UNOWNED DOG POPULATION ESTIMATION IN PINHAIS/PR – BRAZIL

Fernanda Argenton[1], Marta Kopach[2], Stefany Monsalve Barrero[3], Karyn Aparecida Rossa[1], Janaína Hammerschmidt[4], Solange Aparecida Marconcin[4], Fernando Ferreira[5], Rita de Cassia Maria Garcia[1]

[1]Paraná Federal University, Curitiba, Paraná, Brazil
[2]Animal-Id Enterprise, Drogobych, Ukraine
[3]University Foundation of Colombia Agraria, Bogota, Colombia
[4]Pinhais Hall City, Paraná, Brazil
[5]São Paulo University, São Paulo, Brazil

The unowned dog population represents an issue for public health and animal welfare, and its population estimation is necessary to plan and monitor a management intervention. In order to estimate the unowned dog population in the city of Pinhais, south of Brazil, the World Animal Protection (WAP) and Animal.id.info methodologies were used. The total area of the city (60.92 km) was split into 60 contiguous blocks within 1km² each and 15 blocks were selected by random sampling. All the blocks were well spread across the city and had equal chance of being selected. The counting happened in 3 consecutives days on December 2017, between 7am and 9am. Sixteen volunteers were divided into pairs and conducted by cars through the blocks at 20 km/h maximum speed. The StraysID® app was used to record the picture, coordinates, sex and age of each dog seen on public road and unattended by its owner. A questionnaire survey was applied with the pedestrians and residents at the time of the counting to classify each animal as "owned", "unowned" and "community" dog. The survey included the answers of up to 3 people, and the volunteer's opinion was also considered. All the data was compiled using Excel and two different estimates were obtained from WAP and StraysID® methodologies. About 115 km of street were covered and approximately 3 dogs/km were recorded, totaling 357 dogs. The map created by the app using the coordinates shows that some spots of the city presents a larger density of dogs than others. Those points coincide with low income and high human concentration areas. The dog population profile shows the majority of normal body condition scoring (86.3%), and more males (53.8%) than females (34.5%). The roaming dogs estimate, between 7 am to 9 am, by WAP methodology, was 1428 (from 388 to 2468) with 95% confidence; 57% (n=820) were unowned, including community dogs, in an interval from 232 to 1408 dogs. By the Animal.id.info method, an interval from 1214 to 1642 stray dogs, whose 697 to 943 are unowned. The large interval of confidence could be explained due the variation of roaming dogs between blocks, showing a very heterogeneous population. In conclusion, 57% of the free roaming dogs are unowned, and its population is correlated with human density and income rate. Hence, it is important to develop public polices to the dog population management direct to reduce the unowed dogs.