in the first season and a decreasing percentage in the following years. This means that with constant additions of compost, the reserves

of plant nutrients in the soil are being built up to the point where, for several seasons, little fertilizer of any kind may be needed.

Bacteria, earthworms, and pH. Compost also supports essential soil bacteria; feeds earthworms and allows them to multiply; and gradually changes soil pH levels that are either too low (acidic) or too high (alkaline).

## The Environment

Protect water quality. Because the composting process converts nitrogen into a less soluble form, it is less likely to be washed out of manure and into ground water and surface water. Excessive amounts of nitrate in drinking water can cause health problems such as blue baby syndrome and may be linked to cancer and birth defects. Recent samplings of wells in northern Whatcom County have found nitrate levels above the U.S. Environmental Protection Agency's safe drinking water standards.

Protect fish and shellfish. When rain falls on soil rich with compost, raindrops seep into it. When rain falls on packed soil rain runs off the surface, creating erosion and carrying soil particles to nearby waterways. Sediment can smother trout and salmon eggs and make water cloudy, making it more difficult for fish to find insects to eat. Raw manure also contains fecal coliform bacteria which is commonly used to measure contamination of water from human or animal waste. The coliform bacteria may not necessarily produce disease, but can indicate the presence of other bacteria that may cause infections, hepatitis, and other illnesses. When coliform bacteria is found in the water around shellfish growing areas, it often leads to shellfish bed closures. Composting kills most of these coliform bacteria as well as viruses and parasites that may be a concern to human health.

Conserve our natural resources. Using compost instead of chemical fertilizers can reduce our use of non-renewable resources like natural gas. Approximately two percent of the natural gas consumed in the United States goes into the manufacturing of nitrogen fertilizer.

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## *6. HEAT, HUMIDITY and HORSES*

*Dr. Frederick Harper, Extension Horse Specialist, Animal Science Department, University of Tennessee*

*What do horses and humans have in common in hot, humid weather? Both perspire to cool their bodies. So when you are hot, so is your horse. But how much does hot, humid weather affect the performance of your horse?*

*In hot, humid weather it is difficult not to perspire especially if one is working. Do you know that sweating also aids in regulating the horse's body temperature? Several research groups have studied the effect of high temperature and humidity on horses in laboratories where the climate could be controlled. So, what about the effects of hot weather on performance horses in the field?*

*Virginia Tech researchers addressed this question using 10 mature horses fed a typical*

*hay (alfalfa/timothy) and grain ration. The horses were stabled but turned-out for an hour of*

*exercise daily. They were kept in a fit condition for hunters/jumpers competition during the*

*study and were acclimated to the climate conditions they performed in. The horses were exercised for three weeks prior to being tested. The same test procedure was used to insure that the horses performed at the correct speed. Horses were tested in July in hot, humid conditions and again in mid-September in cooler, drier conditions. The horses were ridden in a ring for three minutes at a walk, trotted for four minutes (3.5 m/sec), slow-cantered for four minutes (4.5 m/sec) and fast-cantered for*

*four minutes (7.0 m/sec). A 10-minute recovery period followed the exercise. Horses were tested at 88 F with a relative humidity of 67 percent and again at 64 F with a relative humidity of 47 percent. The horses were in good health and at the same level of physical fitness in both exercise periods.*

*Heart rate increased with exercise intensity and decreased in the 10-minute recovery*

*period. Heart rate was higher at all speeds in the high heat, humidity group than the cooler,*

*drier group. Heart rate was higher at the end of the recovery period in the high heat, humidity*

*group than it was at rest before the test. The respiratory rate tended to be higher in high heat,*

*humidity horses vs. cooler, drier horses. Respiratory rate was greater in the high, humidity*

*horses during exercise and recovery. Rectal temperature was also higher in the high heat,*

*humidity horses and remained relative high in the recovery period.*

*Total plasma protein increased with exercise and decreased in recovery. Packed cell*

*volume was higher in the high, heat than in cooler, drier horses.*

*What does this tell us about performance horses in hot weather?*

*These data prove that high temperatures and humidities are a thermal burden on*

*performance horses, since these horses were at the same level of fitness and acclimated to the*

*different weather conditions of July and September.*

*The effects of hot weather can be even more severe on horses that are not adjusted to*

*the heat.*

*Horses must also be properly fit to perform and be acclimated to the weather. Or, the*

*effects of hot, humid weather could be more severe.*

*Research from Texas A & M University has recently shown that horses not acclimated*

*to hot, humid weather do not perform well. And they do not get rid of the heat produced during*

*performance as well as horses acclimated to hot, humid conditions.*

*Fat horses do not perform as well either, especially in hot, humid weather. They also*

*have more difficulty in cooling their bodies.*

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## 7. Colic Prevention Tips

[http://www.aaep.org/health\\_articles\\_view.php?id=191](http://www.aaep.org/health_articles_view.php?id=191)

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## 8. Piedmont Horseman's Association

Are you looking for a local open horse show association that is friendly and offers a variety of classes for all ages? Look no further...Piedmont Horseman's Association has been around for 41 years and still going strong! Whether you show halter, showmanship, English, Western Pleasure or Working Western; PHA has classes for you! Piedmont Horseman's Association (PHA) helps create a wholesome, family atmosphere in the great sport of Horse Showing; and for each member to exhibit his or her horse or pony in a sportsmanlike manner. There are many benefits of being a member of PHA; reduced entry fee at sanctioned shows, accumulate points for year end awards, recently APHA PAC approved and much more! Horse Show season is upon us and currently PHA has eight shows scheduled.

Our next show is August 4 at Jerome Davis's Ranch in Archdale, NC. This is a night show that starts at 4pm. Great high point awards will be handed out!! You can find all the details such as membership forms, class lists, calendar, etc on the PHA website at: <http://www.phasince1971.com/> PHA is also looking for class/show sponsors to make this the best year ever! Feel free to contact one of the officers from the website if you have any questions. We hope to see some new people at the Piedmont Horseman's Association shows!

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*9. Weed Control in Blackberries, Grapes and Blueberries to Increase Yields*

*Tuesday, August 28, 2012*

*6 pm*

*Rockingham County Agriculture Center*

*525 Hwy 65*

*Reidsville, NC 27320*

*Come learn how to control weeds in these small fruit crops!*

*Wayne Mitchem, Horticulture Researcher and Extension Associate, NCSU, will be doing the program on how control weeds to produce healthier plants and maximum fruit yields.*

*Please bring problem weed samples!*

*2 Hours of NC Pesticide Recertification Credit will be available in N, O, D, and X subclasses*

*Please Pre-register to Kathryn Holmes 342-8230*

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## ***10. Cooler Natural Horsemanship Schedule***

***August 17 – 19 - Weekend Getaway Clinic at Shangrila Guest Ranch  
Visit our Schedule Page for more info on this fun and affordable event!***

***Saturday, August 4th - Clinic Day  
Morning Session, 9:00am - 12:00pm  
Afternoon session, 5:00pm - 8:00pm  
\$100/person/per session.  
Auditors welcome: \$10***

***Sunday, August 5th - Trail Session  
9:00am - 12:00pm  
\$100/person***

***Group Sessions - 6:30pm - 8:30pm  
\$40/person, \$5 to audit***

***Wednesday August 15th  
Thursday August 23rd  
Tuesday September 4rd  
Wednesday September 12th  
Thursday September 20th***

***Saturday, September 29th - Clinic Day  
Morning Session, 9:00am - 12:00pm  
Afternoon session, 5:00pm - 8:00pm  
\$100/person/per session.  
Auditors welcome: \$10***

***Sunday, September 30th - Trail Session  
9:00am - 12:00pm  
\$100/person  
[www.CoolerHorsemanship.com](http://www.CoolerHorsemanship.com)***

*kate@coolerhorsemanship.com*

*843-304-3407*

*Fiore Farms*

*7600 Millbrook Road*

*Summerfield, NC 27358*

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**11. Blind Horse Rescue Run at Bur-Mil Park - Saturday, September 29th**

Flurry's Hope is having a Blind Horse Rescue Run at Bur-Mil Park in Greensboro on Saturday, September 29th starting at 8:30 am. Registration and information is available at [www.OnTheMarkSports.com](http://www.OnTheMarkSports.com). Come meet Eeyore, the donkey and other equine friends. Horse rides on site and Handmade Pottery available. Run Proceeds to benefit Flurry's Hope. Visit [www.FlurrysHope.com](http://www.FlurrysHope.com). 336-420-1105

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**12. HAY DIRECTORY - A Hay Directory is maintained by the North Carolina Cooperative Extension Service for the Rockingham County and Guilford County area. This directory is intended as a service to both hay producers and buyers in the area. If you are in need of hay or would like to be added (or removed) from this list please call me at 1-800-666-3625 or 342-8235 and let me know your name, address & phone #, type of hay, number of bales, (square or round bales) and weight per bale.**

**MANAGE YOUR PASTURES!**

**Please let me know if you have hay to sell!**

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### 13. SWAP SHOP

**- Pasture Board - NE Guilford \$150/mo. Good pasture, cross-fenced, run-in sheds, dressage arena. Brought into 8-stall barn once daily to feed your grain. Tack room, hot & cold wash, trails in area. Call Sandy 336-584-5617 or [larknspursandy@bellsouth.net](mailto:larknspursandy@bellsouth.net).**

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### 14. Take A Load Off –

I need your clean Jokes, so please send em to me! -

### INNOCENCE IS PRICELESS -

One Sunday morning, the pastor noticed little Alex standing in the foyer of the church staring up at a large plaque. It was covered with names and small American flags mounted on either side of it. The six-year old had been staring at the plaque for some time, so the pastor walked up, stood beside the little boy, and said quietly, 'Good morning Alex.'

'Good morning Pastor,' he replied, still focused on the plaque. 'Pastor, what is this?'

The pastor said, 'Well son, it's a memorial to all the young men and women who died in the service.'

Soberly, they just stood together, staring at the large plaque. Finally, little Alex's voice, barely audible and trembling with fear asked, 'Which service, the 8:30 or the 11:00?'

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**I always want to know what you think of the Weekly Pile, good or bad,**

**Especially if it has had ANY IMPACT on you. Let me hear from you!**

**\*\*\*\*\*I NEED YOUR IDEAS FOR ARTICLES In FUTURE Newsletters!\*\*\*\*\***

**I WANT TO HEAR FROM YOU!!!!!!!!!!!!!!!!!!!!**

**\*Please remember our Troops who are serving our Country (and there families) those who have come home with wounds and the families that paid the ultimate sacrifice. We owe everything to those who are and have served!**

**Have a Great SAFE Weekend!**

**Thank You!**

**Ben**

**North Carolina State University and North Carolina A&T State University**

**Is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, creed, national origin, religion, gender, age, or disability.**

Moreover, North Carolina State University and North Carolina A&T State University is open to people of all races and actively seeks to promote racial integration by recruiting and enrolling a larger number of black students. North Carolina State University and North Carolina A&T State University regards discrimination on the basis of sexual orientation to be inconsistent with its goal of providing a welcoming environment in which all its students, faculty, and staff may learn and work up to their full potential. The Universities values the benefits of cultural diversity and pluralism in the academic community and welcomes all men and women of good will without regard to sexual orientation.

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**<http://rockingham.ces.ncsu.edu/index.php?page=animalagriculture>**