



Protective masks reduce fly-related discomfort for equines housed in paddocks

Taking Care of Pests

TIPS TO MANAGE THE INEVITABLE

By **AMANDA DUCKWORTH**

WHEN IT COMES to stable management, one of the least pleasant but almost guaranteed issues one will encounter is flies. Horses, due to their secretions and excrement, naturally attract them, and if flies start appearing in large numbers, it can cause a number of problems. Fly control can take many forms, and a multifaceted plan often proves necessary.

For a baseline understanding of how to tackle such an issue, the American Association of Equine Practitioners has published its “External Parasite and Vector Control Guidelines.” This document provides current information about the control of ticks, flies, lice, mites, and mosquitoes.

“Commonly used strategies for external parasite control in horses have not changed significantly in recent years,” explained the AAEP. “It is important to keep in mind that the information contained within these guidelines are suggestions; there are many variations of these suggested programs that will still meet the same goals and follow the same principles.”

Flies belong to Diptera, which is one of the largest orders of insects. When it comes to horses, fly species many are familiar with include house flies, stable flies, horn flies, face flies, and horse flies. When building a management plan, it is important to understand the specific species that are problematic in a given area.

The AAEP recommends basic management methods for fly control. It suggests sanitation for house flies and stable flies; protective masks and on-the-animal pesticides and repellents for face flies; and on-the-animal pesticides and repellents for horn flies.

Good sanitation can prevent many headaches later, and controlling the fly population is no different. Regular upkeep of barns, proper storage of hay and feed, stall maintenance through regular cleaning, and limiting standing water can all help prevent a fly infestation.

When it comes to specific products to target the issue, fly spray is a staple of many stables, especially in warmer months. However, the AAEP suggests caution there as well.

“Insecticide resistance is a big problem in fly control, and the affected flies are mainly the house flies and horn flies,” the AAEP explained. “Continued use of the same pesticide and use of long-term residual pesticides on surfaces or on animals are major causes. Most pesticides on the market are pyrethroids. If other chemical classes cannot be found for use, at least suggest rotation among pyrethroids.”

In February 2020, the Journal of Economic Entomology published “Behavioral Inhibition of the House Fly (Diptera: Muscidae) When Exposed to Commercial Equine Fly Repellents.”

“House flies can have negative consequences on the welfare of horses and other equids,” explained researchers. “Fly repellents in the form of on-animal sprays, wipes, or spot-ons are the most commonly used fly control method for horses. Many products are available, but repellent efficacy and duration of effectiveness may influence repellent choice by horse owners. A better understanding of the efficacy of common fly repellent products will help guide repellent selection to reduce fly pressure on horses.”

For the study, researchers evaluated a number of commercially available

repellents and then house fly behavioral inhibition after they were applied. They used three products marketed as natural (Ecovet, Equiderma, and OutSmart) and four with synthetic pyrethroids as active ingredients (Bronco, Endure, UltraShield, and Opti-Force).

“The natural products performed as well as or better than the synthetic products at all dilutions and times,” researchers concluded. “Ecovet in particular retained over 75% inhibition of flies for >1 d at the 100 and 50% concentrations. Differences were seen among products with pyrethroids, suggesting that formulation differences



Tail swishing is a common annoyance behavior in horses

significantly affect efficacy.”

There are a number of different fly protectants on the market beyond fly spray. In October 2018, Journal of Equine Veterinary Science published “Effectiveness of Stable Fly Protectants on Adult Horses.”

“Blood feeding flies are common pests affecting horses throughout the world,”

researchers explained. “However, little information is available regarding protectant efficacy for reducing fly annoyance behaviors in horses. The objective of this research was to assess the efficacy of five different fly protectants when used on adult horses.”

For the study, six adult horses were individually penned in outdoor dry lots for two hours each day for five consecutive days over the course of six weeks. Each horse received one of six treatments each week: leggings, citronella spray, leg bands, permethrin spray, pyrethrin spray, or nothing (to serve as the control).

BUILD MUSCLE & STRENGTH

BODY BUILDER™

BOOST MUSCLE DEVELOPMENT & PERFORMANCE

- ✓ Contains Gamma Oryzanol
- ✓ Supports Stamina & Muscle Growth
- ✓ Enhances Endurance & Power

TRUSTED SINCE 1984

www.Equiade.com

info@equiade.com

1-800-413-3702

EQUIADE SINCE 1984

BODY BUILDER™

CONTAINS GAMMA ORYZANOL
Muscular Function & Support

Horse Supplement
60 Day Supply
32 FL. Oz. (960mL)



A tidy shedrow helps prevent fly infestations



Regularly mucking out stalls will reduce the number of flies

The horses were observed for two hours immediately after the protectant was applied, and the stable flies on their legs and bodies were counted immediately and then again after 30 minutes, one hour, and two hours. Additionally, fly annoyance behaviors were counted in four 30-minute periods: tail swishes (for 5 minutes); shoulder twitches (for 5 minutes); and head-backs and hoof stomps (simultaneously for 20 minutes).

“Fly annoyance behaviors were reduced by treatment,” researchers concluded. “Leggings reduced hoof stomps from 6.6 down to 2.3 stomps per min, leg bands and leggings reduced head-backs from 3.7 down to 2.0 and 1.6 per min, respectively, and citronella spray reduced tail swishes and shoulder twitches from 47 down to 36 per min, and 34 down to 23 per min, respectively. While none of the products eliminated all fly annoyance behaviors, leggings, leg bands, and citronella spray provided better benefits than the other sprays.”

Oftentimes, a multipronged

approach may be necessary. In March 2024, *Insects* published “An Integrated Pest Management Strategy Approach for the Management of the Stable Fly *Stomoxys calcitrans* (Diptera: Muscidae).”

“Stable flies, known for inflicting painful bites on livestock, cause substantial economic losses worldwide by hindering animal feeding and potentially transmitting diseases,” researchers explained. “Current chemical control methods face challenges of resistance and environmental risks.”

For the study, researchers tested

an integrated pest management at a donkey sanctuary in western Spain. A total of 141 animals of mixed breeds lived on the farm: 110 donkeys, 28 mules, and three horses. They were divided into seven barns depending on their need, and each barn is home to between two to 23 animals. The objective of the study was to enhance their welfare.

“Larval development occurs in diverse substrates, including decomposing plant material and manure, while emerged adults pose a threat through blood-feeding on both animals and humans,” researchers explained. “Conventional chemical control methods, predominantly reliant on insecticides, not only pose environmental risks but also face challenges of resistance among stable fly populations.

“To address this pressing issue, we propose an integrated pest management (IPM) strategy for stable fly control. This approach involved a combination of sanitary-cultural practices, animal protection, the release of natural enemies targeting immature



Reducing the amount of standing water around barns helps manage the fly population

TOP LEFT: OBS/V/DHORSE PHOTO; TOP RIGHT: SKIP DICKSTEIN; BOTTOM: COADY MEDIA/ASHLEY PHILLIPS



PRESTIGE® PRODIGY® DELIVERS

PRESTIGE® PRODIGY® protects a foal's journey before it even begins, defending the mare with a superior vaccine that delivers protection smoothly and safely. In combination with our comprehensive Mare and Foal Care Program, you can trust Merck Animal Health will deliver.



Raise your standard

Learn how Prestige Prodigy delivers
at PrestigeVaccines.com

stages, and a specialized trapping system for adults.”

Researchers used their IPM strategy and conducted their study over a minimum of 16 months. It involved a combination of permanent trapping of adult stable flies, the release of biological parasitoids and predators, the removal of bedstraw, and the protection and treatment of lesions in susceptible donkeys.

The study concluded that the abundance of stable flies declined from the start of the IPM in 2022 to the study’s conclusion in 2023, and the welfare of the equines was moderately improved over this period. However, researchers noted that in addition to the IPM strategy, other factors including climatic conditions (temperature, precipitation, and sunshine hour) could play a role.

“This study is a pioneering effort in Europe, offering the most extensive trial attempt control management conducted to date on stable flies,” concluded researchers. “Significant progress was made in enhancing sanitary conditions among equids. However, the continuous persistent outdoor activity of stable flies in this region throughout the year poses a considerable hurdle in curbing this pest.

“Employing a combination of these methods and ensuring consistent efforts in pest control can prove instrumental in managing stable fly populations. Integrated pest management strategies, which amalgamate various control measures, consistently demonstrate the most successful outcomes in combatting resilient pests like the *S. calcitrans* flies.”

Horses are far from the only animal that attract flies, and thus, research conducted with other species may also lead to suggestions for horse owners. For example, in April 2022, Insect Science published “Development and first evaluation of an attractant impregnated adhesive tape against blood-sucking flies.” Although the study was on cattle, the results proved interesting for other fly-prone animals as well.

Emerging Threat

While the majority of the flies horse owners will encounter are nuisance flies, a recent outbreak also has officials warning to be on the lookout for a specific parasitic fly in the United States.

The New World Screwworm (NWS) is not a worm at all. It is a fly that lays its eggs in open wounds and body openings, such as the eyes, ears, nose, or mouth.

On June 4, 2026, the American Association of Equine Practitioners issued an alert that NWS had entered the country. This was one day after the United States Department of Agriculture reported the first case of NWS in cattle in the United States in south Texas.

“NWS is a serious threat because larvae infest living tissue and cause rapidly progressive, potentially fatal myiasis (maggot infestation) in warm-blooded animals, including humans,” explained the AAEP. “Federal and state animal health officials have emphasized the critical need for heightened awareness, active surveillance, and rapid reporting of suspect cases.

“Why this matters for equine practitioners? Horses are susceptible to NWS infestation. Horses at higher risk are those with wounds, recent surgical sites, tick bite sites and foals with fresh umbilical sites; however all horses are susceptible as NWS infestation can also occur at mucocutaneous junctions. Female flies are attracted to the smell of very small breaks in the skin (i.e. tick bite) or moist

body openings, where eggs may be deposited. Larvae hatch and burrow into living tissue, enlarging the wound and causing pain, tissue destruction, secondary bacterial infection, toxemia, and in severe untreated cases, death.”

The AAEP Infectious Disease Committee has also prepared an overview of currently available prevention and treatment options that equine veterinarians may consider for NWS in its paper “New World Screwworm: Prevention and Treatment Options.”

“The Food and Drug Administration’s Center for Veterinary Medicine is working with animal drug sponsors to identify potential products for approval/authorization for the prevention or treatment of New World Screwworm myiasis,” explained the AAEP. “Product availability for NWS may include conditionally approved drugs, emergency use authorized products, and, where legally appropriate, extra-label use of FDA-approved animal drugs under a valid veterinary-client-patient relationship and applicable regulations.

“The current challenge is lack of published specific studies or research in horses for New World Screwworm. More concerning is that there are no studies on the duration of efficacy for any product for the long-term prevention of screwworm infestation.”

Because product availability and regulatory status continue to evolve, the AAEP recommends that practitioners should consult current guidance from both the FDA and USDA when selecting and using products for NWS prevention, treatment, and environmental control.

— A.D.

“Laboratory bioassays showed that only m-cresol impregnated adhesive tapes caught significantly more stable flies than the control tape without attractant added, with a 77% fly recapture rate,” researchers concluded. “Attractant-impregnated adhesive

tapes deployed in cattle feedlots showed significant impacts in reducing fly population, with a total of one million stable flies captured over a period of three weeks. It further relieved cattle stress with a significant reduction of biting fly avoidance behavior.



Standlee®



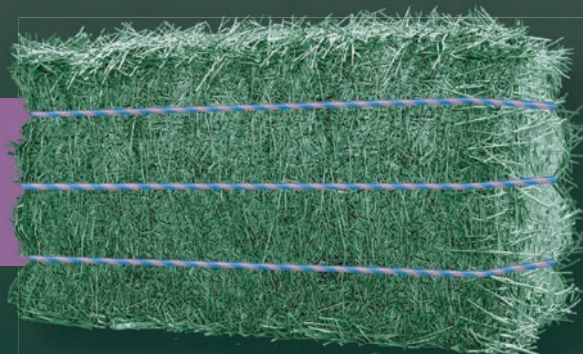
Scan to
Learn More

PREMIUM PERFORMANCE

STARTS WITH PREMIUM FORAGE

Recognized by its purple and blue twine, elevate your stable with the unmatched quality of Standlee 3-tie bales.

standlee.com



HEALTHZONE

Fly Prevention

“The efficacy of the developed tapes lasted up to 1-week longevity, although 70% of m-cresol was released starting from the second day. The m-cresol impregnated adhesive tape provided an 80% reduction in cattle stress due to stable fly attack. This is the first report of a technology developed by integrating an attractant compound into an adhesive material on a plastic film with demonstrated effectiveness in trapping biting flies that attack livestock animals.”

Any stable with horses is almost guaranteed to also have flies, and staying ahead of the game with proper sanitation and anti-fly products can save both handlers and horses a lot of frustration. Most often, a multi-pronged fly control plan is necessary to achieve optimal results. **DM**



SKIP DICKSTEIN

In addition to masks, on-animal pesticides and repellents provide relief



CREATING TOMORROW'S LEADERS IN EQUINE MANAGEMENT



Kentucky Equine Management Internship
(859) 277 - 2512 | info@kemi.org



@kyequineintern
www.kemi.org