

Working with Communities on Canine Population Management in Todos Santos, Guatemala

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Using community outreach programs, household surveys and mark-recapture dog population estimates, the primary purpose of the study was to develop and implement a community-based canine population management program in 12 communities of Todos Santos, Guatemala. The secondary purpose was to provide data with regard to interest and acceptance of canine chemical castration by community members (dog owners) and complication rates associated with chemical castration using an intratesticular injection of zinc gluconate neutralized by arginine (EsterilSol™).

Household surveys were performed five times between May 2008 and January 2010 in all 12 of the study communities. The estimated study region covered 80 hectares. Between May 2008 and February 2010, four mark-recapture dog counts were performed in order to estimate the number of un-owned free-roaming dogs in these communities. Multiple community outreach meetings took place with members of the local government and community leaders, as well as promotional media prior to and during the implementation phases of the project. Chemical castration using EsterilSol™ was performed on 158 dogs and surgical ovario-hysterectomies were performed on 44 female dogs in January and November-December 2009.

Within these 12 communities, there were 472 inhabited households in which 2,461 people lived (2008). In 2008, 51% of households owned one or more dogs, with a total of 382 owned dogs. Approximately 87% of respondents indicated that they would chemically castrate their dog, if such a service were available. Household surveys (January 2010) indicated there were 292 owned dogs (a 30% reduction from May 2008) with a female to male ratio of 1:3.3. Based on household surveys (January 2010), 59.2% of owned male dogs aged > 5 months and 42.1% of female dogs aged > 5 months were sterilized. Complications associated with the use of EsterilSol™ were seen in 2/158 dogs (1.3%). One of these complications resulted in surgical scrotal ablation. Preliminary results indicate that free-roaming un-owned dog populations may have shown a reduction of greater than 30% based on estimates from mark-recapture studies.

A community-based approach to canine population management using chemical castration and surgical female sterilization has, in part, led to an overall reduction in population density of dogs in these 12 communities. Chemical castration using EsterilSol™ appears to be an acceptable method of male dog sterilization. In this study, EsterilSol™ injections resulted in a 1.3% complication rate.