



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Research Update: Essential Oils

The antimicrobial activity of nine essential oils (cinnamon, palmarosa, Indonesian and Madagascar cloves, niaouli, peppermint, oregano, rosemary, and sauce thyme) against *Staphylococcus xylosum* (*S. xylosum*) isolates obtained from the nasal mucosa of healthy and diseased horses were evaluated by researchers in Spain.

A total of 27 isolates with different resistance profiles (susceptible, resistant to one antimicrobial class, resistant to ≥ 2 antimicrobial classes) were analyzed. An initial screening study was carried out to determine the antimicrobial activity of essential oils against 10 *S. xylosum* isolates. Five essential oils with major inhibitory zones were selected, and the minimal inhibitory concentration and minimal bactericidal concentration against the 27 isolates were performed.

All the essential oils, except rosemary,

showed antimicrobial activity against *S. xylosum*. Minimal inhibitory concentration and minimal bactericidal concentration values were obtained for cinnamon, clove, peppermint, oregano, and sauce thyme. Results showed that sauce thyme and oregano presented the lowest minimal inhibitory concentration and minimal bactericidal concentration average values. No significant differences were observed between the inhibitory activity and the resistance profile of the isolates.

The sauce thyme and oregano could be used in the control of *S. xylosum* infection in horses. More studies are necessary to establish their clinical potential use, as well as their dose and application options.

For more information on this research, click [here](#).

Summarized by Krishona Martinson, PhD, University of Minnesota.

Ask the Expert: Certified Weed-Free Hay

Question: My friends and I are planning a horseback riding trip out west and we've been told we need to bring certified weed-free hay. What is this and where can it be purchased in MN?

Response: Noxious Weed Seed Free Forage is certified by the MN Crop Improvement Association (MCIA) to be free of noxious weed seeds. These weed seeds can cause substantial economic loss and ecological damage, especially on public lands. Common sources for the introduction and spread of noxious weed seed include the transportation and utilization of contaminated hay.

In Minnesota, the state agency in charge of certified hay is the MCIA. The Noxious Weed Seed Free Forage certification program is designed to assure that forage (hay, cubes and pellets) meets minimum standards designed to limit the

spread of noxious weeds. Most public lands in the western U.S. require that hay and hay products transported into these areas be certified noxious weed free.

Farmers growing certified hay must submit an application for membership to MCIA and pass field and storage site inspections. The farmer then harvests the eligible crop and submits a tag request. Certification labels are issued by MCIA for eligible bales and labels must be attached to each bale prior to delivery.

For a list of MN farmers growing and selling certified hay, please visit the MCIA website www.mncia.org/, or contact them by phone at 1-800-510-MCIA. Remember to slowly transition all horse to and from new forage sources.

By Krishona Martinson, PhD, University of Minnesota.

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Upcoming Events

Equine Pasture Management Program
One farm visit and a customized pasture and grazing management plan
April 1 - August 1, 2017
\$650 per farm
Registration opens 4/1/2017

Visit our [Facebook page](#) for "Research Update Monday", "Tip of the Week Wednesday", "Friday Funny" and special events.

Visit (and share) our [Webinar Library](#) for recorded lectures on over 20 horse-related topics.

Check out our latest horse-related videos on our [YouTube Channel!](#)

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Help Complete A Survey Regarding Oat Use in Equine Diets

Oats have been a component of horse diets for centuries. The University of Minnesota Extension Horse and Crop Teams are interested to learn how oats are currently used in the horse diet (includes ponies, draft and

miniature horses, mules and donkeys). Please help us by completing this 13 question survey by Monday, March 20, 2017 by clicking [here](#).

Your responses are anonymous and the survey should take

approximately 5 minutes to complete. All horse owners throughout the world are encouraged to complete the survey, but please only complete the survey once. Thank you for your assistance.

Univ. of Minnesota Speakers and Topics at the MN Horse Expo

Date	Topic	Speaker	Location
Friday, April 28	Costs and Considerations When Rescuing a Horse	Krishona Martinson, PhD	DNR Building
Friday, April 28	Pasture Management	Amanda Grev, MS	DNR Building
Saturday, April 29	Managing Easy Keepers	Marcia Hathaway, PhD	DNR Building
Saturday, April 29	Pasture Management	Krishona Martinson, PhD	DNR Building
Sunday, April 30	Costs and Considerations When Rescuing a Horse	Michelle DeBoer, MS	DNR Building
Sunday, April 26	Managing Easy Keepers	Devan Catalano, MS	DNR Building

Core Vaccines for Adult Horses

By: Julie Wilson, DVM, MN Board of Veterinary Medicine

Great horse health care programs include a strong focus on prevention of infectious diseases and control of internal parasites. These topics should be discussed with your veterinarian at least annually to optimize vaccination and deworming schedules for your horse and your farm.

The American Association of Equine Practitioners recommends that all healthy adult horses throughout the U.S. be vaccinated annually against tetanus, rabies, and three forms of sleeping sickness: Eastern (EEE), Western (WEE) and West Nile (WNV). Vaccines against these diseases are considered "core". If mosquito populations are

high in the late summer, or if the horse moves to a region where there is a longer mosquito season, veterinarians may recommend an additional booster for EEE, WEE and WNV. Tetanus is also once a year, unless a horse sustains a wound more than 6 months after the last tetanus vaccination, at which point it should receive another tetanus booster. If the vaccination history is unknown at the time of injury, a dose of tetanus anti-toxin should be given as well as a tetanus toxoid.

Beyond these core vaccines, many vaccines are available for other equine infectious diseases. Discuss your plans for your horse with your veterinarian, and

realistically look at the degree of traffic on the farm where the horse lives and determine the risk of exposure to diseases and if additional vaccines are necessary, which vaccine product would be best, and how often it should be given. If you are planning to show the horse, there may be specific vaccination requirements that the show venue requires.

Vaccine schedules for broodmares and foals are more complex and should be developed by the farm's veterinarian.

For more information on vaccinations and deworming, click [here](#).