Hey Folks,

Included is the Weekly Pile of Information for the Week of May 30, 2011, Extension's Equine related educational information & announcements for Rockingham & Guilford Counties. To have something included in the Weekly Pile, please follow these simple guidelines.

- Information included needs to be educational in nature &/or directly related to Rockingham or Guilford Counties.
- Please E-mail information to me by Wednesday each Week.
- Please keep ads or events as short as possible - with NO FORMATTING with 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 a like.
- PLEASE PUT WEEKLY PILE IN SUBJECT LINE when you send in to me.
- THERE ARE NO CONTINUAL RUNNING SPOTS - Ads must be sent in each week
- The Weekly Pile is not for listings for Commercial type properties or products.

If I forgot to include anything in this email it was a 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!

Included in This Weeks Pile:

1. WATER: The Essential Nutrient For Horses
2. Hydration and Mucous Membranes
3. Horse Vision
4. Colic in Horses
5. You Asked - Can I treat my manure pile with anything to help reduce the amount of flies at my barn?
1. WATER: The Essential Nutrient For Horses

Of the five basic nutrients: protein, energy, water, minerals, and vitamins, water is the most essential nutrient in the horses diet. It has been seen that horses deprived of water for 3 to 4 days will not consume feed. Even if feeds containing abundant levels of protein, energy, vitamins, and minerals and small amounts of moisture, are offered to water starved horses, they will be of no benefit. A minor reduction in water intake may cause dehydration which will cause decreased performance, shock and possibly death.

Water composes the majority of the horse's body and accounts for several very important functions including:
1. Regulation of body temperature
2. Aide in the transportation of nutrients
3. Necessary for waste removal
4. Aids in digestion, absorption, and utilization of nutrients

Under ideal conditions horses should have free access to water, comparable in quality to human drinking water. Water should be free of chemical contaminants, bacterial and protozoa and contain acceptable levels of trace minerals and heavy metals. The North Carolina Department of Agriculture, many health departments and various labs offer quality testing services.

Water intake levels very greatly from horse to horse. Normally a horse will consume one gallon of water per 100 pounds of body weight. Example: an 1,100 pound horse will
consume an average of 10-12 gallons of water daily. The water intake rate can be quite variable, dependent upon the dry matter content of the diet, the environmental temperature and production stage or activity.

**Estimated Water Intake For Horses**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gallons/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Working</td>
<td>4-8</td>
</tr>
<tr>
<td>Gestation</td>
<td>7-9</td>
</tr>
<tr>
<td>Peak Lactation</td>
<td>9-11</td>
</tr>
<tr>
<td>Medium Work</td>
<td>9-15</td>
</tr>
<tr>
<td>Heavy Work</td>
<td>12-15</td>
</tr>
</tbody>
</table>

**General Recommendations**

1. Always provide fresh, clean water free choice, except to hot horses immediately following exercise.
2. Monitor water intake daily.
3. Remove ice routinely during freezing conditions.
4. Increase the dry matter content of the diet prior to prolonged freezing periods.
5. Clean water buckets and water systems daily. Frequent cleaning of water buckets prevents horses from ingesting anything that may have fallen into them, such as feces. Cleaning also prevents algae or bacteria buildup on the walls of the bucket.
6. Water temperature should range between 45° to 65°F (7° to 18°C), because horses will be reluctant to drink water that is too hot or too cold.
7. Test water quality of new water sources.

2. **Hydration and Mucous Membranes**

Adequate water intake is essential to horse health – especially in performance horses and during extremely hot or cold weather. Horses can dehydrate quickly if they do not drink enough water. Dehydration can lead to serious problems, including colic. It can be a problem in winter as well in warmer seasons. If the water is too hot or too cold for the horse to drink comfortably, the horse can become dehydrated quickly.

There is an easy test that can be done to see if a horse is well-hydrated. The “skin fold test” is done by pinching a fold of skin on the horse’s neck, pulling it out and releasing it. Count how many seconds it takes for the skin to go back to its original position. One-half to one second is normal. If the skin remains in the “tented” position, the horse is dehydrated.

The mucous membranes of the horse’s gums and lips should be a healthy pink color and slightly moist. Mucous membranes that are a pale, white, yellow or deep purple color are indicators of a problem. The circulation of a horse can be tested by gently pressing the thumb against the horse’s gums, releasing the thumb and counting the
number of seconds it takes for the gums to go from white back to their original color. This is called "capillary refill" and should take one to two seconds.

+++

3. Horse Vision.
Ashley Griffin, University of Kentucky

Horses have very large eyes with very large pupils. The eyeballs are placed toward the side of the head, giving horses a wider field of vision. In contrast, dogs and coyotes have eyes placed toward the front of their heads, which narrows their total field of vision.

Horses (as well as some other animals such as sheep and cattle) have a much wider visual field than do dogs or coyotes. Horses can scan their entire surroundings with only slight head movement.

The horse uses only one eye--its monocular vision--to observe the width of its visual field. When a horse sees an object with monocular vision, it will tend to turn toward the object to better hear and also, with binocular vision, better see the object. Binocular vision--use of two eyes--results in better depth perception and a more concentrated field of vision. A brief visual shift sometimes occurs as the horse switches from monocular to binocular vision, which can cause an unexplained “spooking” of the horse.

The size of the pupil improves the ability of a horse to pick up movement. The large size provides the effect of a built-in wide-angle lens, which is further enhanced by the placement of the visual receptors in the retina. The total effect is better peripheral (side) vision. The horse can see movement well. However, it is believed that while the horse sees practically all the way around its body, the image is not as clearly defined as what humans see, especially within 4 feet.

In spite of a wide field of vision, there is a blind spot directly behind a horse. You should avoid approaching a horse from behind because your presence may not be easily detected, and it could startle the horse. Some horses may instinctively kick in this situation. When approaching a horse from the rear cannot be avoided, make a soothing noise to announce your presence. Do not sneak up on a horse from behind.

A question often asked is whether or not horses can see color. It was first thought that both horses and cattle were color blind. If horses can distinguish colors, it is unlikely that their ability to see color is equal to that of other species, such as humans.

+++
What is colic? Colic is a sign of abdominal discomfort and can be caused by many processes that occur in the equine gastrointestinal tract. Horses are unique because each will respond in their own fashion to levels of discomfort. The level of pain demonstrated by a horse can vary from mild signs such as pawing or looking at their side, to dramatic when they throw themselves to the ground. Most clinicians associate increased signs of pain with diseases that occur in the small intestine. Large intestinal problems tend to be more subtle in the level of pain and subsequent signs that are demonstrated. Obviously there is variation associated with each horse and the level of disease that they have.

Among the species of domestic livestock, the horse most commonly suffers from colic. Colic is a general term indicating abdominal pain. The anatomy of the horse's digestive tract, its digestive nature and the management practices imposed by man seem to contribute to its occurrence.

Colic may not be caused solely by diseases of the intestinal tract. In fact, infections elsewhere in the body, as in the urogenital or respiratory tract, as well as pregnancy may present symptoms of colic. A survey in 1986 by the Morris Animal Foundation reported that colic was the leading cause of death in horses and the number one health concern of horse owners.

The amount of money spent on the disease is impossible to totally assess, because both treatment costs and time lost are involved. In 1983 the equine insurance industry paid $16 million for claims directly attributable to colic. Therefore horse owners need to know the causes, clinical signs, diagnostic and treatment procedures and preventive measures to reduce colic's incidence.

Causes
Colic has many types and causes. Factors such as sudden changes in the weather, feeding (frequency, quantity or quality of feed), overexertion or chilling may lead to colic. Spasmodic colic is caused by severe contractions of the intestines. Intestinal obstruction or a twisted intestine create a very severe condition resulting in extreme pain. The possibility of an obstruction or twisted intestine should be diagnosed as early as possible, because it is potentially life threatening and requires surgery.

The most common cause of colic is internal parasites.
• Migrating strongyle larvae damage blood vessels in the intestines, decreasing blood supply which leads to necrosis, decreased motility and pain.
• Large numbers of roundworms can cause impaction or obstruction of the intestines.
• Administering deworming medicine (anthelminitics), particularly to horses overloaded with internal parasites, can cause colic. Colic symptoms do not always result from a disease of the digestive tract.

Symptoms also can arise from
Infections elsewhere in the body, or from infectious diseases like rabies, pleurisy and dermatitis.

Conditions affecting the locomotor system, like laminitis and other forms of lameness.

Certain conditions may lead to an intestinal obstruction, which will cause colic symptoms:

- Horses kept in sandy paddocks or overgrazed pastures are predisposed to suffer from "sand" colic. In this situation, ingested sand obstructs the intestine.
- Spoiled silage and enteritis can also obstruct the large intestine.
- An obstruction may also occur if the horse ingests a foreign object.

Diet can cause colic symptoms:

- Sudden changes in feed, (either type or quantity), or moldy feed can cause colic due to improper fermentation in the gut or an obstruction.
- A predominantly concentrate diet can lead to colic if an adequate supply of long stem roughage is not provided.
- Horses with bad eating habits (bolting, cribbing) are also prone to colic.
- Lack of water can also lead to colic symptoms and may even cause an impaction to occur. However, remember to avoid either feeding or allowing a "hot" horse after heavy exercise to drink heavily as doing so can not only lead to colic, but to other serious ailments, such as laminitis.

Clinical Signs

A horse with mild colic will paw the ground with its front feet, be restless, lie down and roll frequently and look at its abdomen. A horse with more severe colic will roll and may become cast and lie on its back to relieve intestinal pressure. Horses with very severe colic will throw themselves to the ground and roll violently. These horses can be dangerous to work with until properly sedated. Pulse and respiratory rates rise while temperature typically remains within a normal range. The absence of abdominal sounds is characteristic of a horse with colic.

Diagnosis

Get a thorough exam by a veterinarian to determine the colic's severity and treatment as soon as possible after the symptoms start. First observe the horse in its stall or paddock.

Note the following:

- general condition and behavior (calm, restless, alert, dull, apathetic);
- frequency of abdominal pain (none, intermittent or continuous);
- frequency of abdominal sounds (normal, increased, decreased or absent);
- abdominal size (normal, reduced, distended);
- nature of peripheral pulse (normal or weak);
- packed cell volume;
- capillary refill time (the length of time it takes for gums to return to normal color after pressure is applied);
- other signs (sweating, wounds, etc.);
- water intake,
• presence of and consistency and regularity of feces.

Further examination of the colic patient includes a measure of pulse and respiratory rates (normal resting pulse rate is 36 beats/minute and respiration rate is 8-16 breaths/minute), rectal palpation, and passing a stomach tube. The stomach tube should always be passed to rule out the possibility of stomach overload. Often the stomach tube acts as a treatment, since it can release fluids or gas from the stomach.

After these observations, the veterinarian can suggest a treatment depending on the type of colic. For example, mild, intermittent colic can usually be treated conservatively, while a horse with a twisted intestine (torsion) requires surgery.

Treatment
Traditionally, a horse with colic is walked to help relieve anxiety and to prevent rolling, which can lead to intestinal twisting. Walking may also help to restore normal activity in the intestine and allow the horse to defecate and/or relieve the buildup of pressure in the intestines. If 30 minutes pass and the symptoms either are unrelenting or increasing in severity, a veterinarian's assistance is necessary.

After an initial exam to determine the type and severity of the colic, treatment by a veterinarian may involve using analgesics (pain-relievers). Often the horse is given mineral oil (about 1 gallon) through the tube to lubricate the tract and to act as a laxative to help fecal matter move through the tract.

Evaluate the horse in the period following the initial treatment. Because of the possibility that the intestines may have an obstruction, check the horse at regular two hour intervals following the initial treatment. If the symptoms do not appear alleviated, an obstruction in the intestines should be considered, and surgery may be necessary.

Control
Preventing colic involves many parameters. Most important is proper management. Avoiding situations which predispose the horse to colic will undoubtedly reduce the incidence of colic.

Here are some practical steps to reduce chances of colic:
1. Do not overgraze pastures and paddocks.
2. Provide a clean, adequate and abundant source of fresh water daily.
3. Feed on a regular schedule from day to day.
4. Do not feed moldy or spoiled grain or hay.
5. Provide adequate long stem roughage in the diet.
6. Keep stalls and paddock areas free from foreign objects that the horse might ingest.
7. Put all horses on a regular, properly designed deworming program. This step is imperative.
In general, good, practical horse management along with good common sense can allow the horseman to avoid situations which may predispose horses to colic. If colic symptoms do arise, contact your veterinarian.

Impaction Colic
An impaction is a blockage of the intestinal tract with normal ingesta or with foreign material. Impaction with ingesta may be caused by anything that increases the coarseness of the ingesta, decreases the amount of fluid in the intestinal tract or interferes with normal intestinal motility. If the blockage is so complete as to prevent the passage of gas as well as ingesta, the condition is quite acute and very painful and may require rapid surgical treatment.
Foreign materials that may block the intestine includes such things as intestinal stones or enteroliths, sand, and rubber and nylon cords from tractor tire feeders or rubber fencing materials.

Spasmodic Colic
Spasmodic colic is due to muscular spasms of the intestinal tract. It is similar to simple indigestion in people. The pain may be severe, but is more commonly mild to moderate. Typically this is not a life-threatening form of colic. It may be associated with overexcitement, resulting in the secretion of hormones that interfere with the normal function of the digestive tract. It is the mildest and most common type of colic. It generally resolves with mild medical treatment.

Excessive Fermentation Colic
The microbial digestion in the horse’s digestive tract produces great quantities of gas and fluid. If this is produced more rapidly than it can be eliminated, painful distention of the stomach or intestine will occur.

Displacement Colic
In displacement colic, a portion of the intestine has become twisted or caught in an abnormal position. Strangulating displacements, such as volvulus-torsion (twists) of the large colon, can be rapidly fatal and require prompt diagnosis and treatment. In any case of displacement colic, blood flow is cut off from the affected part of the intestine and the tissue dies.

Incarceration Colic
In incarcerations, a loop of intestine has become entrapped within a normal or abnormal structure within the abdominal cavity. The most common example is a strangulating hernia, in which the intestine has become caught within a natural or unnatural opening. If the entrapped intestine becomes strangulated so that its blood supply is shut off, the incarceration is a surgical emergency.

5. You Asked - Can I treat my manure pile with anything to help reduce the amount of flies at my barn?
Your manure pile may be producing flies, depending on temperature, moisture content, and how long before it is spread. However, flies are likely to be coming from other sources, and spraying the manure pile alone may not produce the desired results. Breeding sites can be located by searching your premise for places where maggots are actively developing, including soiled bedding, feed debris, areas around waterers, etc. Once located, sources can be eliminated by scraping and spreading the manure, and by preventing manure accumulations from recurring. If stall "pickings" must be piled, then consider composting as an alternative to spraying. For maggot control, you will need to create a hot, actively composting pile, where temperatures are greater than 140 °F. Fresh manure will need to be mixed with another source of carbon, such as straw or sawdust. If space permits, create a new pile each week, and turn all piles weekly to maintain aerobic conditions.

6. Another Question
My horse is at a boarding barn. Her paddock is quite large and grassy, but extremely over-grazed. Someone told me I could get nitrogen fertilizer to put down and that would help. Would it, and is it safe for my mare to then be out there grazing every day? I know rotational grazing is ideal, but not possible.

By - Krishona Martinson, PhD, University of Minnesota

You are right, rotational grazing is the most efficient. However, there are a few things you can do to improve the conditions.

1) Dragging the paddock will help break up manure piles, dry out the manure, and distributes nutrients back to the pasture. You do not need a fancy drag, a pallet works just fine.

2) Mowing helps even out the pasture area, maintains vegetative growth, and helps to control weeds. Mowing pastures to a height of 4” three to four times a year will keep the grasses in a vegetative stage, a more desirable and palatable growth stage. Make sure to mowing weeds at or before flowering to prevent new seeds from entering the soil.

3) Before applying fertilizer, take a soil sample to determine if the pasture needs additional fertilizer. If it does, split the fertilizer in thirds and apply the fertilizer on major summer holidays (Memorial Day, 4th of July and Labor Day). Make sure you can no longer see the fertilizer pellets before you turn your horse back into the pasture to reduce the chance of accidental ingestion. Horses will most likely need to be taken off of the pasture area after fertilizing to ensure the pellets have dissolved into the ground (it's best to fertilizer prior to a rain event).

Finally, try to educate the barn owners on the importance of rotational grazing and resting the pasture. Allowing appropriate rest periods (approximately 30 days for every 1-2 weeks of grazing) can help reduce overgrazing and stress on desirable
pasture plants. It's hard to properly manage a pasture if the horses are never, or can never be, removed. If the owners will not practice rotational grazing, try to get them to build sacrifice areas, or holding areas, where the horse(s) can be kept while the pasture is resting, this will also give you a chance to mow, drag and use herbicides to control weeds if necessary.


Price: $79.00
To order go to:  http://horsebooksetc.com/index.php?p=catalog&parent=3&pg=1

8. Environmental Education Programs June 20—June 25

Programs for Teachers, Youth & Scout Leaders, and Parents - Receive Curriculum Materials to Teach Hands-on Activities - Receive CEUs & NC Environmental Education Certification Credit


Tuesday, June 21, 2011—9—4 pm—Project WET Kathleen Clay Edwards Family Branch Library 1420 Price Park Dr. Greensboro, NC 27410 (336-373-2923) * Hands-on activities about water conservation, water as a resource, & water management. * Sponsored by the NC Division of Water Resources and the Kathleen Clay Edwards Library


Thursday, June 23, 2011 - 9—4 pm Leopold Education Project Kathleen Clay Edwards Family Branch Library 1420 Price Park Dr. Greensboro, NC 27410 (336-373-2923) * Experience Aldo Leopold’s Sand County Almanac & learn to “read the land” and develop your own land ethic by recording observations and participating in outdoors experiences. Cost for workshop materials. * Sponsored by the Kathleen Clay Edwards Library & Cabarrus County Soil and Water.

Friday, June 24, 2011 5-9 pm Wildlife Ed Center (Bur-Mil Park) Saturday, June 25, 2011 9 — 4 pm The Club House (Bur-Mil Park) Methods of Teaching Environmental Education Bur-Mil Park — 5834 Owls Roost Rd. Greensboro, NC 27410 (336-373-3800) * Learn a variety of methods to teach EE. Must have completed Basics of Environmental Ed.
9. Flintrock Farm 2011 Show Series

Open Show - This Saturday, June 4th

www.flintrockfarm.com

10. Open Community Fun Show: June 11th, @ Piedmont Saddle Club in Colfax. No class entry fees; admission $5 per horse, $5 per person (ages 10 & under free). Contact Jenny Taylor 919-323-9910 or info@piedmontsaddleclub.org. See www.piedmontsaddleclub.org for class list, release form, sponsorship, directions, etc. Sponsorship info contact Carol Merritt 336-312-4149 or ckmerritt@bellsouth.net. Last year's attendance: over 600 people. Concessions on site. Camping with electric hook-up available. Stalls available.

11. Rockingham County Cooperative Extension Advisory Golf Tournament

Date: July 20, 2011
Location: Wolf Creek Golf Club
722 Wolf Island Road, Reidsville

Purpose: To establish an endowment fund for the support of our Rockingham County Extension Agents with program cost as they play a vital role in many ways such as Food Safety, Youth Development and Leadership skills, Crop/Livestock Production, Home Beautification, and Recreational Opportunities – just to name a few benefits given!

Hosted By: NC Agricultural Foundation, Inc. In conjunction with Rockingham County Cooperative Extension Service.

Entry Information:
- $200 per team or $50 per player
(Includes green & cart fees, player gift, lunch, closest to the pins & Prizes.)
- Payment MUST accompany completed registration form to reserve your entry.

Event Format:
- Four Person Captain’s Choice

Schedule of Events:
- 7:15 – 8:00 Registration
- 8:00 a.m. Morning Shotgun Start
- 12:00 – 1:00 Afternoon Registration
- 1:00 p.m. Afternoon Shotgun Start
- 5:15 p.m. Prizes & Awards

Tournament Prizes:
- 1st Place $800 team
- 2nd Place $600 team
- 3rd Place $400 team
- 4th Place $200 team

Registration Deadline
Monday, July 18th
SPACE IS LIMITED
Limited to the first 36 teams!!
We will start alternate list after tournament is full.

If you would like more information please call 336-342-8230

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

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!

WHEN YOU HAVE CUT HAY AND HAVE SOME TO SELL, PLEASE LET ME KNOW!!

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

13. Swap Shop - For Sale/Wanted - Equestrian Facilities Available
- For Sale- 2002 Horse Trailer, bumper pull, step up, with stabilizer attachment, steel frame, aluminum shell, two horses slanted, tack/changing room, saddle area. Drop down windows w/bars and screens. Lights. Used only few times for local events. Excellent shape. Email Mrs.White (fwhite2@triad.rr.com) and I’ll send you a photo. Asking $6,900.

- For Sale- we have five totes of 275 gallons each, used only once. Large opening on top, spigot with valve at bottom. They are in excellent shape and they have the galvanized protective cage with the lift fork set up. Great for water storage. If you are interested, please contact Ms.White @ fwhite2@triad.rr.com or call 336 817 2144.

- Horse Boarding available – Liberty, NC location. Our facility has round pen, lighted riding ring, and beautiful setting. Safe secure facility, owner on-site. $150/mo includes feed and hay. Additional services available at reasonable additional costs, just ask. Please call for more information. 336-708-1759.

- Pasture Board Plus - NE Guilford $150/mo. Good pasture, cross-fenced, run-in sheds, 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.

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!

14. Take A Load Off - Wrong Answer

   A woman, standing nude, looks in the bedroom mirror while her husband reads in bed. "I feel horrible, I look fat and ugly.........pay me a compliment."

   The husband replies, "We can say One thing for sure Honey, Your eyesight’s near perfect."

   He never knew what hit him....
*****I NEED YOUR IDEAS FOR ARTICLES In FUTURE WEEKLY PILES!*****

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!

Thank You!

I hope that you all have a Great Safe Memorial Weekend!

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.

The use of brand names or any listing or mention of products or services does not imply endorsement by the NC Cooperative Extension Service nor discrimination against similar products or services not mentioned.

--

Ben Chase
Rockingham and Guilford County Extension Agent
Agriculture & Livestock
North Carolina State University
North Carolina Cooperative Extension,
525 NC 65, Suite 200, Reidsville, NC 27320
(336) 342-8235  800-666-3625 Fax: 336-342-8242
Email : ben_chase@ncsu.edu
http://rockingham.ces.ncsu.edu/index.php?page=animalagriculture