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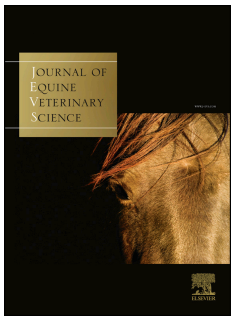

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Effectiveness of stable fly protectants on adult horses

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Abstract

Blood feeding flies are common pests affecting horses throughout the world. 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. Using a Latin square design, six adult horses were individually penned in outdoor drylots for 2 h each day for 5 consecutive days over 6 weeks. Horses received one of six treatments each week: leggings, citronella spray, leg bands, permethrin spray, pyrethrin spray, or a control (no protectant). Each day, horses were observed from 1230 to 1430 h immediately after protectant application. Stable flies (*Stomoxys calcitrans* L.) on horses' legs and bodies were counted at mins 0, 30, 60 and 120. Fly annoyance behaviors were counted in four 30 min periods: tail swishes (for 5 mins); shoulder twitches (for 5 mins); and head-backs and hoof stomps (simultaneously for 20 mins) for a total of 2 h. Fly annoyance behaviors were reduced by treatment ($P < 0.01$). 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