U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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University of Minnesota Extension

Come See U of M Faculty at the MN Horse Expo

Date & Time	Topic	Speaker
Friday, April 25th		
2:30, 4:00 & 5:30 pm	Get a behind-the-scenes tour of the new U of M Equine Center	
2:00 pm	Wound Management	M. Trent, DVM
3:00 pm	Acupuncture	H. Bedford, DVM
4:00 pm	Hay Alternatives (Hay Extenders)	M. Hathaway, PhD
Saturday, April 26th		
10:00, 11:30 am & 1:00 pm	Get a behind-the-scenes tour of the new U of M Equine Center	
11:00 am	Hormones and Hooves	C. Ward, DVM
2:00 pm	Muscle Soreness in Horses	S. Valberg, DVM
3:00 pm	Common Hoof Problems	M. Boyce, DVM
4:00 pm	Genetic Diseases	M. McCue, DVM
5:00 pm	Interpreting an Equine Hay Analysis	K. Martinson, PhD
Sunday, April 27th		
2:00 pm	Pasture Management	P. Peterson, PhD
3:00 pm	Mysteries of Equine Arthritis	T. Trumble, DVM

Research Update: Composting Manure

Many benefits can be derived from composting horse manure, including a reduction in the volume of material that needs to be stored or disposed of, the destruction of parasite eggs, larvae, and weed seeds, and the conversion of water-soluble nutrients into organic forms that are more environmental stable.

Horse manure has an ideal Carbon (C): Nitrogen (N) ratio of about 30:1, an important factor in composting. However, bedding types can easily offset this ideal ration. Hay or straw has a C:N ratio of about 80:1 where wood shavings commonly have a C:N ratio of 300:1. In the case of hay, straw, and wood shaving, nitrogen is usually added to bring the C:N ratio to about 30:1.

Research conducted at the University of Florida evaluated two bedding types, wood shavings and grass hay (oat straw is not commonly grown in FL), and its effects on compost.

Maximum temperature required to destroy parasites (55°C) and weed seeds (63°C) were reaching within 2 weeks of composting with the wood shaving treatments, but not with hay treatments. Composting reduced the weight of materials by 14 to 55%, with a greater reduction in hay treatments.

The researchers concluded that manure mixed with wood shavings had greater decomposition and nutrient stability after 84 days of composting than manure and hay bedding.

Composting can be an effective way to manage manure and waste, however, it takes careful management. Compost in this study was aerated and moved every 14 days for 84 days, and water and nitrogen were added as needed.

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Up Coming Events

U of M Vet Meet and Greet
Tues. April 22 from 7- 9 pm
Hamel Community Building
Topics: Muscle Soreness & Arthritis
Questions? 763-479-2932

MN Horse Expo
St. Paul Fairgrounds
April 25, 26, and 27
U of M Faculty will be speaking at the Ramberg Building (schedule at left). For description of topics and speaker information, visit www.mnhorseexpo.org

Would You Like to Volunteer at the Equine Center?
Contact Sue Loly at Lolyx001@umn.edu

Would You Like to Tour the Equine Center?
Contact Vivian at Neige001@umn.edu or 612-624-3928

Would You Like to Rent the Equine Center?
Contact Bob at john3854@umn.edu or 612-625-7755

Do you have an excess of composted horse manure? Do you want composted horse manure?
Contact Betsy at 612-596-1175 or eliza003@umn.edu

Spring Pasture To-Do List

By: B. Wieland, U of M

Spring is an important time of year for pasture care. Here is a list of things you can do in the next couple months to get your pastures looking great.

1. **Plant Seed.** The best time of year to seed a pasture is fall. However, spring is an acceptable time of year if you missed the fall deadline. April 1st to May 15th is the best time in the spring to reseed your pastures. Make sure you keep horses off newly seeded pastures until the grasses are well established and you have mowed 2 – 3 times.

2. **Take Soil Samples**. See if your pastures need any nutrients. Once the frost is out and the soils have dried, samples can be taken. Contact your county Extension office or the University of Minnesota Soils Lab for a sample kit. The lab's phone number is 612-625-3101.

3. **Fertilize**- As stated in 2, test your soils first, so you know how much you need. Often, only Nitrogen is needed in pastures.

4. **Spray Herbicides**. Spring is a good time to spray annual weeds as it prevents them from getting established. However, mowing is usually sufficient for annual weed control unless weed densities are high.

5. **Check fences.** Snow and deer can be hard on fences. Check them before you turn out the horses.

6. **Plan your grazing system**. Think back to last year whether you had enough grass or if the horses turned the pasture into a putting green or mud pit. You may need to supplement your horse with hay during certain times of the grazing season and set aside a sacrifice area when the pasture needs a rest.

7. **Let the grass grow**. Keep the horses off the grass until the ground firms up and the grass has a chance to get growing. Once the grass is about 6 – 8" tall, start easing the horses onto the pasture in 15 minute daily increments (15 minutes the first day, 30 minutes the second day, 45 minutes the third day, etc…), until the time on pasture reaches 5 hours a day, after which the horse can be given unlimited access.

Ask the Expert

By: Paul Peterson, PhD, U of M

Q: It's nearly time to seed our hay field into horse hay after having it in corn last season. Can you tell me what would be a nice mix of alfalfa and timothy? Also, do you know what rate to seed oats as a nurse crop to keep down weeds? I do prefer alfalfa in my horse hay, but not clover.

A: I like your plan of seeding an alfalfa-grass mixture under an oat nurse crop. However, there may be better grass options than timothy in that mix. What kind of soil do you have? That might influence the best grass option(s). I trust the field has adequate pH (upper 6.0's), potassium levels, and drainage to support good alfalfa production?

For the oats, if you're on sandier soil, no more than 1 bushel (bu)/ acre (ac). If you're on heavier, more clayey soil, you can probably go as high as 1.5 bu/ac. If you're planning to harvest the oat for grain, use no more than 1 bu/ac no matter what the soil type.

Regarding the grass species in the field, a number of different options can work well. Timothy is often favored by horse owners, but it lacks the total season production that other grasses have. It generally provides a nice first cutting, but not much after that. This would be even more pronounced on a more droughty soil, so 2nd and 3rd cuttings would be mostly alfalfa.

Smooth bromegrass has some of the same problems with yield distribution as timothy. Orchardgrass generally has better yield distribution, drought tolerance, and total season yield than timothy or brome. Same is true for reed canarygrass. If you use orchargrass, its probably best to request a relatively late-maturing variety for better hay quality potential and better persistence. If you use reed canarygrass, ensure its a low-alkaloid variety.

For a hay mix that you'd like close to 50:50, I'd recommend 7-10 pounds (lb)/ac of alfalfa. Orchardgrass or reed canarygrass seeded as the sole grass could be seeded at 4-6 lb/ac. Bromegrass has a larger seed, so that would be seeded at 7-10 lb/ac. Timothy seeds are small, so 3-4 lb/ac is usually adequate.

If you choose to use some combination of grasses, you can decrease their rates proportionally. The ranges provide flexibility for what species you'd like more dominant, if any.

Designing hay mixtures is science-based, but there's certainly some art and personal preference involved as well! As a side note, most horses do not need the amount of protein that is usually found in alfalfa dominate hay. The excess protein exits the body via the urine and can lead to strong ammonia smells. Finally, clover, generally speaking, is more difficult to dry in hay compared to alfalfa.