



USDA-APHIS-Wildlife Services

**Texas A&M AgriLife Extension-
Wildlife Services**

**Texas Wildlife Damage
Management Association**

501 (c) (3)



Protects

- **Human Health and Safety** from wildlife-related diseases such as rabies and plague and wildlife-related hazards such as bird-aircraft strikes.
- **Facilities, Structures, and Other Property** from damage caused by rats, mice, raccoons, skunks, opossums, squirrels, beaver, birds and other wildlife.
- **Crops, Timber, and Rangeland** from damage caused by gophers, prairie dogs, feral hogs, raccoons, rabbits, coyotes, grackles, beaver and other wildlife.
- **Livestock** from depredation caused by coyotes, bobcats, feral hogs, mountain lions, raccoons, birds and other wildlife.
- **Wildlife and Other Natural Resources** such as endangered species and game animals as well as soil, water and flora from damage and predation by wildlife.

- 8 districts
- 115 state employees
- 52 federal employees

Cost share partners - \$3200/month

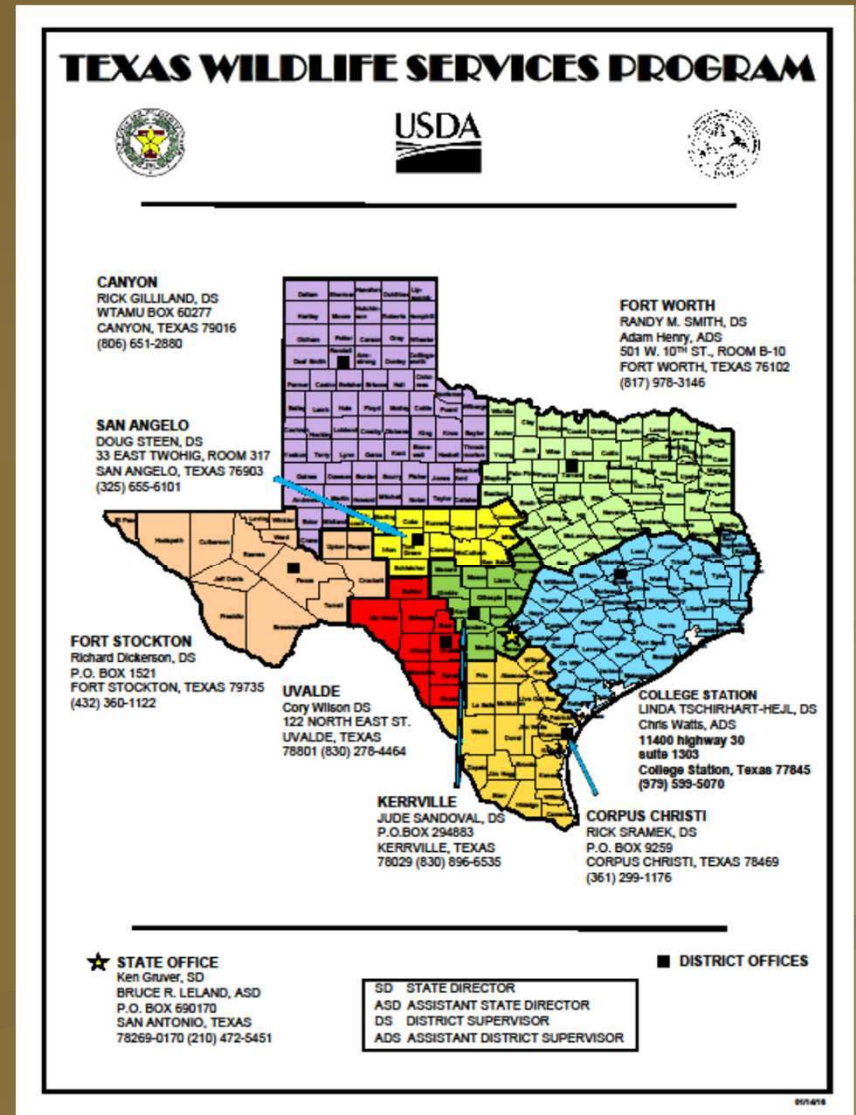
- 85 participants
- 58 counties
- Energy plants, Cities, State Agencies, Trapping clubs

Full Share Partners

- 12 military bases (USAF, Army, Texas Guard)
- Part 139 airport

Provided direct assistance for 4642 Properties in 195 counties

Provided technical assistance to 15135 individuals in 183 counties



Biological Sampling 5360 samples

Avian Influenza - Wild
dabbling ducks – 2019 samples



2476 Feral Swine -
ASF, CSF, Plague,
Pseudorabies, Swine
Brucellosis, Genetics



Feral Swine -
Research
collection of
ectoparasites –
lice, ticks



Rabies - Coyote, Grey Fox 778
samples



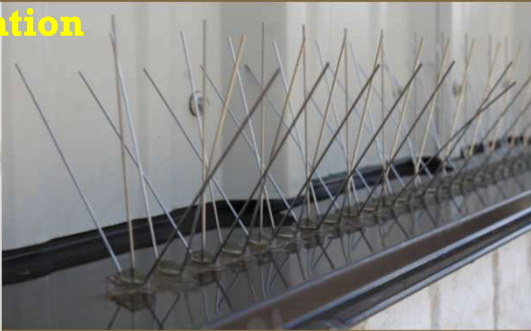
Other diseases: SARS Cov-2,
Plague, Tularemia

Vulture Depredation Black Vultures & Turkey Vultures



Integrated Pest Management

Loafing ledge modification



Laser



Effigies

Noise Harassment



Must use and document non-lethal harassment before you can apply for a Migratory Bird Depredation Permit.



Habitat Modification

Non-Lethal Shooting

Vehicles: ATV/UTV

Livestock protection dogs



Effigies

2 Options for livestock depredation

Depends on population of vultures on property

1 Option for residential situations

Small population of Vultures

In Texas, livestock producers may participate in a blanket depredation permit administered through the Texas Wildlife Damage Management Association. Lethal control of black vultures is only allowed to reinforce non-lethal methods.



Large Population of Vultures:

Recommend apply for a depredation permit directly from USFWS.

APPLYING FOR A PERMIT

STEP ONE

- Contact Wildlife Services, must complete WS Form 37
- Have species number and documented harassment
- TWDMA permit

According to the Financial Institutions Reform, Recovery and Enforcement Act of 1981, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The OMB control number for this collection of information is 0578-0025. The time required to complete this information collection is estimated to average 133 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this information collection to Washington, DC 20543-0044.

OMB Control No. 0578-0025

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES

USFWS MIGRATORY BIRD
PERMIT APPLICATION
OR REVIEW

NEW
 RENEWAL
PERMIT NO.
 AMENDED
WITHOUT CHARGE

1. REQUESTER INFORMATION

A. NAME AND ADDRESS

B. TELEPHONE HOME WORK

C. FAX OR EMAIL

2. LOCATION OF DAMAGE

A. LOCATION

D. COUNTY

E. STATE

3. RESOURCE/DAMAGE ESTIMATE

A. RESOURCES DAMAGED (with a brief description)

AGRICULTURAL HEALTH & SAFETY DESCRIPTION OF DAMAGE

NATURAL RESOURCES PROPERTY

B. LIST SPECIFIC RESOURCES

4. MIGRATORY BIRD SPECIES

A. DEPRECIATING SPECIES	B. NUMBER INVOLVED	C. TOPE RECOMMENDATION	D. NUMBER RECOMMENDED	E. METHODS
(1)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(2)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(3)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(4)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(5)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(6)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(7)		<input type="checkbox"/> YES <input type="checkbox"/> NO		
(8)		<input type="checkbox"/> YES <input type="checkbox"/> NO		

CONTINUE ON REVERSE

5. ACTIONS

A. PREVIOUS ACTIONS TO ADDRESS PROBLEM AND RESULTS OF THESE ACTIONS

B. COMMENTS

6. RECOMMENDED ACTIONS

HARASSMENT HABITAT ALTERATION HUSBANDRY EXCLUSION LETHAL TRAPPING CHEMICAL REPELLENT

CAPTURE AND RELOCATION EGG/NEST DESTRUCTION SHOOTING OTHER

7. US INVESTIGATOR INFORMATION

A. US INVESTIGATOR NAME AND CONTACT INFORMATION

B. INVESTIGATOR SIGNATURE

INVOICE NUMBER

EMAIL ADDRESS

8. DATE OF INVESTIGATION (use US date of 48 cfr 91.10)

WS Form 37
APR 2015


(PREVIOUS EDITION MAY BE USED.)

•STEP TWO

•You fill Out USFWS Form 3-200-13

•Permits Are Issued By United States Fish And Wildlife Service

<https://fwsepermits.servicenowservices.com>

 Department of the Interior
U.S. Fish and Wildlife Service
Federal Fish and Wildlife Permit Application Form

Replaces 7/2007
OMB No. 1018-0022

Return to: Migratory Bird Permit Office
U.S. Fish and Wildlife Service

Type of Activity:
Migratory Bird Depredation Permit

Complete section A or B, and section C and D of this application. See attached Permit Application Instructions.

A. Complete if applying as an individual				
1.a. Last name:	1.b. First name:	1.c. Middle name or initial:	1.d. Suffix:	
1.a. Doing business as (dba):		2.a. Mailing Address (line 1):		2.b. Mailing Address (line 2):
2.c. Mailing Address (line 3):		3.a. City:	3.b. County:	3.c. Province:
3.d. State:				
3.a. Zip code/postal code:	3.f. Country:	4. Date of birth (mm/dd/yyyy):	5. Social Security No.:	
6. Occupation:		7. List of any business, agency, organizational, or institutional affiliation associated with the wildlife or plants to be covered by this permit:		
8. Home telephone number:	9. Work telephone number:	10. Fax number:	11. E-mail address:	

B. Complete if applying as a business, corporation, public agency or institution				
1.a. Name of business, agency, or institution:		1.b. Doing business as (dba):		2. Tax identification no.:
3.a. Mailing address (line 1):		3.b. Mailing address (line 2):		3.c. Mailing address (line 3):
4.a. City:		4.b. County:	4.c. State:	4.d. Zip code:
5.a. Principal officer - Last name:		5.b. First name:		5.c. Middle name or initial:
5.d. Suffix:		5.e. Principal officer title:		
6. Describe the type of business, agency, or institution and provide state of incorporation:				
7. Home telephone number:	8. Work telephone number:	9. Fax number:	10. E-mail address:	

C. All applicants complete	
1. Do you currently have or have you had any Federal Fish and Wildlife permits? (For simplification, all licenses, permits, registrations, and certificates will be referred to as a permit.) Yes <input type="checkbox"/> If yes, list the number(s) of the most current permit you have held: _____ No <input type="checkbox"/>	
2. Have you obtained all required State, Federal or foreign government approval(s) to conduct the activity you propose? Yes <input type="checkbox"/> If yes, provide a copy of the approval(s). Have applied <input type="checkbox"/> Not required <input type="checkbox"/>	
3. Enclose a check or money order payable to the U.S. FISH AND WILDLIFE SERVICE in the amount of \$100 if you are applying for a new permit or \$50 if you are requesting a substantive amendment of your existing valid permit. If you are a homeowner requesting a permit for damage to your personal residence or property, enclose \$500.00. Federal.	
4. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13, of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter I of Title 50, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.	
5. Signature (in blue ink) of applicant/person responsible for permit in Section A or B. (Photocopies/stamped signatures are not accepted.)	6. Date (mm/dd/yyyy):

Form 3-200-13 Rev: 05/2005

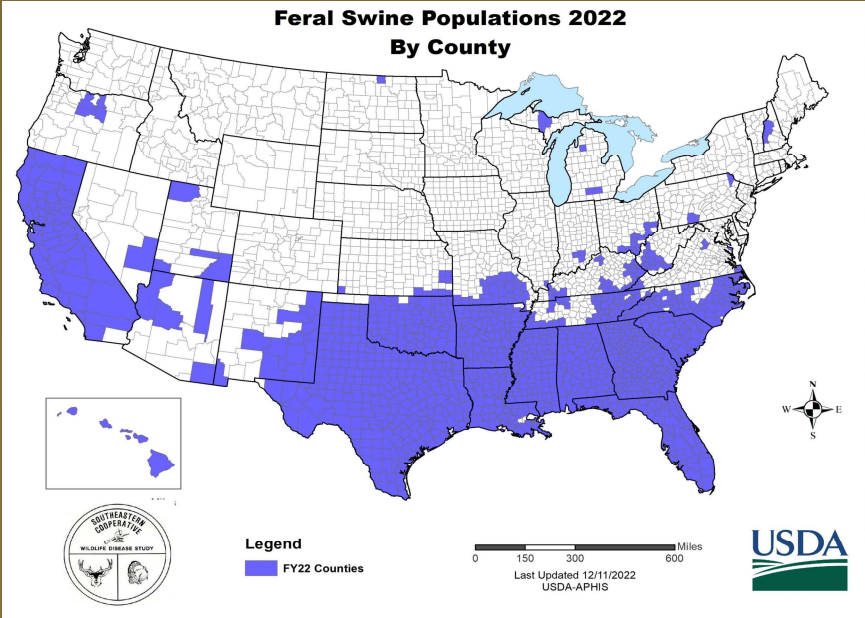
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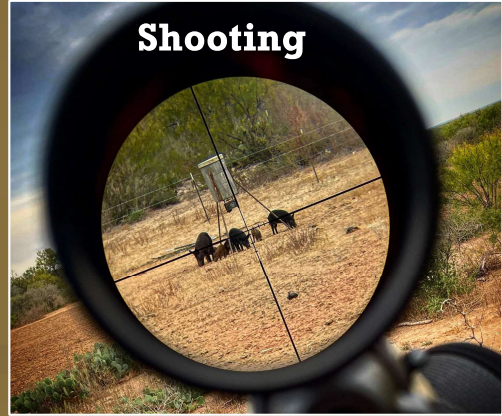
Feral Swine Management in Texas



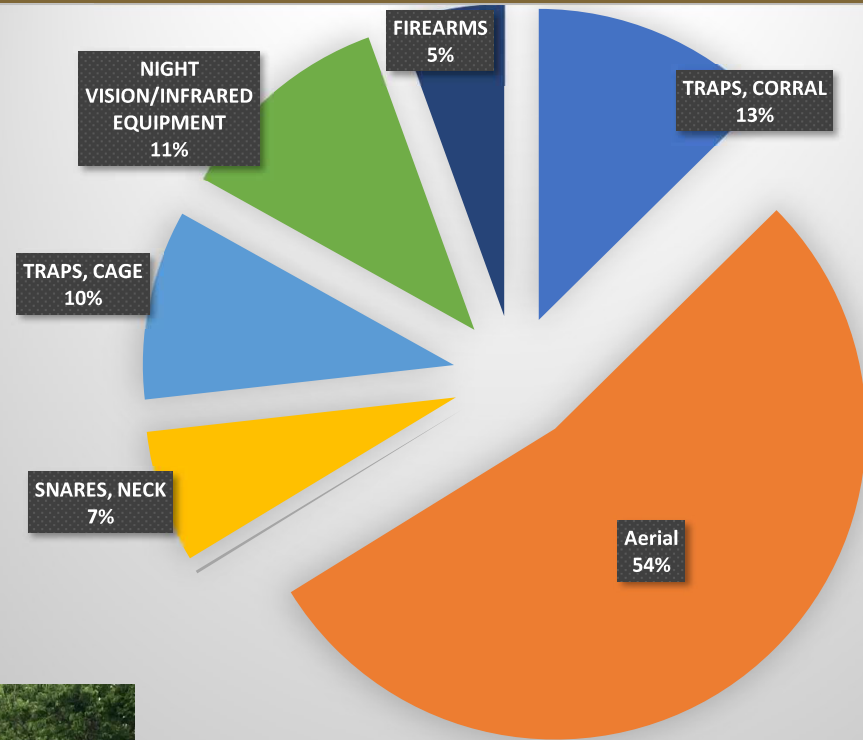
Not just a rural problem



Landowner Tools: Integrated Pest Management



Feral Hog Take: Texas Wildlife Services FY 24 33838



Hog Gone - Sodium Nitrite

Mode of Action

- **Attaches to hemoglobin and converts hemoglobin to methemoglobin. Reduces the ability of red blood cells to release oxygen to the tissues**
- **A couple of mouthfuls in short duration should provide lethal dose**
- **1-2 hours show first signs**
- **2-4 hours to death**

- **Must be conditioned (pre-baiting) to use the feeder**

Where we stand

- **EPA approved site-specific label for testing**
- **Problem with non - target species exposure**



Louisiana State University

Sodium Nitrite bait mixture consist of a mixture of fish, potatoes (gummy bear consistency)

Patented formulation

Pre-baiting important

Starting field trials for EPA approval



Hogstop – Feral Swine Birth Control

[HTTPS://hogstop.com](https://hogstop.com)

- Not EPA regulated
- Reduces the fertility of feral hogs within 5 days and maintains fertility interruption for at least 30 days when fed as directed.
- Contains only non-toxic ingredients. cottonseed oil (1.0%). Inert ingredients (99.0%): sodium chloride, corn, cottonseed meal, molasses.

This bait should only be applied in hog feeders equipped with heavy lids (minimum of 17 lbs. total lid weight) on bait compartments to limit access by non-target animals.

Pre-baiting is important!

Router style feeder, hogs will need to be conditioned to use the feeder





Toxicants- Warfarin

- Kaput® (warfarin-based) registered by EPA in 2017
- 87th Legislature directed evaluation by Texas A&M AgriLife Extension
- 2-year study complete
- Found to be effective

Legal Considerations

- Toxicant regulations
 - EPA label 2017
 - Texas Label 2024
 - State limited pesticide
- Status of feral hogs in Texas
 - free-ranging livestock
 - Ownership: the landowner

Label is the Law



Victoria Thaxton

Kaput® Label

- Only for pigs
- Do not put bait in water (tidal, surface water, cleaning, disposal)
- Must be distributed using approved feeder (more information later)
- Surveillance is required (by the label and for success)



Kaput® Label *(continued)*

- For pastures, rangelands, forests, and non-crop areas
- Do not allow livestock to graze in baiting area. Remove from pasture or exclude.
- Properly dispose of carcasses in accordance with state laws-Status as free ranging livestock



Is it Safe?

Primary Toxicity is direct consumption of the toxic bait

- Should be prevented by following the label
- Kaput® Feral hog bait is a low toxicity bait designed to be chronically toxic, not acutely toxic
- Field trials by Scimetrics Limited Corp. found no non target deaths



Is it Safe?

Primary Toxicity is direct consumption of the toxic bait

- Dog: Single Feeding 88 lbs of bait
 - Chronic dose 13.2 lbs/day for 5 days
- Cow: Chronic dose 3520 lbs/day for 5 days
- Turkey: Chronic dose 29.3 lbs/day for 19 days
- Northern Bobwhite: Chronic dose 27.6 lbs



Austin Killam

*Data from A.P. Meehan 1984 &
Scimetrics 2022*

Is it Safe?

Secondary Toxicity - Consumption of a carcass that was killed by the toxic bait

- Lethal Dose for a dog
 - 20 lb dog would need to consume 136 lb of infected liver in a single Feeding
 - Liver is the most toxic part of a carcass
- Warfarin (10x) -killed rats fed to magpies. No effects.
- Warfarin (10x) -killed prairie dogs fed to European ferrets. No effects.
- Warfarin (5x)-killed rats fed to alligators. No effects.

Is it Safe?

- Accidental human consumption concerns
(intentional consumption not recommended)
- Blue dye in toxic bait
- Visible withing 3 hours of bait consumption
- Fatty tissue, fluids, joints



Is it effective?

Texas Study

- Multiple regions, 23 sites, 10 counties
- Landowner applicators
- Multiple seasons
- It works!
 - But only when protocol is followed



The Feeder

- Bait cannot be placed on open ground.
- Must use a hog specific feeder
- Minimum 17lb door



The Feeder: *how it works*



The Feeder: *Half stop*



Using Kaput®: pre-baiting

Bait with 100%
corn for one week
with feeder doors
fully open

If used regularly by pigs, go to
next step. If not continue for a
week.



Using Kaput®: pre-baiting

Bait with 75% corn and 25% placebo for one week with feeder doors half open

If used regularly by pigs, go to next step. If not continue for a week.



Using Kaput®: pre-baiting

Bait with 50% corn and 50% placebo for
with feeder doors half open

If used regularly, go to next step. If not continue for a week.

Bait with 50% corn and 50% placebo for one
week with feeder doors closed all the way

If used regularly, go to next step. If not continue for a week.

Using Kaput®: pre-baiting

This is successful pre-baiting:

- Regularly at feeder
- Operating door
- Feeder needs to be filled because bait is being consumed



Using Kaput®: pre-baiting

Do not harass the pigs!



Using Kaput® : Toxic baiting

Remove all nontoxic bait from feeder, keep door closed, and fill with 100% toxic bait. Use bait for at least 3 weeks

Once feeder use stops (bait isn't disappearing), go to next step.



Using Kaput® : Toxic baiting

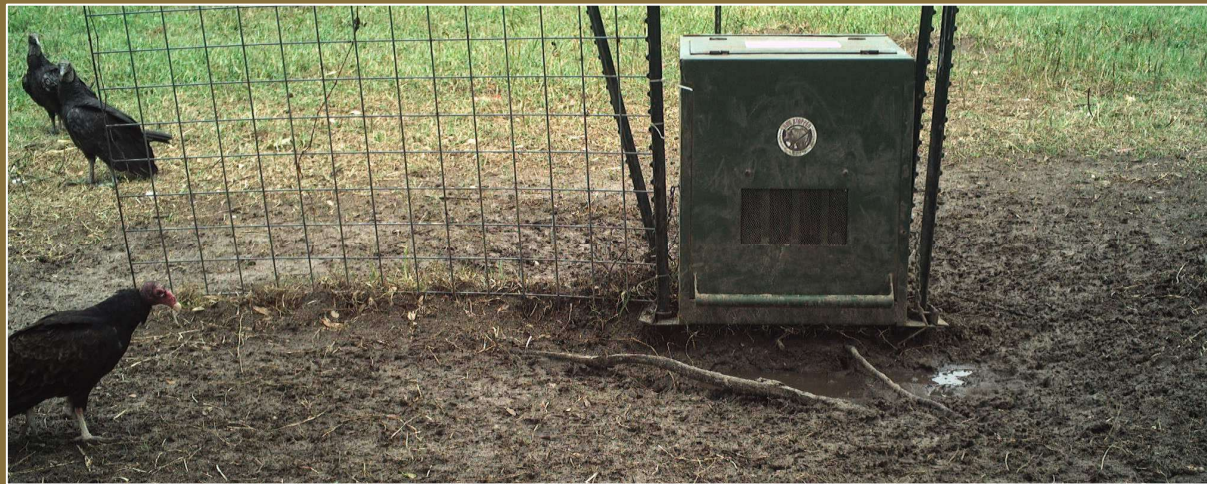
Check Camera



Using Kaput® : post-baiting

Remove all toxic bait and use 100% corn for
10 days with door closed

This should allow managers to monitor for any remaining hogs



When did it work?

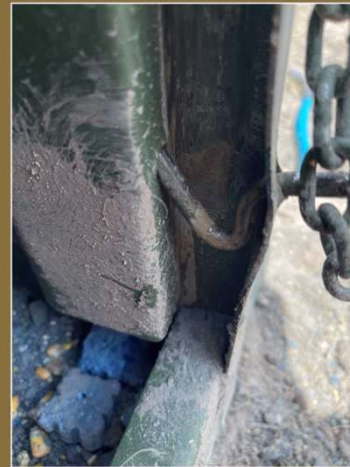
- Successful applicators invested time in good conditioning
- Process can take up to 3 weeks PRIOR to toxic bait
- Feeders are never empty
- Checking every 2 -4 days
 - Early in process every day or every other day, later 3-4 days OK.
 - Feral hogs may get used to applicator presence, but don't want to scare them
- Use of game cameras
- Do not harass feral hog around the bait site.

When did it Fail?

- We had a very few trials that failed. But Why?
 - No feral hogs
 - Abundant alternative feed (acorns, peanuts)
- Inconsistent baiting
- Lack of conditioning
- Harassing feral hogs at bait sites

Feeder maintenance

No feeder will last forever



Final take aways

- Follow the label
- Watch for non-targets - stop
- Only works with constant effort by applicator
 - Regularly refill bait
 - Ensure feeder is operational
 - Watch for non targets
- Never mix toxic bait and corn



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<http://agrilife.org/txwildlifeservices/>