Equine Management Options in an Urban/Suburban Setting

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Introduction

While suburban/urban horse owners face many of the same management issues as rural horse farm owners, close proximity to neighbors and small acreage farms can intensify environmental and liability problems. There are more and more horse workshops and educational information geared to adults offered through extension and equine businesses. A growing number of adult horse owners look to extension for nonbiased science based information in spite of previous misconceptions that extension "only" serves 4-H youth. Often, field-based educators with little to no horse responsibilities or equine expertise are uncomfortable dealing with horse questions. However, an expertise in equine management isn't always necessary to successfully work with the horse industry. Many of the equine industry's questions revolve around manure, pasture, and facility management – the same issues that face other livestock operations. This paper will help the extension educator identify cross cutting issues that face the horse industry in the United States, define some of the nuances that are specific to suburban/urban horse ownership and mentality, and identify resources that can help the educator answer horse questions in the field. This paper is available online at: www.MyHorseUnversity.com, with hot links. Other science based equine resources can be found at www.eXtension.org/horses. View this paper online to bookmark these and the sites referenced in this paper for quick access.

Environmental/Land Use Issues

Pasture and Turnout Management

Turnout Requirements. Most horses thrive when they are housed outside, providing they have shelter from freezing rain, extreme sun, and biting bugs. However, many horses are stalled, for the owner's convenience, to keep the horse's coat in "show shape", or for health reasons. Stalled horses need access to daily turnout (ideally around six hours) or exercise (training, riding, lunging, etc.) to maintain conditioning, respiratory health, and to avoid behavioral vices such as pawing, kicking, wood chewing, and weaving in the stall. Any turnout area should be big enough (about the size of a 40 X 80 foot riding arena) and have adequate footing so a galloping horse can easily stop at the fence line.

Forage Requirements. Horse owners often do not consider the forage in their pastures/paddocks as a replacement for some of the horse's ration. A small turnout area (or bare ground) should not be expected to provide any level of nutritional substance for the horse. If you are utilizing your pasture as your horse's main nutritional source, the average stocking rate of a managed pasture to support the horse's nutritional intake is 2 acres per horse with an increase in acres with dry and rocky pastures. Horses will consume 1.5 – 3 % of their body weight in feedstuff depending on

their work load, stage of growth and production status. The forage component of a horse's diet should make up a minimum of 1% of their body weight. So, the "1000 pound horse" should get at least 10 pounds of hay per day to keep the digestive system moving. Most adult horses that are idle or lightly worked can be maintained on a forage diet alone, as long as their vitamin and mineral requirements are met. There are several brands of vitamin/mineral supplements available to balance forage only diets and either are palatable alone, or can be put in a small amount of concentrate.

An excellent nutritional resource for owners and educators is the ***Nutrient Requirements of Horses*** (revised in 2007). This book is both practical and technical, and has key information on the nutritional needs (requirements, toxicities, and deficiencies) of horses and other equids. This book is primarily intended for animal nutritionists, veterinarians, and other scientists; however, individual horse owners and managers will also find some of this material useful. As a companion to the 6th revised edition of *Nutrient Requirements of Horses*, a free computer program to help you determine nutrient requirements of horses, is available online. The program was developed from equations and other data presented in the volume and complements the information in the book, by performing some of the procedures needed to calculate requirements. For more information on the 2007 Nutrient Requirements of Horses authored by the National Research Council Equine Advisors go to http://www.nap.edu/catalog/11653.html#description.

Hay Purchase. Since horses in boarding stables or housed on small acres often have limited pasture access, feeding hay is essential to meet the horse's nutritional requirements. Typically, horse owners use small square bales (45-70#), because of the ease of handling, storage and small horse numbers. Buying hay at local feed stores in small quantities can be costly and unreliable, from a hay quality standpoint due to multiple hay sources, and/or deliveries. Horse owners need to be educated in hay selection and storing large quantities of hay. In general, most horses do very well on moderate quality grass hay. Lactating broodmares and young growing horses may benefit from alfalfa or alfalfa/grass hay. Fescue hay is not as palatable as other grasses and endophyte infested fescue can cause problems in pregnant mares during their third trimester, including agalactia, thickened placenta, and abortion. Horse hay should be free of mold, dust and debris as well as toxic plants like hoary alyssum or blister beetles found in alfalfa fields in the southwest. Hay testing is a good option for horse owners purchasing hay in large quantities who are balancing rations for horses with high nutrient requirements.

For more information, read the University of Wisconsin Extension Bulletin "**Buying Horse Hay**" at: http://learningstore.uwex.edu/pdf/A3772.pdf.

Forage testing specific for equine requirements can be performed at the following labs:

Dairy One at: http://www.dairyone.com/Forage/services/default.asp

MSU Diagnostic Center for Population and Animal Health at:
http://www.animalhealth.msu.edu/Sections/Nutrition/

UVM's Agriculture and Environmental Testing Laboratory at:
http://www.uvm.edu/pss/ag_testing/

Sacrifice Lots. Suburban horse owners may have limited land available to provide horses with a productive pasture. Owners need to understand that if they overstock their pastures, there is no pasture mix that will provide adequate pasture through the growing season. Sacrifice lots, smaller turnout lots that have little to no nutritional value, can be used to reduce the pressure on pastures, particularly in early spring or after a hard rain. Hay should be provided in off-the-ground feeders, to avoid sand ingestion which can lead to colic. In addition, using drain tile in the high traffic areas and picking up manure weekly can help avoid the mucky lots that typify some overcrowded horse farms. UVM has published a booklet titled "**Greener Pastures**" on improving high traffic areas in your paddocks. For more information, email bonnie.tucker@uvm.edu.

Pasture Management. Many new horse owners don't have an agriculture background and need help with pasture management. Pasture establishment, renovation and maintenance, as well as, identifying toxic plants are all frequent questions that most extension educators with a good background in forages are more than equipped to answer. Optimum forage species will vary according to regions, soil type, and conditions of a farm. However, certain species may need to be avoided based on palatability issues and toxic reactions. In general, pasture mixes for horse farms should avoid fescue seeds, and if they are included, they should be endophyte free seeds. Some horses will have reactions (photosensitivity reactions or a condition known as slobbers) to certain variety of clovers under certain climatic conditions. Horse owners can utilize rotational grazing systems to maximize their grazing. Weed prevention methods may include periodic mowing, soil test based management (fertilization or lime application) and ensuring field stands are not overgrazed.

For more information on pastures, read the University of Wisconsin Extension Bulletin "Pastures for Horses" at: http://learningstore.uwex.edu/pdf/A3680.pdf.

Horse owners in southern states should also read the Texas A&M University Extension Bulletin at: http://animalscience.tamu.edu/main/academics/equine/hrg006_hpastures.pdf.

Also, go to UVM's pasture resource: http://pss.uvm.edu/vtcrops/pasturegrazing.html

For a link to many poisonous plant websites, use Cornell's website at: http://www.ansci.cornell.edu/plants/index.html

Manure Management. Oversized manure piles on horse farms can lead to complaints by neighbors. Horse owners may be reluctant to spread manure and used bedding on their pastures for fear of parasite exposure. Often, small horse farms don't have access to tractors and manure spreaders or even the land base to apply manure. Improper manure management can lead to water pollution, fly, and odor issues. In addition, neighbors don't like to look at a pile of manure over their fence line. Composting is one way to stabilize the nutrients in manure and break down bedding material to provide a nice complement to the soil when used correctly. If active composting versus stockpiling manure is practiced, neighborhood gardeners as well as nurseries may be interested in taking the composted material. Other alternatives include removal to community compositing sites, or hauling the manure and bedding to land fills. There are also electrical plants that are utilizing used horse bedding as an alternative energy source. Horse owners need extensive education in manure management; however, they may not realize this until a complaint has been filed on their farm. Horse workshops with "Manure" in the title typically aren't very popular. However, manure management curriculum that is relevant to horse farms can successfully be worked into other horse management

topics including health care, pasture management and facility management to increase awareness of proper manure management practices.

The Michigan State University Extension Equine Team developed the "**One Horse or One Hundred**" bulletin series that addresses land use issues including neighbor complaints, site planning, water quality, and manure management on the horse farm. To download the pdfs go to: http://www.canr.msu.edu/horseadults/index.html?url=publications/publications.html

For more information on composting horse manure go to: http://www.uvm.edu/extension/publications/horses/horsemanurecompost.pdf

Land Access/Open Spaces. Urban sprawl contributes to the growing concern land access for horse farms and riding trails are being threatened. While some may see the 5-acre small horse farm as part of the problem, others would argue that promoting horse-friendly communities helps conserve open spaces provided by hay fields, pastures and riding areas. Horse owners need to be proactive in attending community functions and working with decision makers on zoning issues affecting horse farms and boarding establishments. Many of the reasons horses are being zoned out of communities have to do with manure management related problems. Educating both the community and horse owners in manure management can help establish horse friendly community zoning ordinances.

Rails-to-trails Conservancy is a popular national program that develops old railways into trail access for equestrians, bikers and hikers. However, there are concerns that horses will bring in invasive seeds and endanger water quality of nearby streams, wet lands, and lakes. In addition, there is a struggle between other trail users and equestrians whether it is due to horses spooking on the trail, or hikers and bikers upset with manure on the trail. Local trail riding organizations must be proactive in advocating for equestrian trail usage in their states, as well as educating trail riders in responsible trail sharing.

To learn more about trail riding, go to the **American Trail Horse Association** web site at: http://www.trailhorse.com/.

To learn more about the **Rails-to-trails Conservancy** go to: http://www.railtrails.org/index.html

The **Oakland Equestrian Coalition** is an example of an equine advocacy group representing the varied equestrian interests in Oakland County in Michigan. They present varied equestrian needs to the Oakland County Planning and Economic Development and promote equestrian growth and activities in their county. For more information go to: http://oaklandequestrians.org/.

Facility Risk Assessment and Liability Analysis

(Exert from the full article by Drs. Betsy Greene and Josephine Trott in Journal of Extension. Dec. 2004, Vol. 42 Num. 6 and can be read in full online at *http://www.joe.org/joe/2004december/tt5.shtml*.)

There are inherent dangers associated with equine activities, as documented by the fact that 44 states have equine limited liability statutes. These statutes protect horse people from frivolous lawsuits if there is no negligence involved. However, many equine professionals and amateurs put themselves and/or their clientele at unnecessary risk in their barns and facilities while working with horses.

Based on the results of barns evaluated using the Self-Guided Barn Safety Analysis booklet, most equine facilities have areas that are unsafe, regardless of the care taken in designing for safety. Extension professionals have the opportunity to intervene prior to an avoidable injury.

Problems can vary from the actual structure or set up of the barn/arena, to the behavior and/or habits of the participants. For example, dependable school horses do exactly what they are expected to do most of the time, but in the case of an unexpected perceived danger, noise, or distraction, the natural instincts (fight or flight) of the horse will override the training.

The Self-Guided Horse Facility Analysis is designed to help stable owners or users evaluate the risks at facilities and prevent accidents involving themselves, clientele, visitors, and horses at their barn. This easy-to-use booklet provides a proactive, educational tool that will alert barn owners and users to dangerous environments or procedures. Using checklists and supporting information to identify problems, it enables users to improve the safety of their facility through either structural or procedural changes. By helping people identify high-risk areas and the potential liability that exists, this tool may decrease the exposure of equine enthusiasts to accident or injury through education.

Self-guided Horse Facility Analysis Booklet and Tools for Promoting Biosecurity in Vermont's Equine Community CD-ROM
Contact Betsy Greene, University of Vermont Extension
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The Horse Facility Handbook published by the Midwest Planning Service is a comprehensive guide to horse facility design and covers all aspects of horse farm construction including barns, sheds, fencing, and manure storage. Go to:
http://www.mwps.org/index.cfm?fuseaction=c_products.view&catID=773&productID=6794

The book **UNDERFOOT (2007 edition)** from the United States Dressage Federation covers the construction and maintenance of riding arenas. Go to:
http://uspcbooks.stores.yahoo.net/unusguidtodr.html

Equine Law and Horse Sense and More Equine Law and Horse Sense by Attorney Julie I. Fershtman are two books that every horse enthusiast should read. Go to:
http://www.horseinfo.com/cart/eqlaw.html

The MSUE Equine AoE Team has collaborated with the University of Vermont Extension to develop a **Virtual Horse Facility Tour** to aid in designing facilities and identifying and reducing risks associated with horse farms. Go to: http://web1.msue.msu.edu/aoe/equine/index.html?url=community/community.html and click on the Virtual Horse Facility Tour.

Equine Law and Horsemanship Safety contains comprehensive resource materials on equine law and horsemanship safety. It is hosted by the University of Vermont. Both the legal and horsemanship materials are suitable for use by law students, lawyers, and the general public. To link to this site, go to: http://asci.uvm.edu/equine/law/equine/

Current Hot Topics in the U.S. Horse Industry

The Unwanted Horse. The expense of caring for a horse makes keeping an unusable horse a costly and sometimes unsafe option if the horse has dangerous behavioral problems. With the decline in horse slaughter access to the U.S. as well as environmental concerns of burying horses, there is a growing concern for the welfare and disposal of unwanted horses. The American Horse Council has sponsored the ~~Un~~wanted Horse Coalition to address this national concern. For more information go to: http://www.unwantedhorsecoalition.org/?id=4

National Animal Identification System (NAIS). While equine will be one of the last livestock species to be affected by NAIS, it is a growing concern with many horse owners who have the same general fears of government oversight as other livestock owners in the United States. Extension will play a key role in educating horse owners in the importance of biosecurity on the farm and how horse movement can play a key role in spreading diseases related to other food production animals. For more information on the NAIS, go to: http://animalid.aphis.usda.gov/nais/index.shtml. The Equine Species Working Group, formed to review and evaluate the NAIS within the Equine Industry, offers more information at: http://www.equinespeciesworkinggroup.com.

Other General Resources

A good resource for information on horse health can be found on the **American Association of Equine Practitioners** web site at: http://www.aaep.org/index.php. This web site includes questions answered by veterinarians and articles on a variety of horse health topics.

For the **American Association of Equine Practitioner's recommendations on vaccinations** go to: http://www.aaep.org/health_articles_view.php?id=171.

For the American **Association of Equine Practitioner's recommendations on internal parasite** control go to: http://www.aaep.org/health_articles_view.php?id=125.

The **American Farrier's Association** website offers information on horse hoof care for the horse owner as well as provides resources for the professional farrier. Go to: http://www.americanfarriers.org/

As the national trade association representing the horse industry in Washington, D.C., the **American Horse Council** works daily to represent your equine interests and investments. The AHC web site provides information on statistics, legislation and regulations related to the horse industry. Go to: http://www.horsecouncil.org/

HorseQuest, the horse community of practice at eXtension, offers free, science based, peer-reviewed information on a range of equine related topics. In addition, there are learning lessons, articles, event calendars, and frequently asked questions. For more information, visit: http://www.eXtension.org/horses

My Horse University (MHU), an online horse management educational program offers certificate courses, DVD's, free web-casts and e-newsletters. Developed at Michigan State University, MHU utilizes national experts to offer science based online courses in horse management topics. The curriculum is enriched by partnerships with eXtension and Equi-Search. For more information, go to: http://www.MyHorseUniversity.com/