

32. Belant, J. L., T. W. Seamans, and C. P. Dwyer. 1998. Cattle guards reduce deer crossings through fence openings. International Journal of Pest Management 44:247-249. Abstract: In response to increased white-tailed deer (*Odocoileus virginianus*) encroachment on airports, we evaluated the effectiveness of cattle guards as deer exclusion devices. We conducted 3 experiments in a 2,200 ha fenced facility in northern Ohio with high (91/km²) deer densities during 1994-1995. During each experiment, we monitored deer crossings at 2-3 cattle guards (4.6 [L]x3[W]x0.5 or 1.0[D] m) constructed at fence openings for 2 weeks pre- and post-installation. For each experiment, the mean daily number of deer crossings after installation of cattle guards was reduced ($P < 0.01$) by >88% compared to respective crossing rates during pretreatment. Reductions in deer crossings using cattle guards with 0.5 or 1.0 m deep excavations were similar (95-96% vs. 98%) overall. Cattle guards at permanent openings used for vehicular traffic appear a viable technique to exclude deer from fenced airports and other facilities where deer exclusion is desired.