TURNER INSTITUTE *of* Ecoagriculture

ENDANGERED BLACK-FOOTED FERRETS: FIELD TESTING FIPRONIL BAIT PELLETS (FIPBITS) TO PREVENT PLAGUE

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Rationale. The primary purpose of this project is to conduct field evaluation of a promising new management tool, bait pellets containing fipronil (FipBits), for mitigating the impact of plague in prairie dog and ferret populations. Plague is the primary biological challenge to black-footed ferret recovery. Thus, developing and implementing effective plague management tools is essential for downlisting and delisting of this endangered species. Existing methods of flea control (plague vector) – e.g., deltamethrin dust or sylvatic plague vaccine (SPV) – have limitations. A fipronil-based alternative may offer an efficient and more cost-effective option. Treatment of prairie dog colonies by distributing 0.25 to 0.5 cups of grain (wheat) treated with 0.005% fipronil at each prairie dog burrow has proven highly effective for flea control, but expensive. USFWS biologist Randy Matchett has invented a novel bait pellet (FipBits), whereby small amounts of fipronil are combined with inexpensive, all food-grade ingredients. By coupling mass-production capabilities and low-cost, practical, and efficient bait-pellet distribution technologies, FipBits bring together a combination that has the potential to substantially reduce flea-control costs. FipBits have been evaluated on small test plots in South Dakota, Montana, and Arizona, where near-complete flea control was achieved one-year post-FipBit treatment on most plots and in some cases, two years post-treatment. These preliminary findings are highly encouraging and underscore the potential utility of FipBits for controlling the primary vector of plague in prairie dog and ferret populations. Expanded field trials are needed. This research aims to conduct FipBit evaluation on at least one Turner property as part of a collaborative effort to evaluate if larger-scale and widespread FipBit treatments have the same or better level of plague prevention in comparison to more expensive treatments. If FipBit effectiveness can be demonstrated through these field trials, FipBits could dramatically improve plague-mitigation efforts and consequently significantly advance ferret recovery.

Species:	prairie dog, ferret
Topic:	ecology, restoration, conservation, health
Researcher:	McCaffrey, Matchett
University:	
Year Completed:	Ongoing