

The knight stick trap and knight stick sticky wraps: New tools for stable Fly Diptera: Muscidae management

Jerome A Hogsette

United States Department of Agriculture-ARS, USA.

Statement of the Problem: Stable fly management is difficult, especially where pesticide usage is restricted. Traps have been used for monitoring stable flies, but have rarely been used for management. The Knight Stick (KS) trap recently became available and preliminary studies indicated that it might be an improvement to currently used traps.

Materials and Methods: KS traps and Olson traps, an industry standard, were compared at an equine facility. These are similar because they attract stable flies by alteration of light waves and capture the flies on sticky wraps covering the trap base. At an equine boarding facility, inherent attraction of the sticky wraps was compared by placing KS Tank wraps, a larger KS sticky wrap, and Olson sticky wraps around the propane tanks used with Mosquito Magnet Independence (MMI) traps. At an exotic animal rescue facility, two configurations of KS Tank wraps were applied to plastic barrels and compared with 3 KS traps.

Results: At the equine facility, the KS trap captured 3X more stable flies than the Olson trap. When the Olson trap base was covered with a KS sticky wrap, it captured 3X and 5X more stable flies than an Olson trap base covered with an Olson sticky wrap. At the equine boarding facility, KS Tank wraps


applied to LP tanks on MMI traps producing CO₂ captured significantly more stable flies and significantly more stable flies per cm₂ of sticky wrap than all other treatments. At the exotic animal rescue facility, stable flies captured by two of the KS traps and the two barrel treatments were numerically similar.

Conclusion & Significance: The KS Sticky wrap and the KS Tank wrap have a high degree of attraction to stable flies. The KS trap fits in tight places, and can be easily moved to desired locations.

Speaker Biography

Jerome A. Hogsette specialty is the biology, ecology and management of higher Diptera, particularly house flies and stable flies, in agricultural and urban settings. He has conducted numerous cooperative studies with USDA and university scientists, nationally and internationally, and has worked extensively with industry and with the military. His 1985 paper on stable fly long-range dispersal opened the door to continuing nation-wide research and debate on this topic. His work with light traps for house flies has changed the way that the pest control industry utilizes traps in restaurants and other buildings. Jerome has worked in many aspects of fly management, including trapping, development of and management with pesticides and Insect Growth Regulators, sanitation, biological control, attractants and repellents. He is the author or co-author of more than 200 refereed publications, review articles, book chapters and extension articles, and has mentored 25 graduate students.

e: jerry.hogsette@ars.usda.gov

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