

Fact Sheet

Deer Management: Immuncontraception

How Immuncontraception Works

Immuncontraception vaccines activate the immune system to block a crucial aspect of reproduction. The porcine zona pellucida (PZP) vaccine causes female deer to produce antibodies that bind to the protein envelope surrounding the egg, blocking fertilization. **PZP is NOT a hormone and does not affect other body processes.**

History of PZP Field Research

PZP was first recognized as an effective contraceptive in the 1970's. Since The HSUS first began treating deer on Fire Island, New York in 1993 more than 2,000 deer have been treated at field sites in seven states. **The effects of PZP on deer and other animals are very well known.**

Effectiveness

Treatment of white-tailed deer with PZP typically reduces pregnancy rates by 80-90%. PZP can be delivered by hand or remotely by dart. Using current technology, **a single hand-injection of PZP prevents pregnancy for at least 2 years.**

Side Effects and Safety

PZP is a naturally occurring protein that must be injected to be effective. **If eaten, PZP is broken down like any other protein.** In deer, the only known side effect of PZP treatment is extension of the mating season; there is no evidence that this causes any harm.

Population Control

Suburban deer populations have been stabilized and modestly reduced (20-50%) at three field sites. Typically, population stabilization is rapid, but population reduction is gradual (5-10% per year). All three sites are semi-isolated by geography or development, but deer move on and off all of them. **Population effects of contraception are site-specific.**

Deer-Vehicle Collisions

Data from the Maryland site show that the number of deer-vehicle collisions goes down as deer population size goes down. **PZP treatments do not increase deer-vehicle collisions.**

Regulatory Status

Use of PZP on deer must be approved by state wildlife agencies. Federally, the FDA and EPA share jurisdiction over wildlife contraceptives. Currently, The HSUS conducts PZP research on wild horse and deer populations under EPA authorization. **In January 2012, the EPA registered PZP under the brand name ZonaStat-H for managing wild horses and burros.** The HSUS is in the process of filing an EPA registration application for use of PZP in white-tailed deer and other wild cervids.



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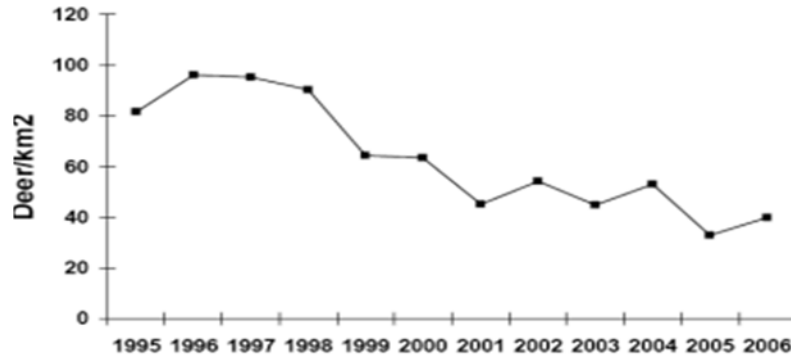
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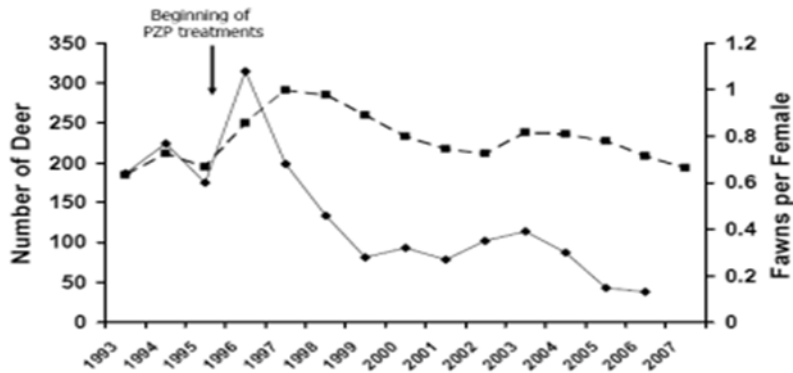
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Fire Island National Seashore, 1995-2006



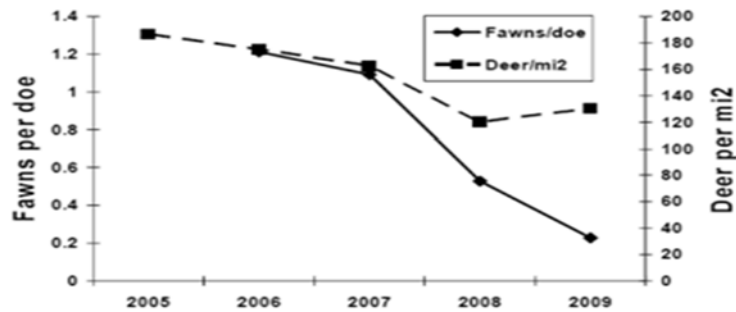
From Rutberg & Naugle 2009

National Institute of Standards and Technology, MD, 1993-2008



From Rutberg & Naugle 2009

Fripp Island, SC, 2005-2009



From 2009 Progress Report to SCDNR



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