Weekly Pile For Week Of July 22 2012

Howdy Folks,

Included is the **Weekly Pile** of Information for the Week of July 22, 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:

14. Take A Load Off

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1. Rough Weather – PAY ATTENTION

The National Weather Service has forecast the possibility of severe weather today with the greatest threat being damaging winds should severe weather occur. These storms may pop up without much warning and are most likely to occur between 1 pm and 3 pm in our area. Please pay attention to the news media and the National Weather Service this afternoon and be aware of the nearest shelter location if operating outside today.

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2. Rabies in Horses

University of Kentucky, Equine Section, Department of Animal Sciences

Rabies in the horse is a relatively uncommon disease. In 1981, the number of rabies cases peaked in the horse industry at 88 and has leveled off to about 40 cases for the past few years. The incidence of rabies in domestic animals follows that of wildlife, which seems to follow a cycle of approximately eight to 10 years. Although rabies in horses is low (5 percent), the potential for human exposure makes it important to discuss its causes, diagnosis, treatment and control.

Causes

Rabies is a sporadic viral disease caused by a neurotropic rhabdovirus (a virus which affects the nervous system). Horses contract the virus from the saliva of an infected animal either through a bite or by the saliva contaminating an open wound. The skunk is the primary animal of focus in the wild. Rabid skunks are the primary way horses contract rabies. Skunks are nocturnal, so if one is seen during the day it should be suspected as being rabid. Horses are

very curious, especially foals and yearlings, and will investigate wildlife roaming the pasture. This exposes them to bites on the nostrils or lips. The incubation period for the disease usually is two to six weeks, although sometimes it may take up to three months before symptoms appear. Foxes are a common carrier from New England through the Southeast and into Tennessee and Kentucky. Raccoon rabies has been on the increase more recently in the states of Pennsylvania, Maryland, Tennessee and other southeastern states. Other carriers include insectivorous bats and unimmunized dogs and cats.

Clinical Signs

Diagnosing rabies proves difficult because of the wide range of clinical signs. Historically, descriptions of the initial symptoms such as "furious" and "paralytic or dumb" were used, but these can be misleading. The most important factor to remember is to think rabies first when dealing with unexplainable clinical signs. The most common sign of rabies is behavioral changes. The majority of horses initially are dull and depressed. A low-grade fever usually is present along with convulsions, increased sensitivity at the site of injury, lameness, gnawing the affected area and anorexia.

Symptoms usually progress quickly over five to seven days resulting in recumbency and death. Often rabies is not diagnosed upon the initial onset of symptoms, as the horse is still calm, alert and eating. Of great importance in recognizing rabies is the rapid progression of the disease. Because the neurological signs always progress rapidly with rabies, other possibilities should be considered if the clinical signs have not worsened after a period of five days.

Diagnosis

Since rabies typically is rare in horses, a veterinarian should attempt to rule out other diagnoses before diagnosing rabies. Other diseases which present clinical symptoms similar to rabies are tetanus, equine herpesvirus, the various causes of encephalomyelitis, botulism, lead poisoning, moldy corn poisoning, protozoal myelitis, and trauma to the brain or spinal cord.

Postmortem diagnosis can be made by submitting the intact head to a designated public health laboratory. In transit, the head should be refrigerated by wet ice but not frozen. Diagnosis can be performed accurately and rapidly within hours using the fluorescent antibody (FA) test to stain sections of the brain for the presence of rabies virus. A positive test means treatment should be started for anyone who has come in contact with the rabid animal. The FA test may be confirmed by mouse

inoculation studies or isolation of the virus in tissue culture.

Treatment

At the present, there is no antiserum for the treatment of the rabies virus. Immediate cleansing of the affected wound area may prevent infection, but post-vaccination of the animal really is not useful as the horse will die before immunity has time to develop. In humans, there is a series of shots given after a suspect bite, but this must be done before the onset of symptoms occurs. With horses, rabies infection generally is not known until clinical signs appear.

If a horse has been previously immunized, an immediate booster shot should be given. Strict quarantine and observation for six months are mandatory in all cases. If clinical symptoms develop, the horse should be humanely destroyed and the intact head should be submitted for diagnosis.

Control

Horses can be vaccinated for rabies, therefore, immunization is recommended for horses in an endemic area. Vaccination should begin at three to four months of age with a booster shot given annually.

Several practical steps can be taken to protect against rabies:

1. Establish, with your veterinarian, a routine yearly rabies vaccination program for horses, dogs and cats on your farm.

2. Discourage adoption of wild animals as pets.

3. Be on the alert for wild animals which exhibit abnormal behavior

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3. Mosquitoes

Many areas of the state saw significant rainfall in the last week and that also means you will see a rise in mosquito activity particularly by the Asian tiger mosquito which takes advantage of those small and often inconspicuous sites around your property that fill with storm water and become prime mosquito breeding sites. So, before people start planning a chemical assault on their yards as the solution to their mosquito problems,you need to

start with the simpler and more long-term approach of eliminating "collectibles". I don't mean souvenirs; we're talking about all of those objects that collect and retain rainwater for days-weeks. For example:

- Bird baths - simply flush them out with a garden hose and you flush out the mosquito larvae in the process. Plus, the birds will appreciate the fresh water. For horse owners with water troughs near stalls or out in pastures, one option is to use a product such as "Mosquito Dunks" which contain the bacteria “Bacillus thuringiensis israelensis” which kills the mosquito larvae (not the adults). Although you can use them in outdoor water bowls for pets, it is far simpler (and better for your animals) if you “tip and toss” the water from the bowl and replenish it with fresh water *daily*.

- Old cans, tires, etc. - empty them and get rid of them (legally, not simply tossed along the highway to become someone else’s problem).

- Outdoor flower pots - empty the water from the dishes/trays underneath them. Your plants have plenty of water without the overflow. This also helps reduce fungus gnat problems in the plant soil.

- Remove all of that built-up debris from your gutters. The water and decaying material attract mosquitoes.

- Rain barrels – if you collect water from your gutters or some other system, make sure the barrel is screened to keep out debris and mosquitoes

- Tarps that cover your boat, grill, firewood, etc. also collect pockets of water that can remain for 1-2 weeks.

- The bed of that '57 Ford pickup that you've been “restoring” for the last 25 years can collect water particularly if the tailgate faces uphill in your yard.

- Kids' pools - if they're not being used by kids, they're probably being used by the mosquitoes (and maybe some toads) – empty them. The same thing applies to pools (in ground or above ground) that aren't maintained (e.g., pools on abandoned or foreclosed properties).

- Drainage ditches - they're meant to collect storm water temporarily. Keep them free of debris so that water flows and has time to filter into the soil.

- Decorative fish ponds can be a source of mosquitoes if they contain a lot of vegetation that provides hiding places for the mosquito larvae. "Mosquito Dunks" are an option here.

- Tree holes - when limbs fall off trees, the remaining hole in the trunk can collect water. Flush that out or put a small piece of a mosquito dunk into it.

Many people ask about treating shrubs in their yard. Mosquitoes will rest in these locations, but whether treating them "controls" a mosquito problem is difficult to determine depending on the species of mosquitoes most prominent in your area.. Similarly, people using outdoor foggers will definitely kill mosquitoes, but depending on the time of day/evening that they use it, they may be missing the peak activity of the most common mosquito species found in their area. Two other issues about using outdoor foggers are important. First, safety is critical. Make sure that you are standing upwind from the direction that you are dispersing the fog and wear appropriate protective equipment to prevent the fog from getting into your eyes and lungs or on your skin. Second, know where the fog is going. Some of your neighbors may not actually want chemicals drifting onto their property (particularly if they're outside eating at the time!). The same applies to the automated misting systems that some people have installed on their homes. From time to time, we get reports of companies that offer "mosquito control" whose response to the question of what they are using is simply that it's something "safe" or "natural" but they won't actually tell you what the chemical is. Personally, I would steer clear of a company that isn't willing to tell you what they are spraying (or propose to spray) on *your* property. You have the right to know the identity of the product and if they won't reveal it, the NC Department of Agriculture and Consumer Services is very willing to "encourage" them to be forthright about their control program.

One other point to remember - mosquitoes have no concept of property lines. Mosquito management takes a neighborhood effort to be truly effective. We have information on mosquito control on the web at http://insects.ncsu.edu/Urban/mosquito.htm.

Mosquitoes and West Nile Virus

Even though our drought is on hold, West Nile Virus is a concern this time of year.

Intuitively one would think drought would reduce the mosquito population and it has for the flood water mosquitoes, but not the mosquitoes that carry West Nile Virus. Public Health officials and State Entomologists in drought stricken states are reporting an increase in the number if mosquitoes that carry the virus, the number of mosquito pools testing positive for the virus, and human cases. We are in peak West Nile Virus season. The mosquito carriers of the virus tolerate drought and effectively reproduce in small amounts of fresh water such as when we get showers or brief thunderstorms. These mosquitoes also do well in irrigation pits. Often times folks do not realize they have been bit by these mosquitoes as they tend to be more stealth than nuisance in nature.

For more information on West Nile Virus see the EDEN West Nile Virus Topic Page. Public Health officials recommend: http://eden.lsu.edu/Topics/HumanHealth/WestNile/Pages/default.aspx

1. Communities focus on controlling mosquitoes where people congregate at night, such as after-dark ballgames or picnics.

2. To prevent mosquito bites and reduce the risk of WNV, take personal precautions:

- **Use mosquito repellents (DEET, picaridin, oil of lemon eucalyptus, or IR3535) and limit exposure by covering up.**
- **Limit time outdoors from dusk to midnight when mosquitoes are most active.**
- **Get rid of standing water that gives mosquitoes a place to breed.**
- **Support local mosquito control efforts and know the West Nile Virus carrying mosquitoes in your area.**

Personal precautions are especially important for those at high risk for WNV – people over 50, pregnant women, transplant patients, individuals with diabetes

or high blood pressure, and those with a history of alcohol abuse. People with a severe or unusual headache should seek immediate medical attention.

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4. You Asked: Will putting pennies in my horse's water trough keep algae from growing?

I thought if I put four-five pennies in my horse's water barrel, which is 40 gallons cut in half, that algae build up would be prevented. I change the water and clean the barrel weekly. Water trickles into the barrel all the time, but algae still builds up. The running water keeps the flies and mosquitoes away and the penny keeps the water clear and clean of algae. My question is: will the penny, by putting a very small amount of copper in the water, affect the horse?

It is important to note that pennies made after 1982 are 97.5% zinc and only coated with a thin layer of copper. There has been limited research showing that if copper pennies or piping is put into galvanized metal water tanks some of the copper and zinc from the tank will leach out into the water. Similar

research has not, to our knowledge, been done with plastic tanks. Copper sulfate (bluestone) is commonly recommended to treat irrigation ponds and swimming pools for algae. High intakes of copper, especially, can increase the need for other minerals, such as selenium. Small ruminants, such as sheep and goats, are very sensitive to copper excess.

In troughs or small tanks, a safe dosage is one level teaspoon of copper sulfate per 1,500 gallons of water. So for a 40-gal tank, even an eighth of a teaspoon of copper sulfate would not be appropriate.

Be aware, though, as you alter your trough management, that copper can be toxic to horses if overfed. Horse water should contain less than 0.5 mg/liter copper.

Another important point is that algae needs sunlight to grow, so if you can relocate your trough to a shady area, you should have less trouble with algae..

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5. CHECK NCSU CONTROL MEASURES

Mosquito Control Measures

What Doesn't Work

There have been a number of natural and man-made mosquito repellents, attractants, and predators touted as effective against mosquitoes. In truth, they don't do much good and cannot be used to effectively control mosquitoes.

A company has been marketing a "mosquito repellent plant" that produces citronella and consequently repels mosquitoes. Citronella oil is produced by a number of different plants. At relatively high concentration, Citronella oil is repellent to mosquitoes. Thus far, there does not appear to be adequate scientific literature to substantiate the claim that enough Citronella is released by a stationary plant to repel mosquitoes. Most likely the plant would have to be physically damaged in order to release enough citronella to repel mosquitoes and the effect would be very short lived.

Dietary studies indicate that mosquitoes are insignificant in the purple martin diet. Studies of bat stomach contents show beetles as the dominant food. Ultraviolet or black lights and sonic devices indicate ineffective control.

Prevention

Since most of the mosquitoes that transmit encephalitis will not travel very far, the risk of contracting encephalitis can be minimized by controlling the mosquito breeding sites which are in close proximity to your home. Water management, to prevent mosquito breeding, is essential for control. Eggs do not hatch unless they are in water. Remove old tires, buckets, tin cans, glass jars, broken toys and other water-catching devices. Change water in bird baths and wading pools once or twice a week; clean out roof gutters holding stagnant water; and place tight covers over cisterns, cesspools, septic tanks, barrels, and tubs where water is stored. Never over-apply lawn and garden irrigation; fill, drain or treat tree holes; and drain or fill stagnant water pools, puddles, ditches, or swampy areas. Inspect water in plant containers, water-holding stumps, keep grass mowed around bodies of water, stock ponds and reservoirs with fish.

Use adequate screens with 16 x 16 or 14 x 18 mesh on windows and doors. Screen doors should open outward and close automatically.

Repellents

Repellents applied to the skin and clothing will prevent mosquito bites for one to five hours depending on the person, type, and number of mosquitoes and the type and percent of active ingredient in the repellent. Repellents are available as aerosol sprays, pump sprays, creamsticks, lotions, or foams.

N, N-Diethyl-m-toluamide (Deet) is very effective and widely used as a repellent but it should not be used indiscriminately as severe allergies can develop. Formulations containing high concentrations of Deet, 50% or more, should not be used on children. Formulations containing 5 to 10% Deet will work just as well as those containing 90% or more, however, they will not last as long.

Avon Skin-So-Soft has been widely used as a mosquito "repellent" for a number of years without being labeled. Avon Products, Inc. has recently obtained EPA approval and is now marketing some of its Skin-So-Soft products for use as a mosquito repellent.

Indoor Control

Space sprays or aerosol "bombs," containing synergized pyrethrins 0.1%, are effective against adult mosquitoes. Frequent treatments may be needed during problem periods.

Outdoor control

Adulticides

Space sprays or aerosol foggers, containing pyrethrins, will give rapid knockdown of adult mosquitoes. However, it is a temporary treatment with little residual effect. Residual sprays applied to tall grasses, weeds, trees, shrubs, and outbuildings, one to two days before use of the area, is effective. Use water solution or emulsions instead of oil-based formulations to prevent plant injury. Some insecticides registered for residual mosquito control include: carbaryl (Sevin), chlorpyrifos (Dursban) and malathion. There are a number of different formulations available. Follow specific label directions when applying.

Note: Malathion and carbaryl (Sevin) are extremely toxic to honey bees. Do not spray plants when in bloom. Mow weedy areas before treatment. Bee losses are minimized by spraying late in the afternoon when bees are gone or when temperatures are below 45 deg F. Malathion and methoxychlor are highly toxic to fish.

Larvicides

Homeowners may apply Mosquito Dunks (made with Bacillus thuringiensis Berliner var. israelensis or B.t.i.) to kill mosquito larvae in the water. This natural

ingredient is harmless to other living things and is biodegradable. (Summit Chemical Co. 800-227-8664).

Methoprene (Altosid XR) is another safe material for control of mosquito larvae. It is an insect hormone which retards the development of larvae (disrupts molting) and prevents mosquitoes from developing into adults (Clarke Mosquito Control Products, Inc.800-323 -5727).

Altosid XR Briquets can be placed even on ice for season-long control. Treat swamps, ponds, and marsh areas in early spring before thawing. These extended-release briquets will provide up to 150 days of uninterrupted mosquito control once they hit the water. It can be applied by hand and the product is labeled for use in known fish habitats.

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6. INTEGRATING FORAGES INTO MANAGEMENT SYSTEMS FOR HORSES

Robert A. Mowrey and Kevin R. Pond

Horses are primarily grazing animals and are well adapted to consume high-quality forages. Forages should be the major component in a cost-effective feeding program for horses at all production stages. Mature horses should consume at least 50% of their diet from forages as either pasture or hay to ensure normal digestive function. In most production systems forage intake can be 100% of the diet for horses at least 24 months old. Because horses younger than 12 months have a relatively small digestive tract and low microbial activity, forage intake will account for only 30 to 40% of their diet.

The cecum is the major site of absorption, and its position after the small intestine further limits the horse's ability to digest poor-quality forages. How-ever, horses' ability to digest fiber is similar to that of ruminants when fed leafy, immature forages. A number

of palatability and digestibility trials indicate that horses will eat a variety of high-quality grasses and legumes. Feeding high-quality, more nutrient-dense forages minimizes the need for concentrates and supplements.

PASTURE USE

If properly managed, a grass or grass-legume mixed pasture provides an excellent source of energy, protein, vitamins, and minerals to horses in a variety of production stages while minimizing the need for concentrate feeds. Broodmares in late gestation and lactation, growing horses, and horses at moderate to intense exercise may require additional supplementation with grain. Pasture quality is directly related to several factors, such as fertilization, forage species selection, pasture renovation, stocking rate, the stage of maturity of the forage, and the environment. Fortunately, most of these factors can be controlled for optimum, high-quality forage production through sound pasture management practices.

The ideal horse pasture should contain (1) a smooth surface free of potholes, trash, potentially harmful objects, and noxious plants; (2) a dense stand of nutritious and palatable forage; (3) ample area to permit grazing and exercise while maintain-ing a consistent rotation plan; (4) safe fences and gates; (5) free access to fresh, clean water; (6) ad-equate shade and shelter from adverse weather; and (7) freedom from marshes and wetlands.

PASTURE OR EXERCISE PADDOCK: THERE IS A DIFFERENCE

Pastures are areas that provide ample space to maintain adequate amounts of nutrient-dense forage to meet horses' nutrient requirements. A traditional recommendation has been two acres of pasture per mature 1,100-pound horse to supply 12 months of forage for grazing and hay production. Pastures should be seeded or sprigged with a high-quality perennial forage and managed to maintain a productive stand.

Exercise paddocks or drylots are areas of one acre or less per horse. The paddocks typically are located near barns and are used

only to provide exercise. Subsequently, they should be planted with a persistent forage such as tall fescue or common or hybrid bermudagrass. Exercise paddocks also can be used as a holding area during periods of heavy rainfall until pasture conditions improve. The tearing action hooves make while horses canter is destructive to extremely wet pastures. Generally, exercise paddocks are fenced areas, with limited vegetation, which have a minimum of 400 square feet. Long narrow areas (runs) are best (minimum of 14 feet wide) with the layout along land contours to minimize erosion. Horses prefer to run along fence lines; therefore, several long narrow runs will let separated horses exercise together without direct interference. Grass filter strips (minimum 25 feet wide) located downslope of an exercise area will greatly reduce any pollutants that might leave the site.

Forages planted in an exercise lot can provide nutrients to replace a portion of horses' forage requirements. The pasture management system is the determining factor on how much feed value can be realized.

DETERMINING PASTURE SIZE

Even very small areas measuring an acre or so can contribute to the feeding program. However, these areas cannot be used as a dry lot. Animals must be added to and removed from an area at the correct times to obtain optimum nutrition, rapid regrowth, and stand persistence. For example, a mature horse can consume up to 3% of its body weight per day in forage dry matter. Thus a 1,000-pound horse might consume about 30 pounds of forage per day. A hybrid bermudagrass (Coastal or Tifton 44) pasture is capable of producing from 10 to as much as 80 pounds of dry forage per acre per day from May through September. A conservative estimate of total dry forage production for the season might be 3.5 tons per acre (7,000 pounds). If about 3,500 to 4,000 pounds of that growth is actually eaten, then 133 pasture days of grazing are produced per acre (4,000 ÷ 30 pounds intake/ day = 133 days). In reality, this means that on some days, such as during early May or late September, less than the 30 pounds needed will be available. On the other hand, during the peak growing season of June-July-August, two to three 1,000-pound horses could be grazed, or a section of pasture could be fenced off for hay production. The same

basic information can be calculated for low-endophyte tall fescue-clover pastures and other appropriate pasture species.

Although it is generally accepted that about two acres of pasture per mature horse are needed to satisfy both nutritional and exercise needs, do not overlook the possibility of getting nutrition from pasture if less than 2 acres per animal are available. The key is management flexibility. If less than 100% of the nutrients are to come from forages, the following land area allocation between nutrition and exercise may be appropriate.

GRAZING MANAGEMENT

Conventional rotational grazing involves dividing pastures, usually with permanent fences, into several sections (at least two or three) and rotating horses in a manner based on pasture growth. Pasture size is allocated so horses will be rotated every 14 to 21 days depending on pasture regrowth and availability. With this system, failure to maintain a proper stocking rate (number of horses per acre) will result in excess mature forage and selective or spot grazing.

The stocking rate should be maintained to ensure consumption of young leafy forage without over-grazing. A properly managed rotation system should maintain plants in a condition that permits rapid regrowth and stand persistence.

A controlled, intensively grazed rotational system is the most efficient grazing method for horses. In this system, the pasture area is subdivided into several sections, enclosures, or paddocks, and horses are rotated from paddock to paddock based on plant growth and animal nutrient needs. Usually, the period of stay in any one paddock is relatively short, (one to five days), depending on the amount of forage present before grazing starts and the rate at which the forage is consumed. Safe, inexpensive, temporary electric fencing, including electrified aluminum wire or polytape, can easily be erected and removed. Horses quickly adapt to electric temporary fencing after short exposure. In some cases, after initial shock, horses will not test the fence again. Others require a consistent and constant voltage.

PERENNIAL PLANTS FOR PASTURES - Perennial plants should be used as the foundation of a permanent pasture system. There are a variety of plants adapted to different areas and soil types in North Carolina. Whenever soil and climate permit, cool-season grass-clover mixtures are preferred to pure grass stands. In almost every case, both warm- and cool-season pastures will be needed to provide the best year-round grazing system (for example, a bermudagrass pasture for summer and a fescue-clover pasture for fall and spring).

ANNUAL PLANTS FOR PASTURES - Temporary pastures are planted annually and are usually used within six to nine months after plant-ing. Winter annuals such as rye, oats, wheat, and ryegrass typically are used for temporary winter pastures. They may be interseeded into bermuda-grass or other warm-season pastures or planted alone in September to provide quality grazing from December through May. Pearlmillet is one of the best summer annuals for horse pastures.

The proper combination of perennial and annual pasture species will provide almost year-round grazing under ideal conditions. Only a limited supply of hay will be required in a properly managed pasture system.

AVOIDING SPOT GRAZING - The horse grazes from the top of the canopy down-ward and, because of its jaw and teeth structure, is able to graze much closer to the ground than a cow. The horse's sensitive lips position and snip the forage between its upper and lower incisors. Allocating horses to areas that are too large for the animals to completely consume the forage grown will lead to "spot grazing." Spot grazing is most severe when the animals are allocated appreciably more grass than they can use within a three- to five-day period. The horses will continually graze and regraze the same areas while other areas in the same pastures are ignored and become mature, stemmy, and unpalatable. Forages located near fences or urine spots typically are not grazed. If left unchecked, this grazing pattern can reduce the effective grazing area, encourage the encroachment of weeds, and result in serious stand loss of desirable pasture plants. Subdividing a pasture area to reduce the land area available for grazing, followed by rotation to another area, will reduce the occurrences of spot grazing. In

addition, when animals are removed from a rotational paddock or pasture, the area may be clipped to remove old, ungrazed plants and to stimulate new, leafy regrowth. The area can also be dragged either during or after clipping to break-up and spread manure evenly over the paddock, which will aid in parasite control and improve nutrient recycling.

Using cattle to graze in sequence after horses on the same pasture is an effective method of improving pasture utilization. Since the grazing behavior of horses and cattle differ, cattle will graze some of the forage left by the horses. Cattle can be forced to graze the more mature forages by restricting them to the area. This will help to use the pasture efficiently and to reduce the levels of parasites that affect the horses; however, it may reduce cattle's performance.

GRAZING BEHAVIOR OF HORSES - Work conducted at the North Carolina State University Equine Educational Unit has demonstrated that mature and growing horses can be controlled by electric fence in small paddocks. Horses rotationally grazed tall fescue in the spring and summer and were effectively managed on stockpiled fescue in the fall and winter. The horses quickly adjusted to the limited area for grazing and consumed the forage in each paddock in three to five days. Short rotational grazing of the paddock reduced the incidence of spot grazing and provided more uniform grazing, which allowed for quick pasture regrowth. Calculations for annual production indicated that approximately 1.5 acres would be required to meet the annual forage needs of a 1,100-pound mare. The use of controlled, rotational grazing to regulate forage consumption and grazing time permitted the stocking rate to be increased.

Research conducted at North Carolina State University and on a producer farm indicated that horses will graze an average of 16 hours per day. The shorter the pasture, the longer a horse will graze (up to 20 hours per day). In all studies, horses spent at least 10 hours grazing. In situations where horses are turned out to graze for a limited time (less than 12 hours), it is likely that the horse's intake will be reduced. Restricting the grazing time is an effective way to reduce intake and weight gain of obese horses.

ESTIMATING NUTRIENT INTAKE FROM PASTURE - The percentage dry matter of forages must be considered when calculating nutrient availability. Grazed or fresh forages, analyzed at the North Carolina Department of Agriculture Forage Testing Lab, are extremely high in moisture, containing only 20 to 40% dry matter. The high moisture content of fresh forages dilutes their nutrient content, compared to nutrient levels expressed on a dry matter (100% DM) basis. Thus, to achieve the same nutrient intake, an animal needs to consume many more pounds of fresh, grazed forage than if the same forage was dried. For example, a 1,100-pound horse would need to eat about 65 pounds of fresh grass (30% DM) or about 22 pounds of hay (90% DM) to achieve the same level of dry matter and nutrient intake.

Since horses have a relatively small digestive tract, gut fill is another factor limiting forage intake. Normally a horse can consume 3.0 to 3.5% of its body weight in dry matter before gut fill occurs and intake stops.

For example, a 1,100-pound mare grazing mature fescue pasture at maximum intake per day would have to eat 78.6 pounds to get 27.5 pounds of dry matter intake:

1,100 lb x 2.5% body weight = 27.5 lb dry matter/day

100

27.5 lb mature fescue pasture = 78.6 lb fresh fescue (as fed)

35% dry matter

The following pasture feeding programs are all based on an estimated mature body weight of 1,100 pounds (National Research Council 1989). Long yearlings, two-year-olds, and mares in late pregnancy grazing immature bermudagrass or fescue-clover mixed pastures can obtain the necessary digestible energy (DE), crude protein (CP), calcium(Ca), and phosphorus (P) intake to meet their nutrient requirements by consuming 15 pounds of forage (dry matter basis) daily. However, lactating mares consuming the same amount of bermudagrass pasture will be deficient in energy, protein, and phosphorus. The same lactating mare could receive all

of her nutrient requirements from 60% low-endophyte fescue, or from 40% ladino clover pasture if she were able to consume 90 pounds per day on an as-fed basis. Unfortunately, some small-framed mares do not have the capacity to consume 90 pounds per day because of the limited size of their digestive tract.

A more severe nutrient deficiency occurs in pregnant mares forced to graze mature bermudagrass pastures. Such nutrient deficiencies can be corrected by grazing earlier or supplementing a balanced concentrate mix in moderate amounts in addition to the pasture.

Trace minerals and vitamins should be supplemented free choice with water when grazing. Loose trace mineralized salt (granular form) or trace mineralized salt blocks will provide adequate trace minerals if the soil is not deficient in trace minerals. However, horses fed a concentrate and grazing pastures known to be deficient in trace minerals should be supplemented with a 1% trace mineral-vitamin premix added directly to a concentrate mix or in a fortified mineral supplement designed specifically for grazing horses. Trace mineralized salt alone may not provide enough trace minerals to meet animal requirements in severely deficient soils.

Calculation of nutrients supplied from immature bermudagrass pasture.

15 lb bermudagrass (DM Basis) x 1.42 Mcal/lb DE = 21,3 Mcal DE

15 lb bermudagrass (DM Basis) x 17.1% CP = 2.5 lb CP

15 lb bermudagrass (DM Basis) x 0.89% Ca x 454 grams/lb = 60.6 gram Ca

15 lb bermudagrass (DM Basis) x 0.32% P x 454 grams/lb = 21.8 gram P

PASTURE PRECAUTIONS

Cystitis, a condition caused by a sublethal dose of hydrocyanic acid, has been sporadically reported when horses grazed sorghum, sudangrass, and hybrids of both during drought conditions or after

a frost. Cystitis can be fatal and is characterized by frequent urination, lack of coordination, and mares appearing to be in heat constantly. Hay harvested at any time, including during a drought or after a frost, can be stored for two to three months and then safely fed. Cystitis has not been reported in horses grazing pearlmillet.

Founder or laminitis is a condition characterized by inflammation of the soft laminae of the feet. It can result in chronic lameness. It is usually caused by overeating grain, but can also occur from overeating lush, succulent pasture. Horses should be switched from dry lot to lush pasture gradually over a 10-day period, which will also limit scouring or loose stools.

Sand colic can result if horses are allowed to remain on bermudagrass pastures during the late fall and winter when the grass is dormant. The animals will dig for bermudagrass rhizomes, which are high in carbohydrates. In the process, they ingest large amounts of sand, resulting in impaction colic. If bermudagrass is the only pasture available, a portion of the pasture can be overseeded with rye or ryegrass so the animals have forage available during the time when bermuda is dormant. There are a number of equine laxatives available that bind with sand and aid in its excretion from the gastrointestinal tract. Do not feed hay that has been lying on the surface of sandy soils.

Nitrates can be a problem with drought-stressed plants that have been fertilized with moderate to heavy amounts of nitrogen fertilizer. Avoid grazing drought-stressed grasses, particularly pearlmillet, until the plants recover and produce growth. Nitrate levels of 1% of the total diet or greater are considered toxic to horses. Hays high in nitrates can be diluted with other nitrate-free hay or grain to reduce the nitrate content to less than 1% of the diet.

Slobbering is caused by high levels of slaframine, a chemical substance that is produced by molds. It occurs as a result of a fungus on the leaves that forms concentric dark brown or golden rings, primarily in legumes such as red clover. The condition has also been reported in horses grazing ladino clover, white clover, and lespedeza. Slobbering can be minimized if the legume

component of a mixed grass-legume does not exceed 40% of the stand, if horses are switched gradually to lush legume dominant pastures, and if the plant is not frequently clipped or grazed close to the ground. Slaframine causes saliva production, which may cause dehydration within 24 hours. Removing horses from the moldy hay or pasture relieves the condition.

Fescue toxicosis in broodmares is caused by a fungus or endophyte (Acremonium coenophialum) associated with tall fescue. A 1984 survey of tall fescue horse pastures in North Carolina found 95% of the tested pastures contained the endophyte at an average level of 68%. Reproductive problems have been noted in horses consuming endophyte-infested hay or pasture at 5% endophyte and higher. Broodmares should be removed from endophyte¬infected hay or pasture 90 days before foaling.

Fescue toxicosis symptoms include abortions, prolonged gestation (12 to 13 months), dystocia,

thickened placental membrane, stillborns, retained placentas, little or no milk production, and reduced rebreeding efficiency. Dilution of the endophyte fescue by supplementing legume hay, grain, or interseeding clover in pastures is not effective. The unidentified toxin produced by the endophyte appears to block prolactin production at the hypo-thalamus. Prolactin is required for normal milk production during late gestation. The accumulation of milk in the udder is a triggering mechanism for parturition. Subsequently, prolonged pregnancies are a symptom of fescue toxicosis.

Weeds may be toxic or noxious (irritating). Horses will not consume weeds if adequate-quality forages are available. Consumption of wood posts, trees, dirt, and hair indicates a lack of fiber intake; supplement hay in such situations.

Blister beetle poisoning may result from animals consuming hays grown outside of North Carolina. Blister beetles are found in states such as Oklahoma, Texas, Arizona, and Illinois that have large populations of grasshoppers. Beetles in the hay fields are trapped and killed in the windrows of forages harvested by mower conditioners. Whether dead or alive, the beetles contain a toxic substance called cantharidin. When ingested, cantharidin causes

severe gastrointestinal tract lesions. Death occurs quickly. As few as three beetles could kill a 1,000-pound horse.

References

National Research Council. 1989. Nutrient require-ments of horses. 5th revised edition. National Academy Press. Washington, DC.

Dalrymple, R.L., and C.A. Griffith. 1988. Horse forage and forage management. Agricultural Division, Noble Foundation. Report HF-88. PO Box 2180, Ardmore, Oklahoma 73402.

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7. Fructans: Dangers in the Grass -

Eileen Coite, Wayne County Cooperative Extension

As horse owners, we are continually concerned with providing the most nutritious, safe, and healthy diet for our horses, with the goal of minimizing the incidence of nutritional related illnesses. Colic and laminitis are just a couple of challenges we face from time to time, and knowing how to prevent these and other nutrition related illnesses are key to reaching this goal. So, having said that, have you ever heard of "fructans" and how they can impact horses?

Fructans, often called "dangers in the grass" are non-structural carbohydrates or sugars found mostly in cool season grasses, such as fescue, orchardgrass, ryegrass, timothy, etc. Fructans are also found in warm season grasses but at much lower and less dangerous levels.

Although produced in the plant leaves through the process of photosynthesis, fructans are stored in the stems of plants. So why are fructans a potential danger to horses? High levels of fructans can cause disorders such as colic, laminitis, and/or tying up symptoms. These conditions are a result of increased lactic acid, decreased pH in the cecum, death of digestive bacteria and protozoa, leading to a release of toxins in the gut. Stress factors such as this can turn into laminitis (founder) in the horse. Considering the fact that bermudagrass is our most commonly grown and fed forage to horses in southeastern North Carolina, we are actually in luck when it comes to fructans! We often talk about the nutritional value of bermudagrass being lower than many other grasses, especially cool season forages, but in this case, it excels. Another thing to remember is that some horses are more sensitive to high fructans than others. Knowing about fructans can however help us to prevent problems in

those that are most susceptible or categorized as "high risk", such as horses with a history of colic or laminitis problems.

Some of the things we know about fructan levels are that they tend to increase with cool temperatures, they increase with sunlight (due to photosynthesis), they increase with dry weather, and levels are higher in the afternoon than the morning. At the same time, fructans will decrease with rainfall or elevated moisture. Knowing what has an impact on fructan levels can help us manage our higher risk horses around them. For instance, grazing at night or in the morning instead of in the afternoon is a good idea. Limiting grazing is helpful during dry periods or frost, which are both plant stress periods.

Hay can be tested prior to feeding for fructans, and susceptible horses should only be offered hay with 20% or less fructans. Pasture growth should also be managed at approximately 4-8" in height, mowed to encourage new growth and get rid of old, mature plants, while being careful not to overgraze either. Overgrazing a pasture can cause an increase in fructans through plant stress.

Some more ideas for higher risk horses may be soaking their hay for 30 minutes or more prior to feeding. Research has shown that soaking for 30 minutes reduces fructans by 19%, while soaking for 60 minutes can cause a 31% reduction. Adding soaked beet pulp to the diet can also help. Higher risk horses should have limited grazing time by either only grazing in the morning hours or grazing at night, or by using a grazing muzzle. Limiting the diet to less than 20% nonstructural carbohydrates is best to preventing colic and/or founder in these animals.

If you are a horse owner, non-structural carbohydrates or fructans are something to be aware of and cautious about, especially if your horse falls into the high-risk category. However, we shouldn't panic and decide all cool season forages are bad for our equine friends! Cool season grasses are critical to extending the grazing season in our pastures, and in many situations are the most nutritious forages we can feed. A good mix of well managed and fed warm and cool season forages have been and will remain the foundation for balanced equine diets.

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8. Be Wary of Sneezeweed

Bitter sneezeweed (Helenium ararum) is an erect, annual weed, 10 inches in height with narrow leaves, alternating on the stem. The flowers are common in August and September and are located at the end of each stem.

A member of the Sunflower family, our species of sneezeweed has showy yellow flowers in the late summer. In dry years, the lower leaves are lost but the new leaves contnue up the stalk. We commonly see sneezeweed growing along rural roads across the county.

The plant is toxic to grazing livestock but is rarely consumed in toxic amounts. The entire plant has a strong odor and is bitter to the taste. Animals consume sneezeweed only if no other forage is available. Avoid cutting hay containing a large amount of bitter sneezeweed. Do not feed hay containing any of the plant to livestock.

Sneezeweed ingestion causes severe irritation to the mucous membranes. Dullness, trembling and weakness are first observed. In many instances, vomiting is prominent.

Severe infestations of sneezeweed in pastures should be controlled with broadleaf herbicides in late spring when good growing conditions exist.

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9. 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 Archadale, 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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10. Paddle on Upper Dan in Patrick County August 4

Will Truslow 336-547-1903 willtruslow@hotmail.com

The Dan River Basin Association (DRBA) will paddle on the upper Dan River in Kibler Valley near the Blue Ridge Parkway for its August 4 First Saturday Outing. Meeting at 10:00 a.m. at 3127 Kibler Valley Road (GPS 36.380497W, 80.272012N), participants will put in and take out on private property with the owners' permission.

On the same day, DRBA is co-sponsoring two other events: the Smith River Cleanup in Henry County, beginning at 9:00 a.m. and the Dan River Boat Race in Madison, for which registration begins at 8:30 a.m. Information about the cleanup and the race is at www.danriver.org.

The 5.5-mile portion of the river chosen for the First Saturday Outing in Kibler Valley is downstream of the challenging section where the renowned Kibler Valley River Run is held each summer. Here the river is much gentler.

According to Trip Coordinator Will Truslow, "This is still a mountain stream where the bottom is cobbles and small boulders. A helmet is recommended for personal safety, and kayak skirts will help avoid waves washing into the cockpit. At only 25 feet or so in width, the river feels quick, but rapids are small and short, and can be managed by novice paddlers with some maneuvering.

Truslow concludes, "This trip is not for the first-time paddler."

Wayne Kirkpatrick, past president of DRBA, describes the setting: "Participants in the August outing are in for a treat on this float. This section of the Dan offers boaters a variety of scenery, with lots of flowers and trees along the banks.

"After traveling through a vacation playground," he continues, "we'll transition to a feeling of gliding into a remote, primitive area with the paddler being the first explorer of this beautiful stream."

Water in Kibler Valley is released from Townes Dam, whose reservoir drives the City of Danville's Pinnacles Power Plant some five miles upstream of the put-in

for the outing. As a "tail-race" stream coming from the deep lake behind the dam, the water is cold enough to make the river a prime trout-fishing stream. The cool water and shade along the narrow waterway may be especially welcome to boaters on a hot summer day.

On a section without official public accesses, DRBA relies on support from private landowners to provide access to the river. Kirkpatrick comments, "DRBA is graced by the generosity of the Slate family for providing put-in access to the Dan from their property. As riverside landowners they recognize and support the mission of DRBA to preserve and promote the natural and cultural resources of this region. Partnerships such as this make it possible for DRBA to reach sections of the Dan River basin's streams that are not regularly available to the public."

Take-out for the outing will be on Sawmill Lane about 100 yards downstream of the Sawmill Lane Bridge.

Participants in the outing are asked to meet at 10:00 a.m. at 3127 Kibler Valley Road, Ararat, VA. They should supply boat, paddles, a life jacket for every boater, water and lunch; wear sunscreen and water-shedding artificial fabric or wool; and provide a back-up change of clothing. All participants will be asked to sign a waiver.

Boat rentals and shuttle may be arranged through Three Rivers Outfitters of Eden, 336-627-6215, www.3-R-O.com.

To reach the put-in from Stuart, VA, take Route 8 (Salem Highway) South to Route 103 (Dry Pond Road). Turn right onto Route 103, and go 9.1 miles to Route 773 (Ararat Highway). Turn right onto Route 773, and go 1.4 miles to Route 648 (Kibler Valley Road). Turn right onto Route 648, and go 3.1 miles. Cross the first bridge on the Kibler Valley Road, then immediately turn left as you leave the bridge at 3127 Kibler Valley Road.

From US 220 near Stoneville, NC, take NC 770 West to NC 704, and continue west on 704 to intersect with Route 8 North. Turn right onto NC 8, entering Virginia. Drive 5 miles, and turn left onto Route 103 (Dry Pond Road). Then, follow the above directions.

From Mt. Airy, NC, take Riverside Drive toward Virginia. At the state line, this becomes Route 773. Travel through the Ararat community and proceed to Route 648 (Kibler Valley Road). Turn left onto Route 648 and follow the directions above.

Outings and meetings of the Dan River Basin Association are open to the public without charge.

For more information about the trip, contact trip coordinator Will Truslow, 336-547-1903, willtruslow@hotmail.com

For membership and other information about the Dan River Basin Association visit www.danriver.org.

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11. 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
kate@coolerhorsemanship.com

843-304-3407
Fiore Farms
7600 Millbrook Road
Summerfield, NC 27358

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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.

- Pine Shavings, etc. – 2.8 cuft compressed plastic bags, easy to pick, no waste, easy to store $ 4.50 + tax per bag. Contact Terri C. Aprile @ (336) 698-0207 shoponys@gmail.com

- Equine Sports Massage Therapy – Certified since 1994 from Equissage. Appointments on site at your farm. Contact Terri C. Aprile @ (336) 698-0207 shoponys@gmail.com

- Riding Apparel For Sale - English (saddle seat-suits, day coats, shirts, jodphurs, ties/silk cumber bun sets & hunt seat-shirts, ties) & Western clothes, misc. tack, etc. Contact Terri C. Aprile @ (336) 698-0207 shoponys@gmail.com

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14. Take A Load Off –

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

A little boy went up to his father and asked: 'Dad, where did my intelligence come from?'

The father replied. 'Well, son, you must have got it from your mother, cause I still have mine.'

'Mr. Clark, I have reviewed this case very carefully,' the divorce Court Judge said, 'And I've decided to give your wife $775 a week,'

'That's very fair, your honor,' the husband said. 'And every now and then I'll try to send her a few bucks myself.'

A doctor examining a woman who had been rushed to the Emergency Room, Took the husband aside, and said, 'I don't like the looks of your wife at all.'

'Me neither doc,' said the husband. 'But she's a great cook and really good with the kids.'

An old man goes to the Wizard to ask him if he can remove a curse he has been living with for the last 40 years.

The Wizard says, 'Maybe, but you will have to tell me the exact words that were used to put the curse on you.'

The old man says without hesitation, 'I now pronounce you man and wife.'

Two Reasons Why It's So Hard To Solve A Redneck Murder:

1. The DNA all matches.

2. There are no dental records.

The graveside service just barely finished, when there was a massive clap of thunder, followed by a tremendous bolt of lightning, accompanied by even more thunder rumbling in the distance...

The little old man looked at the pastor and calmly said, 'Well, she's there.'

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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

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.

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