

Hello All,

Included is the Weekly Pile of Information for the week of September 6, 2015, 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.**
- 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 & IDEAS!

Included in The Pile this Week:

1. Equine Business Resources - Insurance for Equine Businesses

2. West Nile Virus

3. Equine Dentistry

4. You Asked

5. Dealing with Ticks

6. How to Give Your Horse an Intramuscular Injection

7. Barn Fire Safety

8. Vet & Horse Feeding Clinic Sept 19

**9. Piedmont Pot Of Gold Classic Show
9/19 Piedmont Saddle Club**

10. DON'T FORGET - Soil Testing Charging A Fee During Peak Season

11. HAY

12. Swap Shop

13. Take A Load Off

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1. Equine Business Resources - Insurance for Equine Businesses

The Equine Business Network

Insurance protects horse owners and users against negligence and liability.

A good insurance policy is needed for any horse business to protect from the cost of defending itself in court and to protect from lawsuits. Before purchasing an insurance policy on your horse operation, the following should be considered and be reevaluated each year to determine the value of the policy and what possible risks are to be anticipated:

Financial stability of business

Value of the horses

Level of risk

Level of personal involvement

Likelihood of experiencing a covered loss while insured

Equine insurance should protect:

Farm owners

Horse owners

Tenants leasing the property

Property owners

Race horses

Types of Policies and Coverage

- **General Liability Insurance**
 - Most important type of insurance for a horse business
 - Protects insured against bodily injury/accident and property damage suits
 - Investigation and court costs are included in insurance protection
 - Important to list all activities and location of activities the horses/riders participate in, in order to be covered
 - Covers the insured anywhere in the United States for only activities listed
 - Facility and animal determine the value of the policy
 - Example: The more assets, the more liability insurance needed
- **Personal Horse Owners Liability Coverage**
 - Coverage for bodily injury or property damage to third parties caused by your personally owned horse, when used for non-commercial purposes
- **Equine Professional Liability Coverage**
 - For claims and defense fees resulting from an negligent act, error, or omission arising from your professional equestrian activity
 - Example: A trainer who rents facilities
- **Independent Horse Shows and Events**
 - Liability coverage for single horse shows, clinics, and equestrian events
 - Provided for the actual event day(s) and includes both the setup and take down
- **Riding Clubs and Associations**
 - Liability coverage for member organizations and their public event days
 - Coverage is up to seven public event days during the year with coverage for additional days available
- **Property and Commercial Auto**
 - Additional insurance for fire, lightning, wind, and theft
 - Helps cover vehicles, buildings, machinery, tack, etc.
 - Can be packaged with liability insurance policies

- Must declare a list of major items and value
 - Example: A barn might be covered, but if the tractor, horses, etc. were not listed, they won't be covered
- **Care, Custody, Control (CCC)**
 - Protects insured if an owner of a horse sues due to death/harm of that horse
 - This is not covered by most liability insurance policies
 - In some cases, this will help cover vet bills and/or value of horse
 - A dollar value must be assigned to each horse to receive coverage
 - This will not cover stolen horses
 - Policy limits on a per horse/year basis
- **Mortality**
 - Usually covers life of a horse
 - Premiums based on breed, bloodlines, age, use
 - Most companies require a certificate of health from the vet. Only healthy animals are covered
 - Approval will be needed for:
 - Non-emergency surgery, castration, non-emergency euthanasia, nerving
 - Medication can be given under the supervision of a vet only
 - Agreed Value:
 - The set amount determined when purchasing the policy. This is what you are given should the animal die.
 - Actual Cash Value:
 - The set amount determined when purchasing and when filing a claim, but the fair market value will be received instead of the set value.
- **Loss of Use**
 - This is added coverage to mortality policy or can be offered as a separate coverage
 - This is expensive, because the insurance company is basically buying the horse
 - The horse must be totally disabled to receive coverage
 - On average, 60% of the value of the animal is covered

- This is good insurance for high-level performance horses, not pets
- Very expensive, and has a premium
- **Major Medical**
 - Covers surgical and non-surgical procedures:
 - Diagnostic tests
 - Non-surgical illnesses
 - 35% of surgery related X-rays, hospitalization, lab tests, and medications
 - This is similar to health insurance for humans, and requires a deductible
 - Usually has a \$5,000 claim limit and an annual premium
- **Worker's Compensation**
 - Employer must pay for medical expenses and lost wages when an employee sustains a work-related injury
 - Employer must also be covered by this type of insurance
 - Normally inexpensive
 - States differ with policy regulations
- **Umbrella Liability Coverage**
 - Offer higher limits and policies
 - Can add up to \$5,000,000 in additional coverage

Types of Insurance Carriers

- **Admitted Insurers**
 - Have state-approved rates
 - Guarantee Fund to cover clients until they can get new insurance
- **Excess and Surplus Lines Insurers**
 - Cover higher-risk clients
 - Rodeos, polo, vaulting, etc.

Insurance Representatives

- **Brokers**
 - Sell insurance products from several different companies

- Not employed by a single firm
- **Agents**
 - Work for a single firm
 - Only deal with insurance products from a single company

Things to remember:

1. Make sure all activities are disclosed and covered.
2. Establish a positive working relationship with your agent.
3. Make sure coverage is adequate and updated periodically.

Horse and Farm Insurance –

<http://www.thehorse.com/articles/23238/horse-and-farm-insurance>

Equine Insurance: Risk Management –

<http://www.thehorse.com/articles/28179/equine-insurance-risk-management>

What Coverage Should I Get When Transporting My Horse - <https://www.youtube.com/watch?v=Guv0Q1y7EDs&feature=plcp>

Liability & The Landowner

<https://www.youtube.com/watch?v=h4obpvBcUFo&feature=plcp>

Understand Equine Insurance

<http://practicalhorsemanmag.com/article/understand-equine-insurance>

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2. West Nile Virus

Many of you probably saw the report that someone had died from West Nile Virus. Although NCDHHS does not release patient-specific information in these situations,

the person was subsequently identified by his family as being a 76 year old man in Durham Co.

Only about 1% of people who become infected develop severe illness and many people may not become sick at all. The symptoms of West Nile Virus can take 3-14 days to present themselves and so many people may not attribute their illness to the virus until it becomes severe. Among people that develop severe illness (i.e., excluding those individuals who exhibit minimal or no symptoms), the mortality rate ranges from about 3% to 15% with the rate being highest among the elderly (as likely the case here).

As we've seen in previous years, West Nile Virus occurs far less frequently in people in North Carolina as compared to other nearby states. We did not have a human case of WNV in 2014 and only about three in 2013. Those numbers are not intended to trivialize the fact that people were affected (some fatally). It's just a matter of making sure that people don't panic about the disease and just use common sense. West Nile Virus is far less frequent here than other mosquito-borne diseases such as Eastern Equine Encephalitis (EEE) and LaCrosse Encephalitis (LACE). EEE is typically more common in eastern NC and occurs most commonly in horses that were not inoculated against the disease.

Birds are the "amplifying hosts" for the West Nile virus which basically means that infected mosquitoes transmit the virus to birds which are in turn bitten by other mosquitoes which acquire the virus and spread it to even more birds. Some mosquitoes species feed primarily on birds but the species that will readily feed on both birds and mammals are the ones that pose the risk of spreading the disease to people. The mosquito species that transmit West Nile Virus tend to breed in waste water collection areas and stagnating catch-basins. You can also find them breeding where water collects after storms and begins to stagnate with the abundant organic matter present. So, one obvious approach for residents is to make sure that they clear stagnating water sources on their property. It doesn't matter if this water is on a 1000 acre farm or on a 0.1 acre home lot, water that collects and stagnates has the potential to become a mosquito breeding site. Across most of North Carolina, the Asian tiger mosquito remains our most common pest species and it will exploit similar pools of stagnating water on the ground and in man-made objects.

As always, rainfall will dictate a lot of ebbs and flows of mosquito activity but with a multitude of urban water sources as breeding grounds, we'll continue to see mosquito activity continuing into the early fall as long as temperatures are favorable (although the shortening day lengths and declining temperatures will send some mosquitoes into diapause. We still need to remind people that although pesticides have their use in

mosquito management, the first response by individuals should focus on "source reduction"

- disrupting/eliminating those breeding sources rather than worrying first about what to spray in their yard.

- 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.

- All of that built-up debris in your gutters that you've been planning to clean out? It's time to actually do it and get rid of the water and decaying material that 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). So, empty them. The same thing applies to pools (in

ground or above ground) that aren't maintained. In some of our western states where drought has been a major issue, swimming pools have become mosquito magnets (and the swimming pool owners have become the object of attention for emerging female mosquitoes looking for a blood meal..

- Drainage ditches - they're meant to collect storm water runoff *temporarily* (emphasis on "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.

Another critical issue - personal protection.

The majority of mosquito-borne disease incidences, whether they're human or equine, are due to a lack of personal protection. Horse owners need to spend the time and money to get their horses vaccinated against EEE. For us two-legged creatures, we simply need to take precautions when we're outdoors for work or recreation. If it's too uncomfortable to wear long-sleeved shirts and long pants, then cover all *exposed* areas of the skin with an insect repellent (see <http://insects.ncsu.edu/Urban/repellents.htm>). A few other important points about using repellents:

- Do not put repellent on skin that will be covered by clothing.
- Children spend a lot of time outdoors even when school is back in session because the weather has been favorable. The greater the amount of time spent outdoors can increase the likelihood of getting bitten by a mosquito (and potentially a higher likelihood of being bitten by an infected mosquito). Before applying a repellent to a child, read the label carefully to make sure that it contains concentration appropriate for use on children.
- When using repellents on children - you should apply the product to your hands and then rub it on their arms, legs, neck, etc. If you allow your child to rub repellent on their arms

and legs, they need to wash their hands immediately afterwards because they will inevitably forget and either rub their eyes or stick their fingers in their mouths.

People ask about yard treatments for mosquitoes. The idea is to treat mosquito resting spots on the lawn and surrounding landscaping. These treatments can help reduce mosquito populations and are certainly a choice for individuals to make. Some people ask about fogging their yards (e.g., with the hand-held or backpack fogging machines available at hardware stores). These pieces of equipment produce a fine aerosol mist. So, people need to bear in mind a few things if they decide to go that route:

- Spray when there is little (if any) wind. Otherwise, the chemical simply drifts off your property rapidly and may not kill as many mosquitoes as you expect.

- Remove or cover children's toys, pet water & food bowls, barbecue grills, etc.

- Avoid spraying flowering plants during the day when bees and other pollinators are out there. We're already losing enough honey bees and you don't need to contribute to the toll.

- Stay upwind of any application that you're doing and take precautions by wearing proper "PPE" (Personal Protective Equipment) - long-sleeved shirts, long pants, hat, goggles, and preferably some respiratory protection.

- More importantly, watch out for drift off of your property. the chemical may end up on someone else's property whether that's private property or a park, school, or some other public property. Your neighbor's may or may not be receptive to the chemical mist and you need to be aware in particular what is going on at the adjoining property so you don't contaminate people/children, pets, food, honey bee hives, etc.

And along that line - one other point that I've mentioned repeatedly over the years a few weeks ago - mosquitoes have no concept of property lines. They are simply out there looking for a blood meal whether it's you or your neighbor. Chemicals may knock down mosquito populations right now and provide some "control". As I've said before on several occasions - mosquito *management* is what is really needed and that requires a proactive community effort in order to succeed. "It takes a village" applies to mosquito management and you only need one "village idiot" to make that program be

unsuccessful. Communication and Cooperation are as important (or more important) to make mosquito management work.

**We have information on mosquito control on the web at
<http://insects.ncsu.edu/Urban/mosquito.htm>.**

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3. Equine Dentistry

Paul Westfall, Granville County Extension

From time to time, there are articles in the Weekly Pile that deal with equine dental care. It's time to refresh a bit about why it is important to be sure that a horse's teeth are well maintained. For starters, most of us want our horses to stay with us for as long as possible. Making sure they receive good dental care is one piece of the puzzle in keeping them happy and healthy into old age and longer. As the Center for Equine Health at UC-Davis points out in its December 2011 Horse Report, Equine Dentistry is not just floating teeth. Good oral health cannot be separated from the health of the rest of the horse. Dental care should start at a young age, and carry on with regular check-ups. Problems can then be identified and dealt with pro-actively before serious problems develop.

Current research is showing that equine teeth that function normally and have normal grinding patterns actually wear more slowly and last longer. The better the teeth are maintained, the longer the horse can grind forages and feeds. That in turn affects the ability to digest the forage and grain that is ingested. Nutritional problems such as chronic colic, weight loss and nutritional deficiencies can develop if forages and grains are not chewed properly. In time, oral pain can become a bad problem, with the horse suddenly not performing well. When this happens, a visit to the vet clinic may be in order. Check out Dr. Lloyd Heron's blog for a discussion on the equine tooth extraction process. <http://www.flatriverveterinaryhospital.com/2012/07/23/equine-dental-care-tooth-extraction/>

Just looking at those photos makes one think that equine dental care is another place where an ounce of prevention is better than a pound of cure. My translation is that it is better to spend a little money now and then on dental care for the horse than to wait until there is a really big problem and pay a big vet hospitalization and surgery bill later.

Regular dental care will make sure that problems such as sharp enamel points lacerating the cheeks or tongue, retained caps (deciduous teeth that are not shed), hooks and ramps forming on the first upper and last lower cheek teeth, lost and/or broken teeth, abnormally long teeth, and/or

infected teeth or gums are identified and dealt with early. The UC-Davis newsletter has a pretty good discussion on equine dental care. It also has some good photos of problems identified in a dental exam. It and Dr.Heron's tooth extraction discussion are worth reviewing.

To sum it all up, good dental care is vital to the overall health and well being of horses. Good dental care will help ensure that horses reach and enjoy their golden years. With it being pretty common for horses to live into their 30's, let's be sure that their teeth are up to the task of chewing and grinding their forages and feeds properly in those later years.

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4. You Asked: I just found out there is Johnsongrass growing in my hay fields. From what I am finding it can kill my horses...is this true? Do I need to kill it off before I ever pasture them? And what if it gets baled with the hay?

Johnsongrass is a warm season perennial grass that spreads by underground stems called rhizomes and seeds. Seed production is very prolific and can lay dormant for 15-20 years before germinating. Many questions asked about Johnsongrass are related to the control of and the possibilities of it being poisonous to farm animals. The fact is that, yes, Johnsongrass can be toxic to our livestock, **but only under certain conditions**. Not just Johnsongrass, but also its cousins, sudangrass, milo, and sorghum-sudangrass fall into this potentially lethal category.

Two things with Johnsongrass that can cause problems that you need to be aware of:

1. Nitrates
2. Prussic Acid

1. Nitrates

Johnsongrass hay is capable of retaining high levels of Nitrogen when it has been growing in droughty conditions or pastures/hayfields were heavily fertilized before being grazed or harvested for hay. (could also be a timing issue with fertilizer application/rainfall)

Nitrate is the form of nitrogen taken up in the greatest amounts from the soil by plants. Under normal conditions plants break down nitrates into ammonium ions and assimilate them into amino acids or protein, but under various forms of stress, like drought conditions, this process stops and the plant continues accumulating nitrates to toxic levels in the plant.

-If grazed pasture or affected hay is fed to cattle or horses then there is risk of Nitrate poisoning and this could lead to death of the animal. Suspected Johnsongrass hay thought to contain high nitrogen levels can be tested to find what the Nitrate levels are and if safe to feed. In North Carolina there is no cost for testing for Nitrates.

Factors that can contribute to Nitrate Accumulation

- Light Intensity may also influence nitrate levels of plants. Low light conditions caused by cloudy weather tend to elevate nitrate concentration.

- High Soil N Levels tend to set the stage for excessive plant nitrate accumulations. Soils that carry high levels of N from excessive manure or fertilizer N applications or because applied fertilizer N was not taken into soil solution due to drought conditions are predisposing factors.

- Nitrate Accumulators - Plants that tend to have higher levels of nitrate over a wide range of environmental conditions such as : Ragweed, Pigweed, Lambsquarter, Sorghums, Small Grains, JOHNSONGRASS & other Summer & Winter Annuals have been known to be nitrate accumulators.

- Stage of Growth can also affect nitrate concentration in plants. Nitrate levels tend to be highest in immature, actively growing plants that have

been "shut down" or stunted by drought. Also, immediately after a drought when young shoots are actively growing, plants tend to be high in nitrate.

- Plants commonly accumulate nitrates if they're stressed especially if the drought stress was preceded by heavy N fertilization.
- Relatively high levels of nitrate in forage may be considerably dissipated during the fermentation process if the forage is ensiled (as much as an 80% reduction). However it should be noted that extreme caution should be taken with high nitrate forage that is being ensiled because poisonous nitrogen gases may be evolved from the silo for several weeks during the fermentation process.

Management Options Trying to Prevent Nitrate Problems

- Split Nitrogen applications so there is the plant has less chance to take up excess.
- Cut or graze ONLY the upper part of plant canopy. Nitrate concentration is higher at the base of the plant and lower in the leaves. So it makes sense to leave as much stubble as possible when harvesting hay or silage. Raise the cutter bar to leave the lower 1/3 to 1/4 of the plant. This also true in pastures; by not forcing animals to graze pastures to low stubble heights we can help offset potential problems with high nitrate forage.
- Wait to 7 days to harvest after a drought-ending rain. Nitrate levels are highest just after regrowth, and it will take several days of active growth for levels to go down again. Nitrates are non-volatile, and will remain in non-ensiled plants after cutting and baling.
- Test all suspect forages for Nitrates, (by taking representative samples) including hay, silage and pasture before being fed. A little effort here can save a lot. Even if some of your forages show elevated nitrate levels, they can often be fed if you know what you have. Negative effects can often be eliminated by dilution with other feeds or supplements.

- **Check Water Sources** - If for some reason your water source is also high in nitrate, this can really complicate matters if you are also feeding or grazing high nitrate forage. Anything above 10 parts per million nitrate nitrogen in the water could be a problem.

Pregnant animals appear to be most sensitive to elevated nitrate levels. Generally horses and other monogastrics tend to be more tolerant than ruminants.

2. Prussic Acid

Prussic Acid poisoning in horses (and swine) are rare, Ruminant animals (cattle, sheep and goats) appear to be the most susceptible to prussic acid poisoning but it can occur in all species.

Prussic acid, or Hydrocyanic acid, is most often produced when sorghum, sorghum-sudan crosses, Johnson grass, or wild cherry are eaten by cattle, sheep horses or goats. Under normal conditions prussic acid is not a major problem, however, conditions that interfere with normal growth, such as drought, frost, heavy trampling or physical damage, will cause an increase in the amount of free prussic acid in the plant, therefore increasing the chances for toxicity upon ingestion. The poisoning can occur under pasture conditions when animals are grazing young seedlings, young regrowth shoots, stunted growth or frosted plants. Heavy nitrate fertilization followed by abundant rainfall may also increase prussic acid level of the plant. Fatal prussic acid poisoning may also occur from the ingestion of wilted leaves from wild cherry.

The prussic acid interferes with normal oxygen exchange and can be fatal. Animals literally die from lack of oxygen. The first sign of a problem may be dead animals. The typical symptoms of prussic acid poisoning are nervousness, abnormal breathing, convulsions or trembling muscles, blue coloration of the lining of the mouth and

extreme pupil dilation. Animals treated quickly in early stages can be saved by intravenous injection with a combination of sodium nitrate and sodium thiosulfate or methylene blue.

The following points should be kept in mind:

- Prussic acid poisoning is not cumulative and upon removal from the forage source animals not showing evidence of being poisoned will likely not be adversely affected. Normally, grazing of the target plants can resume 14 days after a killing frost. Since frosts may not occur uniformly within the county, it is suggested that animals be taken off the target crops until it is certain that the plants have been frozen to below 26 degrees at least once.**

- Do not turn hungry animals out on questionable forage. If feed is questionable, feed good quality hay or silage first.**

- Graze these type plants only when they reach at least 15 - 18 inches tall.**

- Don't graze plants during or shortly after drought when growth is reduced and plant has been stressed.**

- Do not graze for 2 weeks after a non-killing frost.**

- Do not graze wilted plants or young plant shoots (tillers).**

- Do not graze at night when frost is likely.**

- Prussic acid poisoning is not a problem when crops are cured for hay or ensiled for more than 4 weeks.**

- If high N is applied to soil that is low in phosphorus and potassium, plants may be at greater risk.

- Don't allow access to wild cherry leaves, wilted or not! (Alfalfa and White Clover can also produce Prussic Acid) If there is a chance of frost, livestock should be removed from any of these grasses. Once a killing frost or freeze has occurred, and the plant material has completely dried (about 2 weeks after a killing frost), these grasses can be safely grazed. Prussic acid dissipates when the plant material dries. If there is a small amount of **Johnsongrass** in a pasture field, prussic acid is generally not a problem. However, with abundant rain, there may be a lot more Johnson grass than usual---especially in hay fields. So, be especially careful if you are grazing fields with a lot of **Johnsongrass** present.

As we all know Johnsongrass is very hard to eradicate in our pastures, so the bottom line is if you have Johnsongrass in your fall pastures. If in pastures, animals like Johnsongrass and they do a pretty good job of controlling it due to selectively grazing for it. In hay fields, try a wick applicator, which is a herbicide application bar that the height is set above the height of the grass but to where it will hit the Johnsongrass applying the herbicide. This allows the use of Round-Up to kill the Johnsongrass without killing the grass (Fescue/Orchardgrass).

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5. Dealing with Ticks

Eileen A. Coite, Sampson County Extension

Living in the southeast, all of us have had to deal with ticks from time to time. If you haven't, count your blessings! Most of the time we think of tick control for our dogs and cats, but unfortunately ticks will also often hassle our equine companions, and for those that trail ride or even seek out a shady spot with their horse on these sweltering days, both horse and rider can be in danger. While living on their host and feeding on our blood, ticks can transmit nasty germs that cause diseases such as Rocky Mountain spotted fever and Lyme disease, which can both cause serious problems for the rider. In addition to the rider, ticks can be a nasty nuisance to our horses. As with us all, some horses tend to be more sensitive than others, and some will develop nasty wounds from tick bites. Have you ever thought about what kind of

nasty fly was causing the welts and wounds after a bite, ask your veterinarian you may be surprised to find out that it might not be a fly bite at all, but a reaction to a tick bite.

So what is the best method of tick prevention and control? First, it's best to avoid frequenting heavily wooded areas if at all possible. Mowing of weeds and tall grasses in pastures and around the barn area is also critical. Not only will mowing take away the habitat and environment ticks like to live, but it will also minimize the chances for encounters with snakes! Insect repellents and pesticides are helpful too, both for us and our horses. Those containing DEET (N, N-diethyl-m-toluamide) are very effective at controlling tick, as well as other pesky insects such as mosquitoes and flies, and let's not forget fire ants we might pick up in the pasture or anywhere on the farm or trail. Fly control products labeled for use on horses and livestock may also help prevent tick bites, popular products for ticks in particular are the "spot-on" type insecticides available at most farm and feed stores. These often last up to two weeks and are very convenient in situations where horses are continuously outside or at times where daily applications of fly spray may not be an option. Spot on products not only help control ticks, but also other flying insects such as gnats, mosquitoes and flies. In addition to insecticide application on the animal, heavily infested areas or areas near woods can also be treated with ground application of liquid or granular pesticides, such as Sevin (carbaryl). Remember when using granular products to do so before a rain event or water the granules enough that the pesticide will be released.

Here are some other interesting facts to know about ticks: They are most active in spring, summer and fall, but sometimes even winter. If a tick has not found a host to feed on by fall, most will move into a sheltered location and become inactive until the next spring. A ticks mouth parts are barbed and it produces a glue-like substance to help hold onto the host once bitten. A female tick usually feeds 8-12 days until full and can increase her weight by 100 times! Eggs of a female tick found in crevices or a pile of leaves will hatch within two weeks, and the female can produce thousands of eggs. The complete life cycle of the tick varies by species, but can be from just a few months or up to two years.

Recommendations for the use of chemicals are included in this article as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by the North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage and examine a current product label before applying any chemical.

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6. How to Give Your Horse an Intramuscular Injection

While veterinarians predominantly give horses injections, some situations call for horse owners to give their horse an injection. Therefore, being able to safely administer an intramuscular injection is an important skill that horse owners should have. This article explains the techniques and locations to give a horse an intramuscular injection.

ANR-1018, New Dec 1996. Cynthia A. McCall, Extension Animal Scientist, Associate Professor, Animal and Dairy Sciences, Auburn University

Most horse owners occasionally must give their horse an injection. Fortunately, giving an injection to a horse is an easily learned skill. Determining what type of medication the horse needs and how to administer the medication is the critical part of the process and should be determined by your veterinarian.

There are four basic types of injections used with horses.

- Intravenous injections (IV) are given into a vein.
- Intradermal injections (ID) are administered into the skin.
- Subcutaneous injections (SQ) are given underneath the skin.
- Intramuscular (IM) injections are given deep into a large muscle mass.

Intramuscular injections are the most common type used in horses and are the focus of this article.

Although a few horses are needle shy and object to injections, most horses quietly accept a properly given IM injection. By following the methods outlined, horse owners should be able to safely and efficiently give an IM injection to a horse.

Safety First

Consult Your Veterinarian!

Although giving an IM injection to the horse is a routine procedure, it is not without risk to the horse.

Always consult your veterinarian about the type of medication, the dosage and the route (intramuscular, intravenous, subcutaneous, or intradermal) before giving any drug to a horse.

Improper drug handling and injection techniques can result in infections and life-threatening drug reactions as well as rendering the drugs or vaccines ineffective. Have your veterinarian discuss signs of drug reaction in the horse and how to handle this situation.

Precautions For Handlers

Giving an injection to a horse also can pose some risk to the human handler. If at all possible, have two people available when giving an injection. One person holds the horse while the other person gives the injection. A horse that seriously objects to the injection can easily injure the handler as well as itself. Also, some drugs used in horses can be absorbed directly through human skin or can produce severe reactions if accidentally injected into humans by needle punctures.

Make sure to ask your veterinarian about any safety precautions you should take when handling a drug or giving an injection.

Medication Precautions

Before giving any injection, read the drug label on the bottle. It is a good practice to check the label before you draw the medication out of the bottle and again before you inject the drug into the horse. Check the drug name to ensure it is the one recommended by your veterinarian. Remember, the generic name for a drug and the brand name may differ.

Dosage

Next check the recommended dosage. This may differ from the instructions given by your veterinarian. If you have any questions about the dosage, get clarification from your veterinarian.

Route Of Injection

Check the recommended route of injecting the drug. Again, if you have questions, check with your veterinarian.

Drug Handling And Storage

Follow the recommended method of drug storage, drug handling procedures, expiration date and precautions. Do not mix individually packaged drugs in the same injection. Compounds in one drug preparation may inactivate or decrease the efficacy of the other drug. It is better to play it safe and give the horse two separate injections.

Sterile Equipment

Next, make sure you use a sterile needle and syringe. Individually packaged, disposable sterile needles and syringes are the easiest way to ensure sterile equipment. Open the packages immediately before use and dispose of them immediately after use, preferably in an approved medical waste container. Never reuse a needle because a contaminated needle can easily introduce an infection into a horse and do not use the same needle or syringe on more than one horse.

Size Of Needle

The size of the needle depends on the medication being injected. A large-diameter needle (18 gauge) works best with thick solutions such as penicillin, while a smaller-diameter needle (20 to 21 gauge) can handle a thin, watery solution. Remember, a larger gauge number equals a smaller diameter. Larger gauge needles may break more easily than smaller gauge. If your horse reacts adversely to the injection and breaks the needle, you should make sure you can find both pieces of the needle. If you suspect a piece of needle may be retained in the horse's muscle, consult your veterinarian.

Most IM shots are given to adult horses with a 1 1/2-inch needle so that the medication is injected deep into the muscle mass. Foals are usually given IM injections with a 1-inch needle. Collect used needles, with their plastic covers attached, and syringes in a resealable plastic bag or bottle and take them to your veterinarian's office for disposal in an approved medical waste container.

Site Preparation

Antiseptic cleansing of the injection site is not commonly practiced by most horse owners or veterinarians. They simply brush any noticeable dirt from the injection area and insert the needle into dry skin. There is no noticeable increase in infection with this method when compared with a method that uses an antiseptic cleansing agent.

Studies have shown that swabbing the area with an antiseptic has very little effect on the cleanliness of the injection site. To thoroughly clean the injection site, the horse's hair must be shaved, the area scrubbed with an antiseptic soap which must remain in contact with the skin for at least two minutes, then rinsed with alcohol. This is impractical for most horse owners and most people do not want their horse shaved at the injection site. Using a sterile needle and syringe is more important in preventing injection site infections than thoroughly cleaning the site.

Horse Handling

When injecting a horse, you can never be sure how your horse will react; therefore, it is best to untie the horse and hold its lead line or have someone else hold it. A tied horse that overreacts to the injection may pull back against the tie rope. The resulting pressure on the horse's head may cause it to panic, injuring the horse or the handler. If the horse does pull back during the injection, simply move with the horse and continue the injection when it calms down. If the horse tries to kick, pull its head toward you. This automatically swings its rear end away from you. Some seriously needle-shy horses may need to be distracted by a twitch (a restraint device that tightly grips the horse's upper lip and nose) or the chain end of a stallion lead run through the mouth or over the upper gum. For horses that are extremely dangerous to inject, another option for the experienced horseman is tying or placing a horse in stock. You could also consult your veterinarian about this method.

Injection Sites

The site of the IM injection is important for the safety of the horse and the handler. Choose a large muscle mass that is actively used by the horse. This promotes drug absorption and decreases the chance of swelling and pain at the injection site. The site should allow the needle to be placed deep in the muscle without danger of hitting bone, ligaments, nerves or blood vessels. Also, the injection site should allow the handler to be in a relatively safe position if the horse objects to the injection.

Base Of The Neck

The base of the horse's neck is an injection site favored by many horse handlers because it allows the handler to remain in a relatively safe area by the horse's shoulder.

This site is a triangle defined by the nuchal ligaments along the crest of the horse's neck, the cervical vertebrae that form a backward S-shaped curve from between the horse's ears toward the point of the shoulder, and the scapula.

To locate the appropriate injection area, put the heel of your hand on the base of the horse's neck where it joins the shoulder, about midway between the crest and the bottom of the neck. The area covered by your palm is the injection site.

Higher toward the crest, you risk hitting the nuchal ligaments, and lower toward the bottom of the neck is where the cervical vertebrae and blood vessels are located. Make sure you stay near the

base of the neck rather than injecting higher up the neck toward the ears. This again avoids ligaments, bone and blood vessels and gives a larger muscle mass for the injection.

Remember to never give a nursing foal an injection in the neck. If the neck becomes sore from the injection, the foal may be reluctant to nurse.

Buttocks Region

Below the point of the horse's buttocks is another large muscle mass (semitendinosus) that is a good injection site. Because this muscle is used every time the horse takes a step, it is a good site for drugs that might cause swelling and pain at the injection site. It is the preferred injection site in foals because it is one of the larger muscles on a foal's body.

The major drawback to this injection site is that it puts the handler within kicking range of the horse and should be used only by experienced horse handlers. Horse handlers should remember that horses may kick at the person inflicting pain rather than at the painful area. You are not safe from being kicked if you stand on the left side of the horse and reach across the horse to inject its right buttock. The horse may kick at you with its left hind leg rather than kick at the site of the injection with its right hind leg.

To find this injection site, simply locate the bony protrusion that makes up the point of the buttocks (tuber ischii). Drop about 1 inch below the tuber ischii and inject anywhere in the large muscle mass along the back of the leg.

Pectoral Muscles

The pectoral muscles in the chest are another possible injection site. This site does put the handler at some risk because the handler must lean over in front of the horse to see the site clearly, putting him in a position where he could be easily bitten, struck with a front foot or run over by the horse.

The pectoral muscles tend to become sore easily and generally are only used when the horse is receiving prolonged treatment and is sore in other injection sites. However, if a problem occurs, this area drains very well. This injection site is the bunched muscles in the lower half of the chest between the tops of the forelegs.

Top Of The Rump

Many horse handlers use the top of the rump (gluteal muscles) as an injection site. This is a large,

frequently used muscle mass which allows the handler to stand in a relatively safe area while giving the injection.

The disadvantage to this site is that it has very poor drainage if a needle abscess develops. An infection at this site tends to spread up the loin and back and cannot be treated easily. Therefore, it is not a recommended injection site. However, it can be used as a last resort for a difficult horse or a horse that is sore in all other injection sites.

The proper location of this site is the intersection of a line between the tail head and point of hip and a line between the top of the croup and the point of the buttocks.

Injection Techniques

There are several methods of giving the horse an IM injection. The method you use will depend on your experience, the injection site and the horse's attitude. There are a few basic rules to follow, no matter which injection method you use.

Insert the needle perpendicular to the skin (do not slant upward or downward) and sink the needle into the muscle all the way to the hub, where the needle attaches to the syringe. This ensures that the needle will not shift during the injection and that it is deep into the muscle mass.

- Always pull back on the plunger before injecting the drug to ensure that you are not in a blood vessel. Some commonly used drugs can kill a horse if accidentally injected into the bloodstream.
- + If blood collects at the hub of the needle when you place it into the horse or you draw blood when you aspirate the syringe, then you must pull the needle out and redirect it before giving the injection. It is safest to pull the needle out completely and start over in a different area with a clean needle.
- + However, if you have a needle-shy horse, you can pull the needle out of the muscle, but not out of the skin, change the injection angle, and push the needle back into the muscle. Many needle-shy horses object to the needle going through the skin, which is the painful part of the injection, and will be relatively quiet once the needle is through the skin. Remember to aspirate again when using a clean needle or redirecting a needle to make sure you are not in a blood vessel.
- Insert the needle quickly and decisively. A fast stab is easier for you and less painful to the horse than inserting the needle slowly into the skin.

- Be prepared for an adverse drug reaction. Anaphylactic shock usually occurs rapidly and the horse may die within minutes. Discuss signs and proper treatment of anaphylactic shock with your veterinarian. He or she may leave epinephrine to be administered in case of such reactions. Make sure you have the epinephrine on hand when you are giving injections. If you have to go somewhere to retrieve the epinephrine, the horse may die before you can give it. However, remember to be safe and keep others safe. A horse with a drug reaction may be very dangerous and unsafe to approach.

+ Observe the horse for any signs of allergic reaction for about 30 minutes after giving the injection. Usual signs of allergic reactions such as swelling around the injection site, hives, increased respiratory rate, depression or agitation indicate that the horse may be allergic to the medication. Discontinue its use and consult your veterinarian immediately.

- If you are giving large, repeated doses of a medication, rotate injection sites-- left neck/right neck, left buttock/ right buttock -- to reduce soreness in any one area of the horse's body. Extremely large doses --more than 15 to 20 cc -- of a thick or irritating substance such as penicillin should be split into more than one injection to reduce soreness.

+ It is also a good practice to use more than one injection site -- for example, the neck and the buttocks -- when giving several separate medications or vaccines at once. Then, if the horse has a drug reaction it may be easier to identify the drug that caused the problem.

IM Injection Procedure

- The general procedure for an IM injection is to
remove the needle from the syringe,
set the needle into the muscle,
attach the syringe,
aspirate, and
slowly insert the medication.

Novice horse owners often worry about injecting air into the horse when the needle is inserted without the syringe attached. However, this amount of air injected into the horse is minor and will not harm it.

A quiet horse may allow you to simply pop the needle into its neck or buttocks. However, if the horse needs a little distraction, there are several methods of easing the needle stick. One good method is to pinch up the horse's skin next to the injection site for a few seconds prior to inserting the needle.

Another method is to hold the needle between the thumb and forefinger. Tap the horse vigorously two or three times with the side of your palm in the injection site, and without breaking your rhythm, rotate your hand and insert the needle. However, some horses may learn to associate the taps with the following needle stick and leave the area prior to the needle stick. Also, if used for injections in the neck, the tapping technique may promote a horse to be more reactive to hand movement around the head and neck area.

A similar method is rubbing against the direction of horse's hair growth several times while holding the needle between the thumb and forefinger. Insert the needle on the last rub.

Summary

Giving your horse an IM injection is an easily learned technique. By observing proper safety rules and injection techniques, you can often avoid infections and adverse drug reactions. A summary of the IM injection procedure follows.

Consult your veterinarian about the type of drug needed, route of administration, dosage, drug handling precautions and adverse drug reactions.

Read the drug label.

Use only sterile needles and syringes.

Untie the horse if you are not sure of its reaction.

Insert the needle straight into the muscle and up to the hub.

Attach the syringe to the needle.

Aspirate (pull back) on the plunger. If blood appears in the syringe, remove the needle and try again with a clean one.

Slowly inject the medication.

Observe the horse for signs of adverse drug reaction. Make sure you have epinephrine ready for

injection in case of anaphylactic shock.

Properly dispose of your needle and syringe in a medical waste container.

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7. Barn Fire Safety

Fire Safety in Horse Stables

<http://extension.psu.edu/publications/ub034/view>

Barn Fire Safety

<http://www.extension.umn.edu/agriculture/horse/care/barn-fire-safety/>

Barn Fire Safety Fact Sheet Can Help Keep Your Barn Safe

<http://myhorse.com/blogs/barns-farms-ranches/barn-fire-safety-fact-sheet-can-help-keep-your-barn-safe/>

Fireproof Your Horse Barn, Ranch, and Farm with 12 Lifesaving Fire-Safety Tips

<http://myhorse.com/blogs/barns-farms-ranches/fireproof-your-horse-barn-ranch-and-farm-with-12-lifesaving-fire-safety-tips/>

Prevent Horse Barn Fires

<http://practicalhorsemanmag.com/article/prevent-horse-barn-fires>

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8. Vet & Horse Feeding Clinic Sept 19

**Equine Vaccine & Coggins Clinic with Lunch program on Feeding
The Show & Performance Horse,**

Presented by Dr. Marty Adams.

Hosted by: Cherry Stone Hospital & Southern States of Reidsville

This will be held on September 19 beginning at 8am at Seven Springs Farm, Located at 3251 Ashland Road in Ruffin, North Carolina. [336-686-2841](tel:336-686-2841)

Special Offers that day include:

- Equine Coggins Test, \$18 Paper & \$323 Digital**
- All equine vaccines discounted**
- Equine Dental Coupons**

Please RSVP by September 17, 2015 by calling Southern States at [336-349-7074](tel:336-349-7074) if attending lunch and number of horses you plan to bring.

If you have questions please give Southern States [336-349-7074](tel:336-349-7074) or Dr. Suzanne G. Newcomb at [434-432-4410](tel:434-432-4410) or cherrystonevet@comcast.net

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9. Piedmont Pot Of Gold Classic Show 9/19 Piedmont Saddle Club

The Piedmont Pot Of Gold Classic Horse Show will be held on September 19 at Piedmont Saddle Club. This show is a collaboration between PHA and NC Palomino Exhibitors Association!

On September 19, you will have the opportunity to show in PHA open show classes and also show in registered palomino classes. Remember you must be a member of NC Palomino and have your horse registered palomino in order to show in those classes, but the others are open to anyone.

We will award high point and reserve high point awards in each division for the weekend. Nice ribbons, clocks and gift certificate will be

awarded! The show will start at 9am with halter classes. The show is open to everyone. We have something for everyone; adults and youth. This year PHA is offering field hunter, stock type hunter, working western and western pleasure.

You do not have to be a member to show, but there are many benefits of being a member of PHA; reduced entry fee at sanctioned shows, accumulate points for year-end awards, and much more.

We hope you will become part of the PHA family!!

You can find all the details about all the shows as well as membership forms on the web site:<http://www.phasince1971.com/index.htm>

Also find us on Facebook. ++++++

10. DON'T FORGET - Soil Testing Charging A Fee During Peak Season

NCDA&CS Agronomic Division
- Peak-season Soil Testing Fee

There is a \$4 fee charged for all soil samples processed by the NCDA&CS Agronomic Division during its busiest season: December through March. (No fee April through November).

So if you are planning to take soil test, go ahead and get them sent in to avoid the fee.

GET YOUR SOIL SAMPLES TAKEN & SENT IN!

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11. HAY

PLEASE LET ME KNOW IF YOU HAVE HAY FOR SALE!

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!

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12. Swap Shop

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13. Take A Load Off

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

Organic Vegetables

The other day it was my turn to prepare dinner so I asked my wife to go over to the local market and buy some organic vegetables. She came back rather upset. When I asked her what was wrong she said, "I don't think I like that produce guy. I went and looked around for your organic vegetables and I couldn't find any. So I asked him where the organic

vegetables were."

"He didn't know what I was talking about so I said,
'These vegetables are for my husband. Have they
been sprayed with any poisonous chemicals?'"

"And he said, 'No, ma'am. You'll have to do that
yourself.'"

Thanks For This Send In!

I always need more help with the jokes!

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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!**

**PLEASE SEND TO ME YOUR IDEAS FOR ARTICLES
IN FUTURE NEWSLETTERS!**

I WANT TO HEAR FROM YOU!!!!

**Please remember our Troops who are serving our
Country (and their families), those who have come home
with wounds, and the families that paid the ultimate
sacrifice.**

HAVE A GREAT WEEKEND!

Ben

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Ben Chase

**Rockingham and Guilford County Extension Agent
Agriculture & Livestock**

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