



# EQUINE NEWS

**Utah State**  
UNIVERSITY

COOPERATIVE  
**extension**

October 2009

## Welcome!

Welcome to the USU EQUINE NEWS

Fall semester has begun and our equine program is growing in leaps and bounds. When you receive this newsletter we will only be days away from groundbreaking on our new Equine Center, occurring on October 9th. While the facility will be built in stages as money is raised, the horses and program will be moved as of summer of 2010. If anyone wishes to become a donor for this project, please let me know. We appreciate all of your support. We are hosting some evening events on internal parasites and fecal testing. Participants will be able to bring a manure sample to test and determine parasite load. Enrollment will be limited. We are also hosting a nutrition clinic and a first aid clinic.

## News

- The USU Equine Education Center welcomes sound horses into the program. All donations of horses, tack and equipment are tax deductible. To view recently donated horses or learn more about the undergraduate emphasis please go to: [www.advs.usu.edu/academics/equine](http://www.advs.usu.edu/academics/equine)
- **NEW FACT SHEETS on a variety of topics are now available on the equine website under publications. This year's fact sheet topics include Internal Parasites, Fecal Testing, Importance of Daily Observations, and Managing your Horse on a Tight Budget. Fact sheets on other topics can also be found at this site. Newsletters can be found at: [extension.usu.edu/equine](http://extension.usu.edu/equine)**

*Equine News is a quarterly newsletter written and produced by Utah State University Extension.*

This month our topics include: Manure Management, Poisonous Plants and Your Horse, and Summer Internship Experience.



## Upcoming Events

### EDUCATIONAL EVENTS

#### October 9:

Ground-Breaking Ceremony for Equine Educational Center

#### October 15

Internal Parasites and Fecal Testing, Price, Utah. Contact Dr. Pat Evans, [pat.evans@usu.edu](mailto:pat.evans@usu.edu)

#### October 22

Internal Parasites and Fecal Testing, Roosevelt, Utah. Contact Dr. Pat Evans, [pat.evans@usu.edu](mailto:pat.evans@usu.edu)

#### October 24

First Aid for your Horse, South Jordan, Utah. Contact Dr. Pat Evans, [pat.evans@usu.edu](mailto:pat.evans@usu.edu)

#### October 31 –Nov 1

Buffalo Round-Up, Antelope

Island. Dr. Evans will give equine presentation Oct. 30

#### November 14

Getting the Most from your Horse Feeding Dollar, Hurricane, Utah.

#### November 17

Internal parasites and Fecal Testing, Davis County. Contact Dr. Pat Evans, [pat.evans@usu.edu](mailto:pat.evans@usu.edu)

#### November 19

Internal parasites and Fecal Testing, Utah County. Contact Dr. Pat Evans, [pat.evans@usu.edu](mailto:pat.evans@usu.edu)

**Clinics are added on a regular basis so please check the website for updated information.**

**Please let us know if we can provide a program for your club, county or 4-H youth.**



## Managing Horse Manure– Part II

### Nancy Mesner

Associate Professor, Extension Water Quality Specialist

In July's newsletter Nancy Mesner discussed manure management and environmental concerns. In this newsletter Nancy will discuss applying manure to pastures and composting.

Manure application to fields is an excellent way to return nutrients and organic materials to the soil. This also saves money as it reduces the need for purchasing as much inorganic fertilizer. Care must be taken, however, to apply manure at a rate that doesn't exceed the nutrient needs of the plants. Applying excess fertilizer, either as manure or fertilizer bought at a store, results in build-up in the soil, runoff of these fertilizers to streams or nutrient contamination of groundwater.

As a very rough estimate, an acre of pasture can utilize the waste from one 1400 pound horse. For a more accurate idea of the required application rates, have the soil tested for nitrogen and phosphorus concentrations. The results will determine what the nutrient requirements are for the soil and plant crop. The results can be compared to the nutrients held in the horse manure (see table) to determine how much can be applied to the field.

Table: Characteristics of Horse Manure

Nitrogen	0.28 pounds / day
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.11 pounds / day
Potassium (K <sub>2</sub> O)	0.23 pounds / day
Volume	0.81 cubic feet / day
Weight	50 pounds / day
Percent moisture	78 %

It is best to apply and spread manure in the spring, when plants are actively growing and the nutrients will be rapidly absorbed. Incorporate the manure into the soil as soon as possible. Animals in pastures, of course, directly "apply" manure to the pasture. Breaking these piles up in the spring will help distribute the nutrients more evenly.

When applying manure, be careful to avoid any natural drainages, open water, wells or sinkholes. On flat land, do not apply within 100 feet of open water or 200 feet of wells. Increase the separation distance on land that slopes toward water or wells.

When watering horses, try to minimize direct contact with streams or other open water. Animal grazing can cause bank erosion and damage the vegetation near the water's edge. This vegetation performs the critical role of trapping polluted runoff. If horses need to be watered directly from a stream, limit their access to a very short reach of stream or shoreline.

If the horses generate too much manure to incorporate into the land, it may need to be removed. Find a nearby landowner who could make good use of the manure as a soil enhancement or arrangements may need to be made with a pick up service. The manure from one horse will generate approximately 18 pickup truck loads in a year.

An excellent alternative for managing horse manure is composting. The composting process reduces the volume of the manure, kills parasites, fly eggs and weed seeds (by generating heat), reduces odor problems, and stabilizes the nutrients in the manure.

Create layers of manure and "bulking material" such as straw. The pile needs air movement and should be turned periodically. Heat will be generated from decomposition. A compost pile requires about 3 weeks of high temperature and about 6 months to complete the process. Once completed, compost results in a high quality soil amendment that slowly releases nutrients and adds organic material back to the soil. When applying compost, use the same separation distances from water and wells as with manure. Similarly, make sure that the composting area does not generate runoff.

Backyard composting in Utah. <http://extension.usu.edu/files/publications/factsheet/HG-Compost-01.pdf>  
 The Composting Process. [http://extension.usu.edu/files/publications/publication/AG-WM\\_01.pdf](http://extension.usu.edu/files/publications/publication/AG-WM_01.pdf)  
 Manure solutions - <http://extension.usu.edu/waterquality/htm/agriculturewq/manuresolutions>



## Plants Poisonous to Your Horse– Part II

Bryan Stegelmeier  
Veterinary Pathologist

Dr. Stegelmeier's article in the July newsletter began discussing plant concerns for horses. Here he continues with additional plants of which horse owners should be aware.

### *Trifolium hybridum* (alsike clover) – Photo 1.

Alsike clover is one of about 300 *Trifolium* species that have been associated with phytoestrogenism, slobbers, liver disease and photosensitivity.

Several toxins have been suspected, but none has been proven. Toxicity may be related to environmental conditions and mold or aflatoxin production. Exposures of weeks to months generally are required before animals develop disease. Three syndromes have been identified. The first, called "dew poisoning", is characterized by photosensitivity (sunburn), colic and diarrhea, depression or excitation. The second, called "big liver disease" is severe liver disease or recurrent bouts of liver disease that is seen clinically as icterus, weight loss, CNS depression, anorexia, incoordination, dark and discolored urine and an enlarged fibrotic



Photo 1

liver. The third syndrome is associated with excessive salivation or slobbering, when horses eat clover that is infected with a fungus that causes

brown leaf spot. Horses stop slobbering when exposure is discontinued.

Signs of poisoning depend on the syndrome and include anorexia, loss of body condition, jaundice, hepatoencephalopathy (neurologic disease) and death. Signs of other syndromes include sunburn with dermal edema, necrosis and sloughing of skin and possibly excessive salivation.

Treatment includes removing horses from exposure to the plant, treating photosensitivity and supportive care. Recovered animals often are hepatic cripples and more susceptible to liver failure or other liver diseases. It is recommended that alsike clover not be included in pasture seed mixes for horses.

### *Xanthium spp* (Cocklebur).

In animals, the toxin in this plant disrupts cellular metabolism, causing severe liver disease. Poisoning most often occurs when horses consume feed contaminated with seed or when they eat small seedlings. All animals are susceptible to seedling poisoning. Common signs include neurologic disease related to liver failure, depression, weakness, prostration, abnormal eye position and movements, paddling, convulsions and coma. Other changes include stocking up (swelling and edema of the feet and legs) and vasculitis. Severely poisoned animals generally die or are hepatic cripples that perform poorly. Treating poisoned horses is symptomatic, with little response, as liver damage is extensive when animals become sick. It is important to mow or remove cockleburs before they form seeds and cause heavy infestations.



## Katie Ann Stirling Summer Internship Experience at Silver Lining Farm

I spent the summer of 2009 in Pennsylvania on a small facility called Silver Lining Farm. The farm has well-bred sport horses and ponies. I worked with eight horses: Two yearlings, two 2-year olds (one still a stallion), two 3-year olds, and two older horses. I worked with the yearlings on ground manners while I started the 2 year olds under saddle. I started one of the three year olds jumping and I used the two older horses in my riding lessons. The other 3 year old and one of the 2 year olds were my favorites, Symphony and Smarty.

Symphony is an Oldenburg-Thoroughbred cross, who before she arrived at Silver Lining, was introduced to several things incorrectly and, therefore, mistrusted people. I began working with her to handle and trim her feet. She improved rapidly, and within two weeks, I was able to trim her front feet. I introduced her to the round pen, teaching her voice commands of walk, trot, and canter, and most importantly “whoa.” Gradually she calmed down and began to listen. Working her with the saddle followed and by the end of June, I was able to put weight across her back. In the second week of July, I started riding her. Symphony seemed to enjoy being ridden and having a job. She was the horse I was able to see the most improvement during my internship program.

Smarty is a two year old sport pony registered in the Weser-Ems pony division. He even has his own passport, it’s amazing. He was very different from Symphony in that, Smarty loved to eat and walk around doing nothing. He was very easy to get along with so I tried to do many different things with him. I taught him to drive and pull a cart, but he was also trained to be ridden. His attitude about the things I introduced him to was always one of “so what?” It was great. At the end of the summer I also gave a little girl riding lessons on him and he was perfect for her. Smarty is one of the most easy-going ponies I have ever met, and of course, very cute.

While I was at Silver Lining Farm, the owner gave me riding and jumping lessons. I do wish I could have had more lessons, but the ones I had were very useful. Other tasks I did was train the younger horses to have their feet trimmed and trim them, help develop a sweet-feed ration, and keep the facility and barn in an organized and clean fashion.

One of the things I felt needed to be improved at Silver Lining Farm was their method of training. At USU I have had the opportunity to ride and train horses that are soft and supple. I felt that at Silver Lining Farm the horses were trained to jump and travel along the rail without much



foundation. The horses did not bend very well and were not collected. When approaching a jump, they would speed up, not pay attention to the rider and over-jump because they had no foundation. It could be fun but also very dangerous at times.

My experiences at Silver Lining Farm taught me that I definitely do not want to have my own barn and have to pay all the bills associated with that. I also discovered that while I love jumping and doing cross-country I would rather train the horses more the Quarter Horse style than the sport horse style. I really enjoyed working with some of the horses in Pennsylvania but I am also really glad to be back at USU and working with the horses here in Logan.

*Katie Ann is a senior in the USU Equine Science and Management Emphasis graduating in December of 2009.*