Fact Sheet

Deer Management: Surgical Sterilization

How does surgical sterilization work?

Female deer are surgically sterilized using a technique known as ovariectomies which removes the ovaries – a technique similar to, but less invasive than typical spay surgeries used to sterilize domestic dogs and cats. Female deer are captured via tranquilizers administered via dart projectors and transported to a surgical bay. Preparation and surgery take approximately 20 minutes, the animal is transported back to the capture area, a reversal agent is administered and the animal is observed from a distance. Surgical sterilization is 100 % effective and mortality rates associated with the procedures are less than 1%.

History of Surgical Sterilization Field Research

In 2009, researchers began conducting surgical sterilization field trials in Town & Country, Missouri, and since then, have initiated additional field studies in Cayuga Heights, NY, San Jose, CA, Baltimore County, MD and Fairfax City, VA.

Effectiveness

Surgical sterilization is 100% and permanent. Once a female deer is surgically sterilized via ovariectomy, she can never fawn again. Researchers have also been able to capture and treat high proportions (>90%) of existing female deer populations at study areas in New York, California and Maryland which is critical to achieving immediate population stabilization and gradual reduction over time.

Population Control

The population effects of surgical sterilization on deer are site-specific, but typically, population stabilization is rapid and population reduction is gradual (10-30% per year). In Cayuga Heights, NY, researchers sterilized 95% of the female deer population (i.e. 149 does) in two years and observed a 30% decline after year one. In San Jose, CA, over 90% of the female deer (i.e.115 does) were sterilized in two years and researchers observed a 20% decline after year one.

Surgical Sterilization versus Immunocontraception

Surgical sterilization and immunocontraception are both effective, humane (i.e. <1% mortality) methods for stabilizing and reducing deer populations over time, and the use of volunteers and/or trained on-site personnel can substantially reduce the costs associated with implementing either method. Immunocontraception vaccines are 90-95% effective the first year, are reversible and can be administered without capturing and tranquilizing female deer. However, in order to remain effective, previously treated female deer must be re-treated with boosters every two to three years. Surgical sterilization is 100% effective and only requires the animal to be treated once in their entire lifetime, but the surgical procedure is more invasive than treating female deer with vaccine darts every two to three years.

Regulatory Status

Unlike the administration of the immunocontraception vaccine PZP, surgical sterilization projects do not require authorization from the FDA or EPA. However, like all deer management programs, surgical sterilization and immunocontraception programs must be approved and permitted by state and local wildlife agencies.

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