

**EFFECTIVENESS OF LASER LIGHT AND PROPANE CANNON IN DISPERSING
GREAT-TAILED GRACKLES (*Quiscalus mexicanus*) FROM URBAN ROOSTS
IN NORTHWESTERN COSTA RICA**

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The concentration and volume of excrement produced by communal roosts of birds damage infrastructure, create health problems, and are disagreeable to the public. Costa Rica saw the expansion of the communal rooster Great-tailed grackle (*Quiscalus mexicanus*) in the 1950's, and since then their roosts have raised concern with local governments. This study measured the effect of two communal roost dispersal methods in Cañas, Guanacaste, Costa Rica: a laser and the combination of propane cannon and a pole. Post-study surveys measured local opinion of roosting grackles and of the study's dispersal methods. Both dispersal methods significantly reduced the number of grackles using the central roost ($P < 0.0001$). Reduced roost numbers due to laser use could have been due to previously observed seasonal fluctuations in roost numbers; however, results with the propane cannon completely relocated the central roost to at least three other locations outside of the central park. One minor roost remained in the central park after all dispersal methods, likely due to amount of light in the park at night compared to the rest of the town. Post-study surveys indicated disliked roosting grackle and support both laser and propane cannon dispersal methods.