

7 Summary

effect of insecticide- treated mosquito fences for the protection of horses against nuisance and biting flies.

A trial was conducted in north-western Brandenburg to assess the efficacy of insecticide-treated mosquito fences protecting horses against attacks from biting and nuisance insects during the grazing period of summer 2004. Deltamethrin-treated polyester material of 150denier, pre-treated with a UV filter to ensure a better persistency of the insecticide, was attached to the outside of already existing fences at a height of about 100cm above ground. Three groups of horses that were kept on a spatially separated pasture were retained for the trial. The first group consisted of mares and foals, serving as unprotected control. The second group was kept on a paddock that was fully protected. The third group, consisting of stallions and geldings was partially protected, where only 13,4% of the total perimeter had been fenced. Fly densities were monitored with four Nzi traps outside each pasture. Fly catches showed a distinct reduction: when compared with the control area the reduction was 67% outside the paddock (complete protection) and 57% in the vicinity of the enclosure for the stallions and geldings (partial protection). The attack rates by flies of individual horses were recorded with a digital camera. Five different anatomical body regions (eye, neck, back, lateral and lower chest) had been selected for the surveillance. In comparison to the control group, the attack rates of individual horses were reduced by 97% in the paddock and by 96%, respectively, of the horses kept on the partially protected pasture.