C.G. WILLIS

P.O. BOX 752

WINNBORO, TX 75494

[redacted]

March 13, 2017

April 6, 2017 updated

Dear Senator [redacted]

I'm writing to provide on the proposed government action of allowing "controlled" use of Warfarin, a strong blood anticoagulant, to attempt to control the exploding wild hog population in Texas.

I am a proponent of natural remediation via hunting and trapping, and not poison.

Enclosed please find a research dossier on the topic, including official drug facts, warnings, EPA commentary, published articles and failed examples. Keypoint highlights of the research are included in this cover letter, followed by an addendum table of contents of the research dossier.

What perpetuated my writing today is the published *Austin American-Statesman* April 5 article "On the defense, Sid Miller regrets using 'feral hog apocalypse' comment" by Asher Price. In response, on Thursday morning, April 6, The Texas Department of Agriculture's official Facebook site posts self-praising applauding commentary on their Ag Commissioner, that it was *"a very well-balanced article on the feral hog issue that attempts to correct some long-held misconceptions. Journalist Asher Price stuck to the FACTS – not the FUROR. Well done."*

Let's pause and move not so fast. That's an opinion-editorial statement to defray flack.

"Facts" and "truth" are not the same thing. Journalist Price wrote, in paraphrasing, that the fat of the feral hog would turn blue hence consumers would know it was a poisoned pig: True. Price also wrote that "Miller tells all comers that … 'hogs poisoned by the bait would not affect deer or quail' or 'any other game animal." It's a *fact* that Miller *made that statement*, but the statement itself is NOT TRUE. Frankly, it's an untruth. Okay, it's a lie … whether it be on the reporter's research abilities, or on behalf of a Texas-two-step-misstep of Commissioner Miller. So, that's direct and blunt; I'm not known for tact so why sugar coat it?

EPA Warning Label approved 1/3/2017 states, "This product may be toxic to fish, birds and other wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait."

CRICITCAL POINT 1.

It is a fact and true that the EPA issued a CONDITIONAL registration on 3 January 2017 to Scimetrics Ltd., Corp, the lone manufacturer. **The EPA states the company has "NOT SATISFIED" the "data requirements for storage stability and corrosion characteristics** (Guidelines 830.6317 and 830.6320). A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data."

The EPA Warning states, "Do not expose to children, pets, domesticated animals or other non-target wildlife" and "feeders equipped with heavy lids (8-10 pounds)" and "do not apply directly on the ground."

Commentary.

What hog is going to lift a 8-10 pound lid, after being FIRST "conditioned" for 4 days to eat regular food out of the container, then it is switched with the poisoned, and stick its snout in and be assured to not get any on the ground?

CRITICAL POINT 2.

Environmental warning on the EPA / Company label states "This product may be toxic to fish, birds and other wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait. … do not apply this product directly to water, to areas where surface water is present or intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters."

So, where's the wash waters supposed to be disposed? The warnings are clear. "Not near water?" Wood County has over 90 named lakes, 4 county lakes and Lake Fork. Not even the wild animal food chain. If vultures, coyotes, American Bald Eagles, this can upset the balance of nature. Like big "pharma" for Humans, even a controlled use runs risk on nature's balance of the food chain.

Commentary.

"The test results weren't pretty, he said. Marketed as Kaput Feral Hog Bait, the product is comparable to rat poison — with similar effects. 'They bleed,' Campbell said. Internally and externally, usually for a week or more before they die." (Page 12 of this research)

What happens to animals that kill a hog and eat it before the pig bleeds to death internally? The coyote may eat the hog. A buzzard or worse yet, what if an American bald eagle may eats the pig meat? The hog may be driven to a water source and die, and as the body rots, the poisoned fat will break down and go into the water source?

An east Texas resident in Wood County owns a 300 acre pine and nature forest preserve along the Big Sandy. She once had this product placed on her property to control hogs and beavers. It also ended up killing egrets, ducks and deer. It was a site to behold, "Just horrible!" she said.

I once used a similar product when I managed a $10M luxury apartment complex in north Dallas after college. A squirrel in the attic ate the poison, went to the swimming pool to drink and upon drinking, the product caused death from internal bleeding. I had to shock the pool and then drain it into the municipal water supply, because of one dead squirrel floating at the bottom like an old sock, for fear of human contact from contaminated water.

Success Stories are out there for Trapping versus Poisoning.

For their feral hog, Big Spring did controlled hunts problem rather than pellets of poison, and in the process of reducing by trapping the hogs, the water testing showed reduced level e-coli contaminent amounts.

I live in East Texas, and my 80-year-old mom lives in Southeast Dallas right next to a 60 acre tract of Trinity Forest Trail off North Jim Miller and Scyene roads in Dallas. This area has reduced the problem greatly through controlled hunts capturing over 96 hogs, and not poison. (See Addendum E, Dallas News article on this "study.")

2. Govt. Safety Data

"Warning: Keep away from humans, domestic animals and pets. Harmful if swallowed or absorbed through the skin because this material may reduce the clotting ability of blood and cause bleeding. Do not get in eyes, on skin or clothing. ... Do not contaminate water, food or feed by storage or disposal." *Source:* Sheet: https://www3.epa.gov/pesticides/chem_search/ppls/072500-00006-20050310.pdf

3. AUSTRALIA tried feral pig poison and stopped. Please *see articles attached. (*"experiments that concerned government officials so much they later banned its use on grounds of "extreme suffering." And "It is considered inhumane".

CONCLUSION.

While American agriculture does not actively promote public consumption of feral hogs, hunters and rural meat processors do process it. In fact, some wild boar (feral hogs) are served regionally as a delicacy, and shipped overseas. Frankly, with all the hungry people in the world, even in the U.S., why would anyone with a lick of common since poison a creature when it could be used for food consumption?

The conclusion for controlling and shrinking the wild pig population is NOT using Kaput® , Warfarin, or any other poison in the wild. CONCLUSION: FOOD CHAIN CONCERNS. This product must NOT get in our food chain. It must not be used near any water. The solution is proven natural capture.

Most respectfully,

C.G. Willis

(Enclosures)

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Addendum A. COMPANY OWNERSHIP

MANUFACTURING COMPANY OWNERSHIP

Of concern, is … who is really benefitting from this legislation push? There is apparently ONE company that makes the product "KAPUT" for the wild pig control. Here's the details of ownership

Scimetrics Ltd. Corp., founded in 1999, is a privately held retailer of pest control products, with headquarters in Colorado, makers of **KaputProducts.com;**

- **On March 10, 2005, the US EPA sent a letter for the purpose of clarifying the 72500-06 product's use for rats only, stating, "**Environmental Hazards: This product is toxic to fish and wildlife. Keep out of lakes, streams or ponds." (Attached)

- **On January 3, 2017, had their US EPA product registration letter for use of the Kaput product 72500-26 for feral hog poison, with the EPA reply it is a conditional letter, because they have NOT satisfied the data need and have until July 2018 to provide that data. (See enclosed).** (

Scimetrics Ltd. Corp
9974 Ne Frontage Rd, Wellington, Colorado 80549-1703, Phone 970-482-1330
13 employees reports, with sales at $3.41 million.
Ms. Linda Poche, Managing Director, President
Ms. Sue Vallentine Regulatory Agent
Private Company Ticker Symbol™: (SCIMLTP)

Mr. Richard Poche also owns the patent application for a systemic insecticide for fleas, ticks and rats, using warfarin and other products. Genesis Labs does the testing of the product. GL is a sister company of Scimetrics.

Sources:

1. *http://listings.findthecompany.com/l/11295893/Scimetrics-Limited-Corp-in-Wellington-CO#People&s=2ySY3B*
2. *http://www.privco.com/private-company/scimetrics-ltd-corp*
3. *http://www.trademarkia.com/hog-stopper-866-4423467-s-scimetrics-ltd-corp-new-solutions-to-old-problems-wwwkaputproductscom-87298958.html*
4. *Patent applications, US 20030215481 A1 & https://www.google.co.in/patents/US20060057178*
5. *Genesis Labs: http://offthekuff.com/wp/?p=79260 (FULL TEXT IN ADDENDUM A)*
6. EPA LABEL CONDITIONALLY APPROVED 1/3/2017. http://24mg21e5i362midy831oauj8.wpengine.netdna-cdn.com/wp-content/uploads/2017/04/feral-hog-bait-25lb-label-v1.pdf
7. SAFETY DATA SHEET http://24mg21e5i362midy831oauj8.wpengine.netdna-cdn.com/wp-content/uploads/2017/02/72500-26_Kaput_Feral_Hog_Bait_SDS.pdf
8. GOVERNMENT REGULATORY FILINGS.

   Source: https://www3.epa.gov/pesticides/chem_search/ppls/072500-00026-20170103.pdf

Addendum B. GOVERNMENT REGULATORY POINTS.

Patent Application

Federal Data Sheet: https://www.federalregister.gov/documents/2015/02/06/2015-02178/pesticide-experimental-use-permit-receipt-of-application-comment-request

EPA PATENT APPROVAL:

https://www3.epa.gov/pesticides/chem_search/ppls/072500-00026-20170103.pdf

FULL DOCUMENT ENCLOSED.

FIRST AID	
If Swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
TREATMENT FOR PET POISONING If animal eats bait, call veterinarian at once.	
NOTE TO PHYSICIAN OR VETERINARIAN Contains Warfarin, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans or animals that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1, intramuscularly or orally.	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Information Center at 1-800-858-7378 for emergency medical treatment information.	

ACCEPTED
01/03/2017
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under
EPA Reg. No. 72500-26

In 2004-2005, I used to give 84-year-old grandma Subell (Tex's grandma), Warfarin shots into her stomach regulate the blood viscosity. Warfarin thins blood as an anti-clotting agent; too much can lead to internal bleeding and death. It's unstable use requires the INR (blood thickness) readings to be constantly

monitored in human use. It was almost inhumane to try to keep her alive by thinning her blood so much with Warfarin; she had ghastly bruising up and down her arms and legs, and eventually died from a massive stroke.

Addendum C. PRODUCT OFFICIAL LABEL

FIRST AID

If Swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

TREATMENT FOR PET POISONING
If animal eats bait, call veterinarian at once.

NOTE TO PHYSICIAN OR VETERINARIAN
Contains Warfarin, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans or animals that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K1, intramuscularly or orally.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Information Center at 1-800-858-7378 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Keep away from humans, domestic animals and pets. Any person who retrieves carcasses or unused bait following application of this product must wear protective gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and Other Handlers Must Wear:
- Long-sleeved shirt and long pants,
- Shoes plus socks, and
- When handling bait or retrieving animal carcasses, chemical-resistant gloves made of barrier laminate, polyethylene, butyl rubber (>14 mils), nitrile rubber (>14 mils), neoprene rubber (>14 mils), natural rubber (>14 mils), polyvinyl chloride (>14 mils), or Viton (>14 mils).

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then, wash thoroughly and change into clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing them. As soon as possible, wash thoroughly and change clothing.

ENVIRONMENTAL HAZARDS

This product may be toxic to fish, birds and other wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait. Do not apply this product directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL:
Read this entire label and follow all use directions and use precautions.

IMPORTANT: Do not expose children, pets, domesticated animals or other non-target wildlife to this product. To help prevent accidents:
1. Store product not in use in locations out of reach of children, pets, domesticated animals and wildlife.
2. Apply this product only as specified on this label.
3. Dispose of product container as well as unused, spoiled or recoverable unconsumed bait as specified on this label.

USE RESTRICTIONS: This product may only be used to control feral hogs (*Sus scrofa*) on pastures, rangeland, forests, non-crop areas, and crop lands. This bait may only be applied in hog feeders equipped with heavy lids (8 to 10 lbs. of total weight) on bait compartments so as to limit direct access to bait by nontarget animals. Feral hogs must be conditioned to accept feed from the bait dispensers and to open the weighted lids to bait compartments.

- Do not apply this bait directly on the ground, including all types of ground surface (e.g., bare or plant-covered ground, paved surfaces, etc.). Apply this product only in hog feeders consistent with the description provided above.
- Apply bait in fenced areas, if available.
- When handling bait or animal carcasses, wear protective gloves made of barrier laminate, polyethylene, butyl rubber (>14 mils), nitrile rubber (>14 mils), neoprene rubber (>14 mils), natural rubber (>14 mils), polyvinyl chloride (>14 mils), or Viton (>14 mils).
- Store this product out of reach of children, pets, domesticated animals, and wildlife.
- Post bilingual caution signs (English and Spanish) in the treated areas to warn the public of the presence of the Warfarin bait and to forbid disturbance of bait dispensers and hog carcasses. Post these signs on public roads, trails, and pathways within and at common points of access to treated areas.

GRAZING RESTRICTIONS: Do not allow livestock to graze on baited areas (whether fenced or open) during the baiting program. If bait is to be applied in areas used for grazing, ensure that all livestock are removed and excluded from baited areas before applying this product and for at least 90 days after toxic baits are removed from bait dispensers.

SELECTION OF BAITING SITES: Baiting sites must be consistent with the limitations set forth in the **USE RESTRICTIONS** on this label (above). Before applying this product, observe the area selected for treatment to identify where hog activity and trails are located. Look for evidence of recent activity, including hog sightings, hog damage to crops, rooting of the soil, hog wallows, and fresh hog tracks and fecal material.

PLACING AND SECURING HOG FEEDERS: Locate hog feeders in or near probable resting areas for hogs, including brush along streams, dense cover, and tall vegetation. Do not place feeders in open areas in crops, fields, or pastures. From one to three bait feeders may be used per placement location, according to the apparent number of hogs visiting the location. Three dispensers spaced no more than 10 feet apart may be used where hog numbers are excessive (e.g., if large hog family groups, or sounders, are present). Secure feeders in place, so that hogs cannot tip them over, by use of T-posts or by tying the feeders to trees or shrubs.

CONDITIONING HOGS TO FEEDERS: After the feeders are situated and secured, feral hogs must be conditioned (trained) to feed from them. To accomplish this, load the feeding compartments with a non-toxic feed, and open the lids to the feeding compartments by about 6 inches so that hogs can access this feed with little difficulty. To condition hogs to accept this product, use one of the following preparations as the non-toxic feed: (1) cracked or whole corn, soaked in water for 3-5 days until it has a noticeable odor; (2) cracked or whole corn treated with a commercially available hog attractant which includes scents of hog urine, fruit, or pet food; or (3) Kaput Feral Hog Lure. Load 25 to 50 lbs. of the non-toxic feed into each hog feeder. Provide access to non-toxic feed for three to six weeks, until hogs are feeding readily from the bait compartments. Failure to condition hogs to feeders or ending the conditioning period too early may reduce the number of hogs taken or prolong the period of time needed for toxic baiting.

BAIT APPLICATION: After feral hogs have been conditioned to take non-toxic feed from bait compartments, remove all of the non-toxic feed remaining in the feeders. Add 25 to 50 lbs. of Kaput® FERAL HOG BAIT to each feeder and **close lids to bait compartments** so that hogs must lift the doors with their snouts in order to access bait. (Do not load this product into feeders from which no non-toxic bait was consumed during the conditioning period.) Monitor feeders every 1 to 4 days once treatment has begun to determine whether hogs are accessing bait, to assess whether bait is being spilled around feeders, and to replenish bait, if appropriate. Refill feeders if bait is significantly depleted or degraded, and there still is evidence of hog activity at the feeder. As bait take and hog numbers decline, the feeders may be monitored at 5-day intervals, but site surveillance must continue as described below. If possible, feeders should be checked at mid-day to minimize disturbance to feral hogs. Bait spilled around feeders must be collected and disposed of properly.

SURVEILLANCE AND FOLLOW-UP: Dead hogs may begin to appear in or near the treatment areas within 4 to 7 days after bait placement. Applicators must return to the treatment site within 4 days after the first bait placements were made, and at 2- to 4-day intervals thereafter, to inspect the site for evidence of dead or dying feral hogs and/or dead nontarget animals. All carcasses found must be disposed of properly. Carcasses may be buried on site in holes dug deeply enough that the entire carcass is at least 18 inches below the ground surface. Cover buried carcasses up to the level of the surrounding ground. If burial is not practical (e.g., due to frozen or extremely hard ground) and other disposal methods are allowed by State and local authorities, carcasses may be disposed of by other methods to ensure that carcasses are not accessible to scavengers. Continue to monitor the treatment area to collect and dispose of feral hogs and to search for non-target animals for at least two weeks after the removal of all bait from the hog feeders. Deaths of any animals other than feral hogs that appear to be the result of baiting with this product must be reported to State authorities.

Note: A dye in this product will impart a blue color to the fatty tissues of hogs that have eaten the bait.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container in a cool, dry place inaccessible to children and pets.
Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Container Handling: Non-refillable container. Do not reuse or refill this container. Offer container for recycling, if available, or reconditioning, if appropriate. Otherwise, dispose of empty container in a sanitary landfill.

Lot Number: *See Container Lid*

WARRANTY

To the extent consistent with applicable law, Manufacturer and Seller make no warranty, express or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use/handling is contrary to label instructions.

Notice: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

Patent Pending
Made in USA

Scimetrics LTD. CORP.
Pest Management Solutions
P.O. Box 1045, Wellington, CO 80549-1045
(970) 482-1330
customerservice@kaputproducts.com

Label Version 1/3/2017

8 53215 00021 7

Addendum D. EPA REGULATORY REGISTRATION – CONDITIONAL JAN. 3, 2017

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
72500-26	1/3/17

Term of Issuance: Conditional

Name of Pesticide Product: KAPUT® FERAL HOG BAIT

Name and Address of Registrant (include ZIP Code):

Ms. Sue Valentine
Regulatory Manager
Scimetrics Ltd., Corp.
P.O. Box 1045
Wellington, CO 80549-1045

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Venus Eagle, Acting Chief
Invertebrate-Vertebrate Branch 3, Registration Division (7505P)

Date: 1/3/17

EPA Form 8570-6

2. Be aware that proposed data requirements have been identified in a Preliminary Work Plan. For more information on these proposed data requirements, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

4. Make the following label changes before you release the product for shipment:

    - Revise the EPA Registration Number to read, "EPA Reg. No. 72500-26."

5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(c). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 12/30/2016
- Alternate CSF 1 dated 12/30/2016

If you have any questions, please contact Mark Suarez by phone at 703-305-0120, or via email at suarez.mark@epa.gov.

Enclosure

Kaput® FERAL HOG BAIT

Active Ingredient:
Warfarin (CAS Number 81-81-2) 0.005%
Other Ingredients 99.995%
Total 100.000%

Keep Out of Reach of Children
CAUTION
See back [side] panel for First Aid and Precautionary Statements.

EPA Reg. No. 72500-_
EPA Est. 72500-CO-1

Net Wt. ___ lbs
{25 to 100 lbs}
[{11.34 to 45.36 kg}]

(Back [Side] Panel)

FIRST AID	
If Swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
TREATMENT FOR PET POISONING	
If animal eats bait, call veterinarian at once.	
NOTE TO PHYSICIAN OR VETERINARIAN	
Contains Warfarin, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans or animals that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1, intramuscularly or orally.	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Information Center at 1-800-858-7378 for emergency medical treatment information.	

ACCEPTED
01/03/2017
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 72500-26

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Keep away from humans, domestic animals and pets. Any person who retrieves carcasses or unused bait following application of this product must wear protective gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and Other Handlers Must Wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks, and
- When handling bait or retrieving animal carcasses, chemical-resistant gloves made of barrier laminate, polyethylene, butyl rubber (≥14 mils), nitrile rubber (≥14 mils), neoprene rubber (≥14 mils), natural rubber (≥14 mils), polyvinyl chloride (≥14 mils), or Viton (≥14 mils).

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then, wash thoroughly and change into clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing them. As soon as possible, wash thoroughly and change clothing.

ENVIRONMENTAL HAZARDS

This product may be toxic to fish, birds and other wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait. Do not apply this product directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL:

Read this entire label and follow all use directions and use precautions.

IMPORTANT: Do not expose children, pets, domesticated animals or other non-target wildlife to this product. To help prevent accidents:

1. Store product not in use in locations out of reach of children, pets, domesticated animals and wildlife.
2. Apply this product only as specified on this label.
3. Dispose of product container as well as unused, spoiled or recoverable unconsumed bait as specified on this label.

USE RESTRICTIONS: This product may only be used to control feral hogs (*Sus scrofa*) on pastures, rangeland, forests, non-crop areas, and crop lands. This bait may only be applied in hog feeders equipped with heavy lids (8 to 10 lbs. of total weight) on bait compartments so as to limit direct access to bait by nontarget animals. Feral hogs must be conditioned to accept feed from the bait dispensers and to open the weighted lids to bait compartments.

•Do not apply this bait directly on the ground, including all types of ground surface (e.g., bare or plant-covered ground, paved surfaces, etc.). Apply this product only in hog feeders consistent with the description provided above.
•Apply bait in fenced areas, if available.
•When handling bait or animal carcasses, wear protective gloves made of barrier laminate, polyethylene, butyl rubber (≥14 mils), nitrile rubber (≥14 mils), neoprene rubber (≥14 mils), natural rubber (≥14 mils), polyvinyl chloride (≥14 mils), or Viton (≥14 mils).
•Store this product out of reach of children, pets, domesticated animals, and wildlife.
•Post bilingual caution signs (English and Spanish) in the treated areas to warn the public of the presence of the Warfarin bait and to forbid disturbance of bait dispensers and hog carcasses. Post these signs on public roads, trails, and pathways within and at common points of access to treated areas.

GRAZING RESTRICTIONS: Do not allow livestock to graze on baited areas (whether fenced or open) during the baiting program. If bait is to be applied in areas used for grazing, ensure that all livestock are removed and excluded from baited areas before applying this product and for at least 90 days after toxic baits are removed from bait dispensers.

SELECTION OF BAITING SITES: Baiting sites must be consistent with the limitations set forth in the **USE RESTRICTIONS** on this label (above). Before applying this product, observe the area selected for treatment to identify where hog activity and trails are located. Look for evidence of recent activity, including hog sightings, hog damage to crops, rooting of the soil, hog wallows, and fresh hog tracks and fecal material.
PLACING AND SECURING HOG FEEDERS: Locate hog feeders in or near probable resting areas for hogs, including brush along streams, dense cover, and tall vegetation. Do not place feeders in open areas in crops, fields, or pastures. From one to three bait feeders may be used per placement location, according to the apparent number of hogs visiting the location. Three dispensers spaced no more than 10 feet apart may be used where hog numbers are excessive (e.g., if large hog family groups, or sounders, are present). Secure feeders in place, so that hogs cannot tip them over, by use of T-posts or by tying the feeders to trees or shrubs.
CONDITIONING HOGS TO FEEDERS: After the feeders are situated and secured, feral hogs must be conditioned (trained) to feed from them. To accomplish this, load the feeding compartments with a non-toxic feed, and open the lids to the feeding compartments by about 6 inches so that hogs can access this feed with little difficulty. To condition hogs to accept this product, use one of the following preparations as the non-toxic feed: (1) cracked or whole corn, soaked in water for 3-5 days until it has a noticeable odor; (2) cracked or whole corn treated with a commercially available hog attractant which includes scents of hog urine, fruit, or pet food; or (3) Kaput Feral Hog Lure. Load 25 to 50 lbs. of the non-toxic feed into each hog feeder. Provide access to non-toxic feed for three to six weeks, until hogs are feeding readily from the bait compartments. Failure to condition hogs to feeders or ending the conditioning period too early may reduce the number of hogs taken or prolong the period of time needed for toxic baiting.
BAIT APPLICATION: After feral hogs have been conditioned to take non-toxic feed from bait compartments, remove all of the non-toxic feed remaining in the feeders. Add 25 to 50 lbs. of *Kaput*® FERAL HOG BAIT to each feeder and **close lids to bait compartments** so that hogs must lift the doors with their snouts in order to access bait. (Do not load this product into feeders from which no non-toxic bait was consumed during the conditioning period.) Monitor feeders every 1 to 4 days once treatment has begun to determine whether hogs are accessing bait, to assess whether bait is being spilled around feeders, and to replenish bait, if appropriate. Refill feeders if bait is significantly depleted or degraded, and there still is evidence of hog activity at the feeder. As bait take and hog numbers decline, the feeders may be monitored at 5-day intervals, but site surveillance must continue as described below. If possible, feeders should be checked at mid-day to minimize disturbance to feral hogs. Bait spilled around feeders must be collected and disposed of properly.
SURVEILLANCE AND FOLLOW-UP: Dead hogs may begin to appear in or near the treatment areas within 4 to 7 days after bait placement. Applicators must return to the treatment site within 4 days after the first bait placements were made, and at 2- to 4-day intervals thereafter, to inspect the site for evidence of dead or dying feral hogs and/or dead nontarget animals. All carcasses found must be disposed of properly. Carcasses may be buried on site in

holes dug deeply enough that the entire carcass is at least 18 inches below the ground surface. Cover buried carcasses up to the level of the surrounding ground. If burial is not practical (e.g., due to frozen or extremely hard ground) and other disposal methods are allowed by State and local authorities, carcasses may be disposed of by other methods to ensure that carcasses are not accessible to scavengers. Continue to monitor the treatment area to collect and dispose of feral hogs and to search for non-target animals for at least two weeks after the removal of all bait from the hog feeders. Deaths of any animals other than feral hogs that appear to be the result of baiting with this product must be reported to State authorities.

Note: A dye in this product will impart a blue color to the fatty tissues of hogs that have eaten the bait.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container in a cool, dry place inaccessible to children and pets.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Non-refillable container. Do not reuse or refill this container. Offer container for recycling, if available, or reconditioning, if appropriate. Otherwise, dispose of empty container in a sanitary landfill.

Batch Code [Lot Number]: {Description of where lot number is located}

{Per PR Notice 2007-4 the batch code/lot number will appear on the label or container.}

WARRANTY

To the extent consistent with applicable law, Manufacturer and Seller make no warranty, express or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use/handling is contrary to label instructions.

[WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER, AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, CROP OR PLANT DAMAGE, OR LOSS OF YIELD, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE WEATHER, WIND, AND TEMPERATURE, OR THE MANNER OF USE OR APPLICATION, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER, AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER OR MANUFACTURER, AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY OTHER REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS. NO WARRANTIES SHALL BE CREATED BY COURSE OF DEALING, USAGE OF TRADE, OR COURSE OF PERFORMANCE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE FACE HEREOF. THE SELLER OR MANUFACTURER ASSUMES NO RESPONSIBILITY THAT THE GOODS WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH YOU MAY BE BUYING OR USING THE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THE CONTRACT.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THE NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NEITHER MANUFACTURER NOR SELLER SHALL BE LIABLE TO BUYER OR USER OR TO CUSTOMERS OF BUYER, IF ANY, FOR INDEMNIFICATION OR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE USE, MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY, SHALL BE FOR DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE GOODS AND, IF BUYER OR USER WISHES, THE RETURN OF THE GOODS BY BUYER TO SELLER.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the goods, and return it unopened to the Seller, and the purchase price will be refunded. *By using the goods, you expressly agree to all of the terms and conditions of this contract.*]

[Attention [Notice]: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.]

Manufactured by:

Scimetrics LTD. CORP.

[Pest Management Solutions]
P.O. Box 1045
Wellington, CO 80549
(970) 482-1330
customerservice@kaputproducts.com
Made in [the] U.S.A. [USA]
[Patent Pending]

[Kaput® is a registered trademark of Scimetrics Ltd. Corporation]

{ } Denotes language that does not appear on the market label
[ ] Denotes alternate/optional language

Minimum text for warning signs

CAUTION

- Warfarin bait to control feral hogs is being used in this area.
- Do not touch dead animals or bait dispensers.
- Do not eat meat from animals shot or found dead in this area.
- Do not eat animals with internal parts that are dyed blue.
- Do not allow livestock to graze in this area.

PRECAUCIÓN

- Cebo con warfarin se utiliza en esta área para controlar marrano salvajes.
- No toque animales muertos ni dispensadores de cebo.
- No coma carne de animales disparados o encontrados muertos en esta zona.
- No coma animales con partes internas teñidas azul.
- En esta zona no permita ganado a pacer.

Addendum E. MEDIA ARTILCE RESEARCH "OFF THE CUFF"

"If you can't porkchop 'em, poison 'em"

Mar 9th, 2017 by Charles Kuffner.

Source: http://offthekuff.com/wp/?p=79260

The war on feral hogs enters a new phase.

At a Feb. 21 news conference in Austin, Texas Agriculture Commissioner Sid Miller announced the agency had issued a rule that would allow Kaput Feral Hog Bait, a pesticide containing the anticoagulant warfarin as its active ingredient, to be used in the control of feral hogs. The emergency rule, issued Feb. 6, makes Texas the first and, so far, only state to adopt regulations allowing the use of a lethal toxicant – poison – to control the invasive swine.

Miller, who as a member of the Texas Legislature in 2011 sponsored a successful bill allowing aerial gunning of feral hogs by private citizens with the permission of landowners, trumpeted the new rule as a significant advance in the state's ongoing war against feral hogs, which compete with native wildlife, carry and transmit diseases such as brucellosis, and annually cause tens of millions of dollars in damage to property, including an estimated $50 million in annual losses to agriculture.

"I am pleased to announce that the 'feral hog apocalypse' may be within Texans' reach with the introduction of Kaput's hog lure," Miller said.

Miller's action was made possible by the U.S. Environmental Protection Agency's conditional registration last month of Kaput Feral Hog Bait under the federal statutes governing pesticide use across the country. Kaput, the brand name of pesticides produced by Colorado-based Scimetrics Ltd. Corp., is the first and, so far, only toxicant approved by federal authorities for use in feral-hog control.

Warfarin, laced in prepared baits designed to be eaten by feral hogs, is toxic to pigs in the same way that it is lethal to rats, mice and other rodents for which the substance has been used as a toxicant for more than 60 years. Warfarin has therapeutic uses – it is one of the most common medications taken by humans as a blood-clot preventive. But ingested in sufficient quantities by some mammals, warfarin triggers fatal internal hemorrhaging.

Warfarin's effects are anything but therapeutic in pigs. Feral hogs' physiology makes them susceptible to warfarin's toxic effects at a much lower dose than almost any other animal, research has shown. The percentage of warfarin the Kaput Feral Hog Bait approved by EPA is 0.005 percent by weight – five times lower than the 0.025 percent warfarin by weight used in rats/mice baits.

The poison has proven very effective at killing feral hogs, according to research conducted in Texas by Genesis Labs, a sister company of Scimetrics.

[…]

To limit exposure of non-target species such as deer, raccoons, birds and other that might ingest the baits, protocols for distributing it mandate use of a specially designed feeder with a heavy "guillotine" door that must be lifted to access the bait. Feral hogs have little trouble using their stout snouts to lift the door, while the door's weight and mode of operation stymies most other wildlife.

Additionally, use of the pig poison in Texas will be restricted. Under the rule change announced by Miller, the warfarin-based bait is classified as a "state-limited-use pesticide," and it can be purchased and used only by state-licensed pesticide applicators.

Landowners or others who want to use the hog toxicant on property in Texas and who do not hold the required license will have to hire a licensed applicator to legally set up the approved bait dispensers and distribute the bait. That almost certainly will limit its use.

Some Texans would rather it not be used at all.

In the wake of Miller's announcement, the Texas Hog Hunters Association initiated an online petition to have the rule revoked. The group cites concerns about the potential human health effects of eating feral hogs that have ingested the warfarin-infused baits as well as questions about collateral damage to non-target species such as deer or domestic dogs that ingest treated baits and possible secondary poisoning of animals and protected birds such as hawks and eagles.

As of early Saturday, the online petition at change.org had garnered 10,400 supporters.

Texas Department of Agriculture statements counter those concerns, noting the low levels of warfarin in hogs that consume the baits pose little threat to humans, especially if they avoid eating the animal's liver, where most of the warfarin will be concentrated. Also, the bait contains a blue dye that transfers that color to the fatty tissues of hogs. Hunters taking a hog and finding blue-tinted fat can decline to eat the animal.

Here's the petition in question. It turns out that these hunting groups did more than just create a petition, and they got some results.

A Waco-area feral hog processor on Monday said he was racing to get a bill filed that would shoot down Texas Agriculture Commissioner Sid Miller's call for a "hog apocalypse" through use of poisonous bait.

Will Herring, owner of Wild Boar Meats, last week won a court order temporarily halting Miller's Feb. 21 rule allowing use of "Kaput Feral Hog Lure," arguing the measure would spook pet food companies he sells to and put him out of business. Herring said he'd since secured Rep. Kyle Kacal, R-Bryan, as primary sponsor for legislation that would require study of chemicals before they are approved. The deadline to file bills for the current state legislative session is Friday.

"All our bill says is, 'Let's have a state agency and/or state educational institution study this poison and any other poison before it before it becomes legal,'" Herring said from Austin, where he was recruiting state lawmakers to back the bill. "There's not one public study, and by public study I mean a study available to the public, that has looked at using the product Kaput to poison feral hogs."

[…]

Herring said he was processing as many as 5,000 hogs a month and was getting ready to break ground on a new facility when Miller announced a rule that could potentially put he and other wild hog processors out of business.

"We have not developed a way to test for it, nor have we developed a way to inactivate it," Herring said. "If someone said, 'Look, I only want to buy warfarin-free wild hog meat,' we do not know a way that we could guarantee that. And that's a problem to me.

"It's not just me that's concerned about this," Herring added. "I only do the pet food business. There's a couple of companies that deal with the human consumption business, and it's the same issue."

Herring last Wednesday filed a lawsuit against Miller's rule, with the Texas Hog Hunters Association and Environmental Defense Fund filing supporting briefs. State District Judge Jan Soifer in Austin on Thursday issued a temporary restraining order stopping Kaput use in Texas

until March 30, saying the TDA did not follow the Texas Administrative Procedures Act and agreeing that allowing Kaput would cause "immediate and irreparable harm" to Wild Boar Meats.

All right then. I have some sympathy for the hunters here, because introducing poison into the environment, even in a fairly controlled fashion like this, carries a higher level of risk. Even with the protocols in place, there's no way to fully prevent unintended consequences of this. It should be noted that this isn't the first attempt at poisoning the pigs, but it is the first one with an EPA-approved toxin. We'll see how this plays out in court, and I'll keep my eyes open for an anti-warfarin bill in the Lege; as of yesterday, I didn't see anything authored by Rep. Kacal that sounds like this.

(CONTINUED)

Addendum F. MEDIA ARTILCE RESEARCH "WASHINGTON POST"

'Hog Apocalypse': Texas has a new weapon in its war on feral pigs. It's not pretty.

https://www.washingtonpost.com/news/animalia/wp/2017/02/23/hog-apocalypse-texas-has-a-new-weapon-in-its-war-on-feral-pigs-its-not-pretty/?utm_term=.b5841ee40a4a

Securing a Texan's right to shoot wild pigs from a helicopter may have been Sid Miller's best-known accomplishment before this week.

The state's agricultural commissioner hangs a boar's head and toy chopper outside his office to remind people of the law he got passed, the Austin American-Statesman reports.

But Miller has never stopped searching for better ways to kill some 2 million feral hogs in Texas that the commissioner accuses of eating newborn lambs, uprooting crops and "entire city parks," trampling across highways and causing more than $50 million in damage a year.

The search is over, Miller announced Tuesday: "The 'Hog Apocalypse' may finally be on the horizon."

Miller said he would return his entire research budget to the state. He doesn't need it anymore, he says, after finding "a new weapon in the long-standing war on the destructive feral hog population."

It's called warfarin: the pesticide with war in its name. Pigs eat it. It kills them slowly, often painfully, and turns their innards blue. It's already wiped out swine herds in Australia, which later banned the product as inhumane.

The Environmental Protection Agency just approved it.

Hunters and wildlife experts, not so much.

More than 3,000 have signed the Texas Hog Hunters Association's petition against Miller's chemical war.

"If this hog is poisoned, do I want to feed it to my family?" the group's vice president, Eydin Hansen, asked the Dallas CBS affiliate. "I can tell you, I don't."

Stephanie Bell, an animal-cruelty director for People for the Ethical Treatment of Animals, said in a statement that feral hogs "should not be sentenced to death simply for trying to forage and feed their own families." She noted correctly that feral boars were brought to the United States to be hunted for sport before they proliferated across Texas and other states.

Tyler Campbell, a former researcher with the U.S. Agriculture Department, led the agency's feral-hog studies in Kingsville, Tex., for several years, when warfarin was first tested on pigs in the United States.

"It was fast-tracked," he said.

The test results weren't pretty, he said. Marketed as Kaput Feral Hog Bait, the product is comparable to rat poison — with similar effects.

"They bleed," Campbell said. Internally and externally, usually for a week or more before they die.

Just as concerning, he said, were difficulties in preventing other species from eating the poison — which is known to paralyze chickens, make rats vomit and kill all manner of animals.

The EPA regulations — which Texas plans to strengthen by licensing warfarin's use — requires hogs to be fed the poison out of bins with 10-pound lids.

The lid tactic won't work, Campbell said. Before retiring from government research a few years ago, he saw a study in which raccoons lifted much heavier lids in search of food.

"The wildlife community at large has reasons to have concerns," he said.

[Trump adviser mentioned for agriculture secretary called Clinton the c-word]

Some people are worried in Louisiana, where officials are considering using warfarin on the state's population of feral hogs.

"We do have very serious concerns about non-target species," state wildlife veterinarian Jim LaCour told the Times-Picayune.

Even if only hogs can get to the bait, LaCour said, "they're going to drop crumbs on the outside." Those crumbs might then be eaten by rodents, which might be eaten by birds, and thus warfarin could spread throughout the ecosystem.

People should be concerned too, LaCour said: Millions take low doses of warfarin, like Coumadin, to prevent blood clots. Ingesting more from poisoned game could be "very problematic," he said.

Miller isn't worried.

The commissioner's office didn't reply to requests for comment. But in a statement to the CBS station DFW, he said years of testing prove that other wildlife, or pets, "would have to ingest extremely large quantities over the course of several days" to get sick.

As for the hunters' objections, Miller said a blue dye will make poisoned hogs obvious long before they reach the oven.

"If you want them gone, this will get them gone," the commissioner told the Statesman.

As precedent, he pointed to Australia, where he said warfarin "was used for many years" on feral hogs.

It was — in experiments that concerned government officials so much they later banned its use on grounds of "extreme suffering."

[Wild pigs may become Washington's next big pest]

"It is considered inhumane and its use is being phased out in all states and territories," reads an Australian government assessment from 2009, shared with The Washington Post by Campbell.

The poison was effective, granted. It proved as apocalyptic as Miller promises, taking just a few months to wipe out an estimated 99 percent of wild pigs in Sunny Corner State Forest during an experiment in 1987.

Other studies described poisoned hogs' last days in explicit detail: Some were lucky; massive internal bleeding killed them quickly after they ate warfarin. Most suffered for a week or more — one pig for a full month before it died.

"Animals moved only if approached closely and spent most time lying in shelter," researchers wrote in Australian Wildlife Research in 1990.

Some leaked blood from their eyes or anuses. Many bled internally — sometimes into their joints, causing severe pain. An autopsy revealed one pig's liver had fused to its stomach.

Being shot from a helicopter, the Australian government concluded, was objectively less cruel.

This post has been updated.

Addendum G. MEDIA ARTILCE RESEARCH “ABILENE REPORTER NEWS”

http://www.reporternews.com/story/news/local/2017/03/04/poison-answer-feral-hog-problem/98705028/

SPECIAL REPORT: Is poison the answer to feral hog problem?

QUESTIONS RAISED ABOUT HOG POISON'S EFFECT ON LAND, OTHER ANIMALS, AND EVEN ABOUT THE HOGS' SUFFERING.

Fisher County rancher and farmer Todd Coker sat in the middle of a recently plowed cotton field Tuesday evening and surveyed the damage wreaked by feral hogs on his land once again.

Frustrated and exasperated, Coker still had zero desire to use a poison on his farm that would kill feral hogs, and it looks like he won’t have to worry about it right now.

So vehement was the backlash from Texas Agriculture Commissioner Sid Miller’s Feb. 21 announcement of the approval of a warfarin-based pesticide to control the feral hog population, it took only a week for a lawsuit to be filed and an Austin district court judge to grant a temporary restraining order blocking the emergency rules established by the Texas Agriculture Department.

Wild Boar Meats filed the lawsuit in 345th District Court because the meat processing plant believes — like many hunters, farmers and ranchers — that the poison is not the solution to the feral hog problem, the company website states.

Calls to Wild Boar Meats went unreturned Friday, the day after the temporary restraining order was granted.

The order temporarily lifts emergency rules enacted by the Agriculture Department to address the use and distribution of warfarin-based Kaput Feral Hog Lure.

The department issued additional regulations over the Environmental Protection Agency’s guidelines, which classifies Kaput as a general-use pesticide available to anyone. Miller made an emergency rule change under the Texas Administrative Code to classify the poison as a state-limited use pesticide that would require state licenses to sell and buy the product.

"In this case, I was required to do nothing," Miller said. "We went above and beyond what the federal government required, which is kind of unusual for me."

The judge ruled Miller and his department did not follow the requirements to impose an emergency rule, according to Spectrum News, an Austin cable news service.

To adopt an emergency rule, a state agency must find an "imminent peril to the public health, safety or welfare," according to the TAC.

Will this be the end of what Miller in announcing the use of the pesticide called the "hog apocalypse?"

POISONING THE PIG

Coker and other ranchers and farmers said they did not know enough about the chemical, which is used as a poison for rats and a blood thinner for humans, to start using it on their land.

The Agriculture Department required certain precautions for Kaput's use that are now on hold with the restraining order. Bait should be used in fenced areas, if possible. Signs must be posted at all entries that poison is present, and bait must be in special secured feeders with lids that weigh at least 8 to 10 pounds to prevent non-targeted animals from eating the bait.

Dustin Johnson, owner and operator of Cedar Ridge Aviation of Knox City, said he did not think the toxicant would succeed. Cedar Ridge Aviation offers helicopter hog hunts.

“I don’t think farmers will put the poison out,” Johnson said of Kaput. “I highly doubt some of these big ranches that I fly for are going to take the risk of putting poison out.”

As a cattle rancher, Johnson said he would not place a poison on his property that could potentially kill his cattle.

Like Johnson and Coker, rancher Kelly McLaughlin of Twin Mountain Ranch southeast of Abilene, said he had too many unanswered questions to use Kaput at this time.

"You're not going to hear many ranchers or farmers complain about any way to get rid of hogs. Any way we can eradicate them, we want to," he said. "I just don't know that poisoning is the way to do it."

McLaughlin wondered how much the hog would suffer from the poison, a question he said he never thought he would ask himself.

"I never thought I'd say that about a pig because normally I don't care how they die just as long as they die," he said.

Warfarin is an anticoagulant that causes pigs to bleed internally when they consume it, so they die slowly, sometimes over the course of a week or two, said Dr. Ivan Castro-Arellano, assistant professor of biology at Texas State University and a researcher with the Texas Invasive Species Institute.

That is one of the reasons Australia discontinued the use of warfarin as a feral hog poison bait, according to the Australian Invasive Animals Cooperative Research Centre, the country's largest invasive animal research and management coalition.

McLaughlin said the hogs in his area are barely kept at a "standstill" with the use of helicopter hog hunts like those offered by Cedar Ridge Aviation.

"I don't know for sure what the answer is, but there's got to be something we can do," he said.

Coker said he thought the helicopter hog hunts do a great job of controlling the feral hog population, but the hunts would be more effective if the helicopters had a larger range to hunt. Currently, they must have the property owner's permission to fly on their land.

The Legislature passed the law that allows helicopter hog hunts in 2011. Miller, then a state representative from Stephenville, sponsored the legislation.

"There's too many people who like to sport hunt pigs on their own ranches who will not allow flying," Johnson said. "They're not going to allow poison, so the pig problem is going to remain as exactly where it's at. We're not going to gain ground. We're not going to lose ground."

Miller's answer to hunters, farmers and ranchers who are not in favor of using poison to kill feral hogs? "If they don't like the poison, don't put it out."

POISONING THE LAND?

More questions are being asked about the use of warfarin as a feral hog pesticide than are being answered.

Farmers and ranchers want to know if the toxicant will leach into the land and water. They want to know if scavengers that find the poisoned pigs also will be affected. Will the poisoned pigs really turn blue inside?

Dr. Thomas "Randy" Simpson, a certified wildlife biologist and Wildlife Biology Program director at Texas State University, said the concerns he's heard expressed by numerous people include:

- Non-target animals that could access the bait
- Poisoned hogs dying slowly
- Secondary poisoning of scavengers
- Blue dye not working as warning sign

"One of the tell-tale marks that raises a red flag to all of us is the fact that Australia used it for years and then discontinued its use because of the impact it was judged to have for animals taking such a long time to die," Simpson said. "Warfarin takes a while for the hog to die. In the meantime, while it's in the process of dying, a hunter might shoot it and then take it home to eat it."

When the hunter cuts open the pig, will it be blue then? Or will it only be blue inside after it dies?

"We all know not everything works perfectly all the time," he said.

Because it takes a while for the hog to die from warfarin, the animal will still be roaming around, behaving differently and becoming easier prey, Castro-Arellano, the other Texas State professor, said.

He said throughout history humans have tried to control animals and our environment with chemicals and there have always been unintended consequences.

"We are more or less in the same situation," Castro-Arellano said. "There's bound to be a lot of unforeseen consequences. The only way to avoid this is by doing scientific research, and I think that's probably a missing point."

Simpson said he tried to find scientific investigations into warfarin but to no avail. Neither Simpson nor Castro-Arellano could find a peer-reviewed study of the poison, and peer-reviewed studies are important to scientific research because the scientists' methods and outcomes can be seen, unlike a company's internal review.

There is an alternate chemical — sodium nitrite — that is being researched in Texas and other places, like Colorado and Australia, that likely would be a more humane way to kill feral hogs and not adversely impact the environment or other animals, Simpson said.

"It's somewhat confusing to me why the current agriculture commissioner decided ... to go ahead and OK this other warfarin-based bait instead of waiting and seeing what type of scientific research comes out on sodium nitrite and studies on all the effects of the warfarin-based bait," he said.

Castro-Arellano said the type of research being conducted with sodium nitrite is the kind of work needed before "going on a campaign for widespread use."

"We really need to see proof of what are the potential impacts of the use of this toxicant," he said. "We really need to see strong, scientific evidence for either one before making decisions."

Both biologists know the feral hog population — now at over 2 million in the state — is a big economical and environmental problem, causing more than $52 million in damages to agriculture businesses each year. But the poison needs to be investigated fully before it is used on the landscape and causes unknown and unintended consequences, they said.

"One thing that makes me hopeful is that there's a lot of questions coming from other sources: hunters, private individuals — not just us ivory-tower eggheads, as you might say," Simpson said.

RESEARCHING ANOTHER OPTION

The Texas Parks & Wildlife Department has been researching sodium nitrite — called HOGGONE — as a potential feral hog pesticide for almost nine years, said John Kinsey, a wildlife research biologist at the Kerr Wildlife Management Area, 80 miles northwest of San Antonio.

The chemical is a salt found in bacon and sausage, and humans consume it daily, Kinsey said. Researchers already know its chemical components but are waiting for an EPA permit to conduct research in the field.

Sodium nitrite works by providing one lethal dose to the pig that results in hypoxia, or a loss of oxygen, Kinsey said. The pig falls asleep from the lack of oxygen and never wakes up, and this occurs within two hours.

Kinsey said he expected free-range experiments to begin in late-2017 or early-2018, but the research team has had high rates of success in pens and in a controlled free-range setting. In the pens, the mortality rate with sodium nitrite is 90 percent, he said. In the controlled 300-acre facility, the rate is 70 percent.

Kinsey said research is still needed to know the environmental hazards of sodium nitrite on the landscape and secondary consumers, such as coyotes and vultures. He said preliminary research shows a low risk for vultures that consume feral swine carcasses.

"We feel pretty confident about a low level of risk to non-target species right now, as far as secondary consumption goes and our ability to exclude the majority of non-target species from the bait box which the sodium nitrite may be presented in," he said. "We're still doing our due diligence."

The Texas Parks & Wildlife Department's mission is to protect and conserve the natural resources of Texas, Kinsey said, and the research team wants to provide a solution to the high feral swine population in the state without devastating the native species.

"Our objective is to control the population of feral pigs, but we're absolutely not going to do so in a manner that may negatively impact our native, indigenous species," he said. "With that in mind, we've been conducting research here on species-specific delivery devices that will only allow feral pigs to consume the bait."

[CONTINUED]

Addendum H. MEDIA ARTILCE RESEARCH "DALLAS MORNING NEWS"

News http://www.dallasnews.com/opinion/commentary/2017/02/22/texas-approves-poison-cause-hog-apocalypse-dallas-begs-differ

Texas approves poison to cause 'Hog Apocalypse,' but Dallas begs to differ

On Tuesday, and out of nowhere, the state Agricultural Commissioner Sid Miller made it legal to poison the state's seemingly unmanageable feral hog population. In a press release announcing the approval of the blood-thinner warfarin to control the animals, Miller said that "the 'Hog Apocalypse' may finally be on the horizon."

That sentence is so Sid Miller: Just about everything the man says or tweets goes to 11.

We'll get into whether using warfarin is a good idea or a bad idea in a moment (spoiler alert: more bad than good). But, first, it's worth noting the timing of Miller's announcement. Because, *quelle coïncidence*, about 24 hours after his office amended the Texas Administrative Code and gave the high sign to kaput filthy swine with Kaput Feral Hog Lure, the Dallas City Council went in the exact opposite direction.

By a vote of 14-1, the council agreed to pay an Aledo-based company called Striker Outfitters a total of $347,100 over the next three years to "humanely trap and remove" hogs across the city. Striker Outfitters will be tasked with rounding up the wild beasts causing millions of dollars of damage to municipal golf courses, lake shores, riverbeds, fields and giant swaths of the Great Trinity Forest.

Wednesday's vote came after a 10-month pilot program with Striker Outfitters that the city's urban biologist, Brett Johnson, said Wednesday has resulted in the capture of 96 hogs on just a handful of southern Dallas parcels, among them the Joppa Preserve, the Great Trinity Forest Trail and Keeton Golf Course off North Jim Miller and Bruton roads. [Note 2]

"What we have seen is in those areas, where we've been actively trapping, is a significant reduction," Johnson said. "We do know adjacent properties still have feral hogs on there, which is why it's important to make this a citywide effort."

And he does mean citywide: Most folks think feral hogs are running amok in southern Dallas, near the Audubon Center or in the forest, or, maybe, near White Rock Creek. But in the last couple of weeks, Johnson said, he's seen evidence of rooting within 10 feet of Interstate 35E near Northwest Highway and Harry Hines Boulevard, and he's terrified that they might wind up wandering along Stemmons Freeway one day or, worse, one night.

According to the city's deal with Striker Outfitters, after the hogs are penned and collected they're driven to Frontier Meats in Fort Worth, where they're slaughtered and sliced into bacon — lean cuisine for the Paleo set. The trappers get to keep every cent of the sales, an incentive to

trap as many pigs as possible. Most of the meat winds up in Europe and Asia. But if you're at all interested, I have found what appears to be an excellent recipe for Tagliatelle with Wild Boar Ragout and Pecorino di Pienza, *bon appétit*!

Now, sure. The outcome's the same, whether you trap or poison the hogs. Fill 'em full of warfarin or truck 'em to Frontier — dead's dead, and that's that. Whatever it takes to adios the "menace to our city," the appellation given the wild hogs by City Hall in a briefing last year.

Except, there's the obvious problem that poisoning a feral hog risks poisoning everything else in the food chain. Which is why hunters and conservationists and urban biologists are largely in agreement that declaring warfarin on feral hogs is a pretty bad idea. In fact, the Texas Hog Hunters Association is begging Miller's office to pocket its poison, and its explanation is pretty simple to digest:

"For Texas to introduce a poison into the equation is a bad decision in our opinion and could likely contaminate humans who unknowingly process and eat feral hogs," says the just-launched online petition, which already has more than 4,200 virtual signatures. "We certainly don't want to be out hunting hogs and kill and consume a poisoned animal."

I figured maybe the state intends to use the poison in rural areas, where ranchers with big spreads don't have the resources or inclination to ensnare feral hogs in traps with thermometers and video cameras. But the Department of Agriculture's Perry Cervantes said no, not necessarily.

He told me Wednesday that cities might want to wind up swallowing the poison pill because "the trapping only works to an extent, and we're not trapping enough of them."

I called the ag department initially to ask about the hunters' concerns. Because I think we've learned at this point that if there's one group of folks in this state Sid Miller's going to take seriously, it's hunters. Alas, in this case, not so much.

Cervantes said that, well, the new rule limits the sale of the Kaput Feral Hog Lure to state-approved pesticide applicators, which is to say people who've taken the exam and procured a license. But that does nothing to diminish the chance of things that could go wrong — like, say, a tumped-over feeder or bait pen that allows other animals to dine on the poison. More likely, we're looking at rotting carcasses being snacked on by otherwise innocent carnivores.

"Any kind of animal — vultures, coyotes, birds that eat stomach contents, entrails, intestines — could be poisoned," said Ben Sandifer, the Dallas accountant and Trinity River guardian who at this point probably spends more time with feral hogs than people. He even talks about feral hogs as though they're human, referring to one big fella at Big Spring as "weary, ornery."

Sandifer has spent years documenting the damage wrought by feral hogs across the southern part of the city, among them Big Spring, deemed historic enough by City Hall to merit landmark protections. His photos of the hogs and the damage done have adorned city briefings on the subject. And just last December he tweeted that the city had closed off Big Spring as it "wrestles [with an] out of control hog population."

But he concurs with Johnson: Where the trapping program's been piloted in recent months, the population's taken a big dip — and he has the science to back it up.

"'I do water testing at Big Spring for E. coli — animal feces — and since the trapping began, the amount of E. coli has dropped off," he told me Wednesday.

Before then, Sandifer said, levels had been "real high." Now, he said, "it's almost nothing."

Which is no small something, considering the incalculable damage done in recent decades, and the fear that the hogs' march would prove unstoppable.

And all without the pellets of poison.

Addendum I. PUBLIC FORUM: "Texas Ag Feedback"

https://texags.com/forums/34/topics/2836365

Warfarin approved for feral hog poisoning in Texas

TexasAggie_02

10:09a, 2/19/17

http://www.reporternews.com/story/money/industries/agriculture/2017/02/17/texas-ag-commissioner-approves-poison-feral-hogs/98057838/?from=global&sessionKey=&autologin=

How much warfarin will be transferred to the meat? How much would be safe for human consumption? Legally, who's liable if you put poison out, and your neighbor eats the hogs.

1

bdgol07

10:52a, 2/19/17

This seems like a slippery slope

21

Poeag

10:57a, 2/19/17

Seems like a bad deal that could have negative consequences on scavengers as well

33

MouthBQ98

10:59a, 2/19/17

Poisoning things that are regularly hunted and consumed seems not well thought out.

53

TAMUallen

10:59a, 2/19/17

That's probably not the best method but an effective one nonetheless

1

MouthBQ98

10:59a, 2/19/17

Isn't that that heart drug they discontinued because of excessive bleeding.

BCO07

In reply to MouthBQ98 • 11:14a, 2/19/17

No, it's a blood thinner that's used regularly. High doses causes animals to bleed out.

18

BCO07

11:27a, 2/19/17

I guess there's worse ways to die as it's probably painless, but sounds like a good way to kill lots of animals unintentionally

1

TexasAggie_02

In reply to MouthBQ98 • 11:31a, 2/19/17

MouthBQ98 said:

Isn't that that heart drug they discontinued because of excessive bleeding.

It's Coumadin. Its also commonly used in rat poison

2

IslandAg76

11:39a, 2/19/17

Warfarin (Coumadin) is an anti-coagulant which is most effective when the target ingests small daily doses--5 days or more.
Many people took this to decrease the chance of forming clots (stroke) when afflicted with certain maladies or in advance of some procedures (often cardiac). One larger single dose is not often effective..requires multiple feedings thus the second hand effect to "predators" is usually minimal unless you eat the pork daily. Doesn't mean there can be no effect and I'm sure they have done some more studies on this.

Quote:

A predator
feeding daily (or at least
frequently) on rodents that have tissue residues or stomachs
filled with toxic bait can be a
dversely affected. A single feed-
ing by a predator on the bait itself or on an affected target
species will not impact the predatorjust as a single feeding
will not impact the target species.

http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1087&context=vpc15

Newer rat baits (anti-coagulants) are more of a problem as a single feeding can cause problems--they found ways to cause the chemical to persist in the body for a couple weeks.
AND..there is a newer neurologic acting bait which can be a real problem as there is no effective treatment (yet)

GSS

In reply to TexasAggie_02 • 11:40a, 2/19/17

MouthBQ98 said:

Isn't that that heart drug they discontinued because of excessive bleeding.

TexasAggie_02 said:

It's Coumadin. Its also commonly used in rat poison

Years ago an elderly relative was responding to hog damage by fencing off a small area, and putting a bucket of bait inside. When asked what it was, he replied "rat poison". I asked "will it kill hogs?"....he replied "I dunno, but I bet it will make them sick...". He was a pioneer in hog poisoning 🙂.

It will be interesting to read the basis for warfarin/coumadin being approved for hogs.

NRA Life
TSRA Life

4

Tom Doniphon

1:33p, 2/19/17

They could introduce cholera into the herds and wipe most all of them all out... but it's (swine fever) also an indiscriminate killer that doesn't know the difference in feral and food swine.

I'm not sure what the answer is, but they're damn sure a big problem. This seems worth a try anyway.

SharkinAg

2:49p, 2/19/17

So what about all of the scavengers that clean up these hogs?

1

Oogway

3:21p, 2/19/17

Quote:

Doesn't mean there can be no effect and I'm sure they have done some more studies on this.

Perhaps, but do the people that make the decisions pay attention to the studies or just roll with it?

skelso

3:42p, 2/19/17

If you disagree with the use of poison to control feral pig population, here's a petition you can sign.

https://www.change.org/p/texas-hog-hunters-association-help-stop-the-program-of-introducing-a-new-warfarin-based-pesticide-to-control-feral-hogs?recruiter=684019799&utm_source=share_petition&utm_medium=facebook&utm_campaign=share_facebook_responsive&utm_term=mob-xs-no_src-custom_msg

2

ursusguy

In reply to Oogway • 4:58p, 2/19/17

That is the part that bugs me.....that is not the chemical the WS, TPWD and A&M have been researching for several years. Specifically looking at secondary effects. I follow these things very closely, and the abrupt nature bugs me.

7

Knight_Train

6:03p, 2/19/17

Damn, I take that stuff everyday!

3

BCO07

In reply to Knight_Train • 6:09p, 2/19/17

It's such a pita. I can't wait for better coverage/generics of eliquis and xarelto

1

PharmD4

6:49p, 2/19/17

Who's going to monitor the INR???

16

GSS

In reply to ursusguy • 6:58p, 2/19/17

ursusguy said:

That is the part that bugs me.....that is not the chemical the WS, TPWD and A&M have been researching for several years. Specifically looking at secondary effects. I follow these things very closely, and the abrupt nature bugs me.

Last "feral hog control" seminar I attended (early 2016?), the only bio control discussed / in development was a contraceptive of some sort.

NRA Life
TSRA Life

ursusguy

In reply to GSS • 7:22p, 2/19/17

Contraceptives in an open population (wildlife management in general) should be summarily laughed at and move on the next option. If you are on a island or high fence, alright, maybe.

The previous efforts were related more to Sodium nitrite.

2

Tudster

In reply to GSS • 7:23p, 2/19/17

ursusguy said:

That is the part that bugs me.....that is not the chemical the WS, TPWD and A&M have been researching for several years. Specifically looking at secondary effects. I follow these things very closely, and the abrupt nature bugs me.

GSS said:

Last "feral hog control" seminar I attended (early 2016?), the only bio control discussed / in development was a contraceptive of some sort.

Shooting them in the nuts!!

16

Stasco

In reply to GSS • 8:49p, 2/19/17

+ 1 more quotes (click to expand)

TexasAggie_02 said:
It's Coumadin. Its also commonly used in rat poison

GSS said:

Years ago an elderly relative was responding to hog damage by fencing off a small area, and putting a bucket of bait inside. When asked what it was, he replied "rat poison". I asked "will it kill hogs?"....he replied "I dunno, but I bet it will make them sick...". He was a pioneer in hog poisoning 🙂.

It will be interesting to read the basis for warfarin/coumadin being approved for hogs.

Just to add some additional color to this story, the relative GSS is talking about is one of the most unsuspecting multi-millionaires you'll ever meet.

bdgol07

In reply to PharmD4 • 9:24p, 2/19/17

PharmD4 said:

Who's going to monitor the INR???

Underrated post

pnsagdad

In reply to MouthBQ98 • 3:03a, 2/20/17

MouthBQ98 said:

Poisoning things that are regularly hunted and consumed seems not well thought out.

Are you talking about the hogs? Because obviously you're not a landowner that's had his pasture torn to wasteland or his pecan orchard destroyed, or his crop turned to waste.

Fun to shoot? Yeah. Worth it for the pain and misery they have caused farmers and ranchers? Hell no. Poiseon em away.

13

montanagriz

4:52a, 2/20/17

Why not invest in big hog traps/pens? Catch 20 or more at a time. Technology is advanced but most effective means would be trapping and I dont think that market has been tapped effectively. I think so much money in hunting them a collective effort to eradicate hasnt happened.

I have seen a few pens circular with cameras and remote trap door browsing internet that catch 20 at a time. That seems effective, safe, and could be lucrative or at least a way to use meat for something instead of rotting carcasses from poison.

montanagriz

4:55a, 2/20/17

I want to know how this poison will effect humans, rabbits, squirrels, coons, and deer etc, what about scavengers feeding on a bunch of dead carcasses? What about domestic dogs feeding on infected carcasses?

6

Troutslime

In reply to pnsagdad • 6:45a, 2/20/17

MouthBQ98 said:

Poisoning things that are regularly hunted and consumed seems not well thought out.

pnsagdad said:

Are you talking about the hogs? Because obviously you're not a landowner that's had his pasture torn to wasteland or his pecan orchard destroyed, or his crop turned to waste.

Fun to shoot? Yeah. Worth it for the pain and misery they have caused farmers and ranchers? Hell no. Poiseon em away.

And when you get sued because your neighbor gets ill from consuming a hog you poisoned?

11

CherryLodes

In reply to BCO07 • 7:08a, 2/20/17

BCO07 said:

I guess there's worse ways to die as it's probably painless, but sounds like a good way to kill lots of animals unintentionally

Yeah. I don't think bleeding internally is painless. 😉

I haven't read any research on it so I can't really comment. I just hope, like many others, it doesn't kill a lot of scavengers and dogs inadvertently.

chris1515

7:18a, 2/20/17

I feel like this might be effective in eliminating a single group of hogs that are causing problems in one location, but this isn't going to be practical on a large scale.

It bothers me that the announcement indicates they are stopping research on any other solutions. I guess the Ag Commish is pretty confident that this is the silver bullet.

3

Muzzleblast

7:47a, 2/20/17

Sounds like a great way to painfully kill dogs out here in the country.

Not to mention coyotes and bob cats that do more good than harm.

I hate hogs. I shoot them frequently but this may be the worst idea I've heard in a while.

Wonder what the effect on buzzards, cara cara, and eagles will be?

1

BCO07

In reply to CherryLodes • 7:59a, 2/20/17

I've had patients bleeding from everywhere you can think of due to too much warfarin and pain wasn't an issue. Symptoms are an anemia picture, dizzy, tired, short of breath

3

aggiedent

8:07a, 2/20/17

Quote:

Are you talking about the hogs? Because obviously you're not a landowner that's had his pasture torn to wasteland or his pecan orchard destroyed, or his crop turned to waste.

Fun to shoot? Yeah. Worth it for the pain and misery they have caused farmers and ranchers? Hell no. Poiseon em away.

What does being a landowner have to do with the common sense in his post? I'm a land owner and hogs have done tremendous damage to parts of our property. They are pretty much shot on site. That said, I'd never put poison down knowing that my neighbors (and 3 guys with a lease on our property) use the smaller ones for food. Good way to get someone killed.

10

EMY92

In reply to CherryLodes • 8:14a, 2/20/17

BCO07 said:

I guess there's worse ways to die as it's probably painless, but sounds like a good way to kill lots of animals unintentionally

CherryLodes said:
Yeah. I don't think bleeding internally is painless. 😉

From seeing my mother when she had severe internal bleeding (almost died), it wasn't painful. Just got very weak.

TexasAggie_02

8:17a, 2/20/17

Quote:

According to experts familiar with the issue, warfarin is a logical choice for hog toxicant, **because it is effective in swine** but requires much higher dosage levels to potentially affect other wildlife populations or livestock.

I would like to know more about the dosage, and how much of it is transferred into the carcass. The part that bothers me, is that this is saying that it's more effective in swine than in other mammals. Swine are often used in pharmaceutical research and heart valve transplants b/c they react similarly to humans.

Maybe eating a warfarin hog is negligible for a young healthy person. But what about an older person that is already taking warfarin, or other drugs that it might react with.

I did find this just now:
https://www.aphis.usda.gov/wildlife_damage/feral_swine/pdfs/managing-feral-pigs.pdf

from page 41:

Quote:

Toxicants are an effective and important tool for pig control in some countries, Australia and New Zealand in particular. Warfarin, an anticoagulant widely used as a rodent toxicant, has been used to control and nearly eliminate wild pig populations in Australia (Saunders et al. 1990). However, because of secondary poisoning and other environmental concerns, warfarin is not currently an option in the United States.

Quote:

More recently, researchers in Australia have developed the product PIGOUT, a bait containing the compound 1080, to achieve population reduction of at least 73% (Cowled et al. 2006a). PIGOUT is designed to attract wild pigs and not other native wildlife species in Australia. During trials in Australia, which has no native midsized generalist mammals and thus is an environment where speciesspecific baits are viable, the product has shown great promise (Cowled et al. 2006b). **Unfortunately, research in Texas demonstrated that many nontarget species (mostly midsized generalist mammals) would be adversely impacted by toxicant-laced PIGOUT baits**

in North American ecosystems, and thus it is currently not a viable alternative in the United States (Campbell et al. 2006).

[CONTINUED]

Addendum J. BLOG HUNTER FORUM: "LUKE CLAYTON"

Blog Hunter:

Use Of Warfarin Approved To Control Wild Hogs

LUKE CLAYTON 02/21/2017

http://www.scout.com/outdoors/hunting/story/1756730-use-of-warfarin-approved-to-control-wild-hogs

Rather than take you with me on a recent hunt or fishing trip, let's devote this space to a much more important topic this week: Using the drug Warfarin which is an anticoagulant as a measure of controlling wild hogs. I and other members of the outdoor press recently received the press release below from The Texas Agriculture Commission, headed by Sid Miller. Please read the release and we will discuss it later in this column.

AUSTIN – Texas Agriculture Commissioner Sid Miller will be announcing approval of a major new weapon in the ongoing war against feral hogs in Texas. Commissioner Miller has approved a rule change in the Texas Administrative Code (TAC) that classifies a new warfarin-based product as a state-limited-use pesticide for control of feral hogs. State-limited-use pesticides may only be bought and used by a licensed applicator or someone under the direct supervision of a licensed applicator. The pesticide, "Kaput Feral Hog Lure," is the first toxicant to be listed specifically for use in controlling the feral hog population.

"Wild hogs have caused extensive damage to Texas lands and loss of income for many, many years," Commissioner Miller said. "I am pleased to announce that the 'feral hog apocalypse' may be within Texans' reach with the introduction of Kaput's hog lure.

Introducing warfarin as the first pesticide available to control the feral hog population is significant because it gives agriculture producers and landowners in Texas a new weapon in the fight against feral hogs with minimal risk to other animals. According to experts familiar with the issue, Warfarin is a logical choice for hog toxicant, because it is effective in swine but requires much higher dosage levels to potentially affect other wildlife populations or livestock. The Texas A&M Agrilife Extension Service is supportive of the rule change and the use of warfarin for feral hog population control.

Commissioner Miller has informed the legislature that $900,000 in TDA's budget previously earmarked for feral hog control research will no longer be necessary as a result of this rule change and has asked that the appropriation be removed from the current TDA budget pending before the Legislature.

The manufacturer of the product, Scimetrics Ltd. Corp., has been manufacturing rodent management products for 15 years. Extensive testing of warfarin has been conducted in Texas since 2008. The approval of warfarin for feral hog control is the culmination of several years of research in partnership with Scimetrics and TDA. A representative from Scimetrics will also be on hand to take questions regarding the product.

Not, let's discuss the implications:

I was shocked to learn of this new regulation being adopted. Because wild hogs are not considered a game animal in Texas, their control is not under the auspices of Texas Parks and Wildlife. Thus, I assume the meeting across the state where citizen input is heard were not conducted. It appears the Department of Agriculture in conjunction with the ONE company that is allowed to make this hog poison are the primary instigators of this new regulation.

I am sure that if you have read this column for long (I've been writing it for about 27 years now), you have come to understand that I am not some bleeding heart animal rights activities that wishes no hogs be killed. Quite the contrary, I am a lifelong hunter and I personally hunt and occasionally trap wild hogs on a year around basis. I love hunting hogs and I love transforming that wild pork into tasty meals in the form of sausage, ham and pulled pork. I have long stated that the meat from wild hogs is a valuable commodity and that trapping them is by far the most effective and environmentally sound method of controlling their numbers. Granted we hunters do kill a lot of hogs but not nearly enough to keep their numbers in check.

I was shocked to learn that that this drug, used for killing rats and also as the basis of a medicine for high blood pressure in humans, is now legal to use to kill hogs.

Many, many questions arose when I first mulled over this press release. I called one of my friends who is a medical doctor and also a cardiologists and he explained that he thought high dosages would be necessary to kill hogs and felt that pigs would probably be the first to be killed rather than larger hogs. I still have to wonder the overall impact that this drug will have on the ecosystem in general and other wildlife in particular.

Annually, $900,000 has been allocated to the study of controlling wild hogs. My point is this: Why not let trappers and hunters control the hogs. Give this money to the counties where the hog problem is the greatest and pay a bounty of, say $5 for each wild hog tail brought in. It's a common practice for farmers and some ranchers, especially those producing hay, to offer a bounty of their own for hogs removed. Trappers, using modern day technology such as traps that are triggered by cell phone apps are very effective in catching large numbers of hogs. The trappers then sell the hogs at prices ranging from fifty cents to seventy five cents per pound to licensed wild hog buyers. This practice is

currently ongoing and a network of wild hog buyers is currently in place. The meat from the wild hogs ultimately winds up on restaurant menus, billed as "wild boar". Everyone wins using this plan and the ecosystem is not jeopardized by the widespread use of a drug that could possibly cause harm to our ecosystem.

As much as the media likes us to think everyone hates wild hogs, I have several good friends that operate hunting ranches where hunting wild hogs is a huge draw for out of state hunters. From the months of January through spring and into summer, thousands of hunters from the upper Midwest and back east flock to Texas to hunt hogs. They spend their dollars on hunting fees, motels, gasoline, etc. I have never seen these factors mentioned in the press when the discussion of wild hogs comes up.

I have a couple of friends that hire out to farmers to keep wild hogs shot off their emerging corn fields and watermelon fields after the melons ripen.

Granted, periodic trapping programs simply do not work. Trapping needs to be a year around endeavor to be a worthwhile tool in reducing hog numbers.

It will be interesting to see how this new plan will work and what negative impact it will have. I am convinced that an aggressive hog trapping plan, keying on hotspots and hunting has the potential to keep their numbers in check.

(continued)

Addendum K. ROTTED RED CLOVER KILLS CATTLE; Warfarin DISCOVERED

Originally first identified in 1939, as a possible chemical pharmaceutical because some cattle at rotted red clover and died. Warfarin is a synthetic chemical made from learning about Coumarol, recreating the components in a lab, usually by adding a fungi, and producing it initially for rodent killing use, and more modernly, for medical purposes to thin blood as an anticoagulant.

http://www.pmlive.com/pharma_news/how_dead_cattle_led_to_the_discovery_of_warfarin_485464

June 1939: How dead cattle led to the discovery of warfarin

A mystery that devastated farms in the US midwest but heralded a major medical breakthrough

In the article 'The Discovery of Dicumarol and Its Sequels' for the American Heart Association journal *Circulation*, the chemist Dr Karl Paul Link describes his discovery of dicumarol – the substance that would lead to the development of warfarin – as a "kind of legend".

Although not quite up there with Hercules and the Minotaur, it's still a fairly accurate statement, considering the creation of the world's most famous anticoagulant – allowing the treatment of life-threatening blood clots and atrial fibrillation – all began with a set of mysterious deaths that threatened the livelihood of farmers in the Northern US and Canada in the early 1920s.

Hundreds had cows that had succumbed to major haemorrhaging for what seemed to be no good reasons after undergoing a minor procedure, such as dehorning or castration, and farms from Alberta to Wisconsin felt the effect of herds of cattle that bled to death.

The mystery piqued the interest of Canadian veterinarian, Frank Schofield, who donned his deerstalker and magnifying glass for an investigation that determined all of the affected cattle had eaten mouldy silage made from a sweet clover plant.

This 'sweet clover disease' as it became known was only found in cows that had eaten hay that had gone off – a point proved in an experiment by Schofield who fed both good and damaged clover to rabbits, discovering that the unfortunate animal in the latter arm faced the same haemorrhaging effects as the cows.

It was another eight years, in 1929, before someone worked out just what this rotten clover actually did to the body of a cow (or rabbit), when fellow veterinarian Dr L M Roderick demonstrated that the affected animals lacked the blood clotting factor prothombin.

The actual substance in the vegetation that led to the lack of prothombin was still a mystery, however, with attempts by Roderick and others to extract the haemorrhagic agent proving unsuccessful.

Their work drew the attention of other researchers, however, including the already mentioned Wisconsin-based chemist Dr Karl Paul Link, who started his own investigation into the curious problem in 1933.

As described in his article for *Circulation*, Dr Link saw the very real effects of the disease's impact on the local community when confronted by Wisconsin farmer Ed Carlson: "Late in December, he had lost two young heifers. In January, one of his favourite old cows had developed a massive haematoma on a thigh and following a skin puncture, fatal bleeding set in rapidly. Finally two young cows had died on Friday and the bull was oozing blood from the nose."

All Dr Link could do at the time was explain to the farmer that his cows need to stop eating the affected clover, but he described the impact of the incident as "immense".

The same sentiment could be applied to Dr Link's senior student and research assistance Eurgen Wilheim Schoeffel, whose volatile, German-accented reaction Dr Link describes: "Vat vill he find ven he gets home? Sicker cows. And ven he and his good voman go to church tomorrow and pray and pray and pray, vat vill dey haf on Monday MORE DEAD COWS!! He has no udder hay to feed – he can't buy any... Mein Gott!! Mein Gott!!"

Perhaps an exaggeration to prove a point from Dr Link, but nevertheless, this urgency turned into productivity, and he began experimenting with small animals to figure out the reason for the lack of prothombin.

It was a "long and arduous trail" as described by the doctor, but one that eventually reached an end as worthwhile as any mountain vista, when on June 28, 1939, Dr Link's student Harold Campbell isolated the anticoagulant dicoumarol.

Large-scale extraction began almost immediately, while scientists confirmed that the dicoumarol was formed when coumarin – a molecule in many plants that produces the sweet smell of freshly cut grass – interacts with certain fungi, as in the case of rotten clover.

At the time, Dr Link's work was supported by the Wisconsin Alumni Research Foundation (WARF), hence the decision to name a more potent molecule, synthesised from the coumarin-based anticoagulant, warfarin.

Its first approved use wasn't as a medicine, however, instead being approved as a rat poison – a use it is still sold for (the delayed effect means rats don't get put off by a mound of dead rat bodies around a more fast-effecting poison).

Safety concerns were the main issue behind its lack of use in humans, although these were eased in 1951 following the attempted suicide of man who overdosed on warfarin rat poison, but was successfully saved with doses of vitamin K – an important aspect in the synthesis of blood-clotting factor prothrombin.

With the knowledge its effects could be reversed, it wasn't long before Endo Laboratories produced the first version of warfarin intended for humans under the trade name Coumadin, with the drug gaining widespread fame when it was used to help treat US President Dwight Eisenhower following a heart attack.

In the 60 years since then, warfarin has remained a staple part of a treatment for clotting conditions, helping in the treatment of countless people, while generics have been introduced from several major pharma firms.

A new generation of anticoagulants is now coming through, however, including Boehringer Ingelheim's Pradaxa, Bayer's Xarelto and Pfizer/ Bristol-Myers Squibb's Eliquis, all of which are rapidly gaining approvals worldwide as a safer, simpler to administer alternative to warfarin.

These may overtake their predecessor as the main weapon in the treatment of blood clots, but warfarin's discovery still stands as both one of the greatest medical breakthroughs of the 21st century and one of its great detective stories.

Addendum L. Warfarin Quick Facts

http://www.thepigsite.com/pighealth/article/510/warfarin/

www.thepigsite.com/pighealth/article/510/warfarin/

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Warfarin

(610) Warfarin is one of a group of chemicals (rodenticides) that are used to control rat and mice populations. Poisoning by these substances is common in pigs due to accidental exposure. A single dose of warfarin of 3mg/kg is fatal. Doses of less than 0.06mg per day for seven to ten days will produce poisoning. Warfarin acts by preventing blood clotting.

Clinical signs

Severe haemorrhage is present throughout the carcase of dead pigs and in the skin, particularly where trauma has occurred. Lameness with haemorrhage in the joints and anaemia are consistent features.

Diagnosis

This is based on the history of the use of warfarin and the typical post-mortem lesions of widespread haemorrhage throughout the carcase.

DrugLib.com Drug Information Portal

Rx drug information, pharmaceutical research, clinical trials, news, and more

http://www.druglib.com/activeingredient/warfarin/

Active ingredient: Warfarin - Brands, Medical Use, Clinical Data

Brands, Medical Use, Clinical Data

Active ingredients in Coumadin

Coumadin contains the following active ingredients. Click on the ingredient name to view details.

Warfarin

Drug Category

- Rodenticides
- Anticoagulants
- Coumarin and Indandione Derivatives

Dosage Forms

- Powder for solution
- Tablet

Brands / Synonyms

200 Coumarin; Athrombin; Athrombin-K; Athrombine-K; Brumolin; Co-Rax; Compound 42; Coumadin; Coumafen; Coumafene; Coumaphen; Coumaphene; Coumarins; Coumefene; D-Con; Dethmor; Dethnel; Dicusat E; Eastern States Duocide; Fasco Fascrat Powder; Frass-Ratron; Jantoven; Killgerm Sewarin P; Kumader; Kumadu; Kumatox; Kypfarin; Latka 42; Liqua-Tox; Maag Rattentod Cum; Mar-Frin; Marevan; Martin's Mar-Frin; Maveran; Mice Bait; Mouse Pak; Panwarfin; Place-Pax; Prothromadin; RAX; Rodafarin; Rodafarin C; Rodex; Rodex Blox; Rosex; Sofarin; Solfarin; Sorexa Plus; Temus W; Tintorane; Tox-Hid; Vampirinip II; Vampirinip III; W.A.R.F. 42; Waran; Warf 42; Warf Cmpd. 42; Warf Compound 42; Warfarat; Warfarin; Warfarin Plus; Warfarin Q; Warfarin sodium; Warfarine; Warficide; Warfilone; Zoocoumarin

Indications

For the treatment of retinal vascular occlusion, pulmonary embolism, cardiomyopathy, atrial fibrillation and flutter, cerebral embolism, transient cerebral ischaemia, arterial embolism and thrombosis.

Pharmacology

Warfarin, a coumarin anticoagulant, is a racemic mixture of two active isomers. It is used in the prevention and treatment of thromboembolic disease including venous thrombosis, thromboembolism, and pulmonary embolism as well as for the prevention of ischemic stroke in patients with atrial fibrillation (AF).

Mechanism of Action

Warfarin inhibits vitamin K reductase, resulting in depletion of the reduced form of vitamin K (vitamin KH2). As vitamin K is a cofactor for the carboxylation of glutamate residues on the N-terminal regions of vitamin K-dependent proteins, this limits the gamma-carboxylation and subsequent activation of the vitamin K-dependent coagulant proteins. The synthesis of vitamin K-dependent coagulation factors II, VII, IX, and X and anticoagulant proteins C and S is inhibited. Depression of three of the four vitamin K-

dependent coagulation factors (factors II, VII, and X) results in decresed prothrombin levels and a decrease in the amount of thrombin generated and bound to fibrin. This reduces the thrombogenicity of clots.

Absorption

Not Available

Toxicity

LD_{50}=374 (orally in mice)

Biotrnasformation / Drug Metabolism

Metabolized by hepatic microsomal enzymes.

Contraindications

Anticoagulation is contraindicated in any localized or general physical condition or personal circumstance in which the hazard of hemorrhage might be greater than the potential clinical benefits of anticoagulation, such as:

Pregnancy

COUMADIN is contraindicated in women who are or may become pregnant because the drug passes through the placental barrier and may cause fatal hemorrhage to the fetus *in utero*. Furthermore, there have been reports of birth malformations in children born to mothers who have been treated with warfarin during pregnancy.

Embryopathy characterized by nasal hypoplasia with or without stippled epiphyses (chondrodysplasia punctata) has been reported in pregnant women exposed to warfarin during the first trimester. Central nervous system abnormalities also have been reported, including dorsal midline dysplasia characterized by agenesis of the corpus callosum, Dandy-Walker malformation, and midline cerebellar atrophy. Ventral midline dysplasia, characterized by optic atrophy, and eye abnormalities have been observed. Mental retardation, blindness,a nd other central nervous system abnormalities have been reported in association with second and third trimester exposure. Although rare, teratogenic reports following *in utero* exposure to warfarin include urinary tract anomalies such as single kidney, asplenia, anencephaly, spina bifida, cranial nerve palsy, hydrocephalus, cardiac defects and congenital heart disease, polydactyly, deformities of toes, diaphragmatic hernia, corneal leukoma, cleft palate, cleft lip, schizencephaly, and microcephaly.

Spontaneous abortion and stillbirth are known to occur and a higher risk of fetal mortality is associated with the use of warfarin. Low birth weight and growth retardation have also been reported.

Women of childbearing potential who are candidates for anticoagulant therapy should be carefully evaluated and the indications critically reviewed with the patient. If the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the possibility of termination of the pregnancy should be discussed in light of those risks.

Hemorrhagic tendencies or blood dyscrasias.

Recent or contemplated surgery of: (1) central nervous system; (2) eye; (3) traumatic surgery resulting in large open surfaces.

Bleeding tendencies associated with active ulceration or overt bleeding of: (1) gastrointestinal, genitourinary or respiratory tracts; (2) cerebrovascular hemorrhage; (3) aneurysms-cerebral, dissecting aorta; (4) pericarditis and pericardial effusions; (5) bacterial endocarditis.

Threatened abortion, eclampsia and preeclampsia.

Inadequate laboratory facilities.

Unsupervised patients with senility, alcoholism, or psychosis or other lack of patient cooperation.

Spinal puncture and other diagnostic or therapeutic procedures with potential for uncontrollable bleeding.

Miscellaneous major regional, lumbar block anesthesia, malignant hypertension and known hypersensitivity to warfarin or to any other components of this product.

also: diet high in vitamin K unreliable PT/INR determinations

†Increased and decreased PT/INR responses have been reported.

Because a patient may be exposed to a combination of the above factors, the net effect of COUMADIN on PT/INR response may be unpredictable. More frequent PT/INR monitoring is therefore advisable. Medications of unknown interaction with coumarins are best regarded with caution. When these medications are started or stopped, more frequent PT/INR monitoring is advisable.

It has been reported that concomitant administration of warfarin and ticlopidine may be associated with cholestatic hepatitis.

Botanical (Herbal) Medicines

Caution should be exercised when botanical medicines (botanicals) are taken concomitantly with COUMADIN. Few adequate, well-controlled studies exist evaluating the potential for metabolic and/or pharmacologic interactions between botanicals and COUMADIN. Due to a lack of manufacturing standardization with botanical medicinal preparations, the amount of active ingredients may vary. This could further confound the ability to assess potential interactions and effects on anticoagulation. It is good practice to monitor the patient's response with additional PT/INR determinations when initiating or discontinuing botanicals.

Specific botanicals reported to affect COUMADIN therapy include the following:

• Bromelains, danshen, dong quai (*Angelica sinensis*), garlic, Ginkgo biloba, and ginseng are associated most often with an INCREASE in the effects of COUMADIN.

• Coenzyme Q_{10} (ubidecarenone) and St. John's wort are associated most often with a DECREASE in the effects of COUMADIN.

Some botanicals may cause bleeding events when taken alone (e.g., garlic and Ginkgo biloba) and may have anti-coagulant, antiplatelet, and/or fibrinolytic properties. These effects would be expected to be additive to the anticoagulant effects of COUMADIN. Conversely, other botanicals may have coagulant properties when taken alone or may decrease the effects of COUMADIN.

Some botanicals that may affect coagulation are listed below for reference; however, this list should not be considered all-inclusive. Many botanicals have several common names and scientific names. The most widely recognized common botanical names are listed.

(continued)

https://thenaturopathicherbalist.com/plant-constituents/coumarins/

Coumarins

Coumarins of different kinds are found in many plant species and have widely divergent actions. Their activities can include **anti-inflammatory, antispasmodic, anti-edematous, and vascular tonic effects.**

There are 700+ plant coumarins derived from the plant compound **coumarin** which occurs widely in plants, usually in bound form. Coumarin has been found in 150 plant species in more than 20 families and has anti-hemorrhagic effects and for this reason is used as rat poison (!). In addition it has anti-fungal and anti-tumor properties.

Note: Coumarins do inhibit platelet-aggregation but are relatively weak compared to coumarin. Also **coumarin is virtually devoid of anticoagulant effects in humans** because a structurally essential characteristic for the anticoagulant potential of coumarin derivatives is absent. (The drug Warfarin is a synthetic chemical derived from coumarol). Although coumarin has little-no-anticoagulant activity, it is transformed to the natural anticoagulant dicoumarol by a number of species of fungi. This procedes through production of 4-hydroxycoumarin, then further into the actual anticoagulant dicoumarol, a fermentation product and mycotoxin.

The 3 major classes of plant coumarins include:

- **Hydroxycoumarins**
- **Furanocourmarins** – such as bergapten in Apium graveolens (Celery seed) and khellin from Ammi visnaga (a powerful smooth muscle relaxant)
- **Pyranocourmarins**

Herbal examples:

- Aesculus hippocastanum (Horsechestnut)
- Ammi visnaga
- Angelica archangelica (Angelica)
- Apium graveolens (Celery)
- Melilotus off. (Sweet clover)

Addendum M. 2017 SAFETY DATA SHEET FOR KAPUT ®

Scimetrics

SAFETY DATA SHEET (SDS)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Kaput® FERAL HOG BAIT **EPA Reg. No.** 72500-26 **Use:** Anticoagulant Rodenticide for control of Feral Hogs – Ready to Use	**Manufacturer:** Scimetrics Ltd. Corp. PO Box 1045 Wellington, CO 80549 Ph. 970-482-1330	**Emergency Phone No:** Medical: 800-858-7378 Transportation: 800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification according to Regulation OSHA 1910.1200(d): Not applicable
See "Section 15: Regulatory Information" for FIFRA applicable Safety, Health and Environmental Classification

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	% by Weight
Warfarin [(RS)-4-Hydroxy-3-(3-oxo-1-phenylbutyl)-2H-1-benzopyran-2-one]	81-81-2	0.005%
Other inert ingredients are proprietary and non-hazardous		99.995%

SECTION 4: FIRST AID MEASURES

Symptoms: Ingestion of excessive quantities may cause nausea, vomiting, loss of appetite, extreme thirst, lethargy, diarrhea, bleeding.
Have product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Information Center at 1-800-858-7378 for emergency medical treatment information.
If swallowed: Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation persists, call a poison control center or doctor immediately for treatment advice.
Inhalation: Not applicable

Note to Physician or Veterinarian: Contains Warfarin, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans or animals that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1, intramuscularly or orally.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: Not applicable.
Flammable Limit: Not applicable.
Extinguishing Media: For small fires, use water spray, carbon dioxide, dry chemical powder, or foam.
Special Fire Fighting Procedures: Firefighters should be equipped with protective clothing and self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None Known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

General Information: When handling the bait, wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves.
Spills/Leaks: Immediately wipe up spill, place in a properly labeled container, and hold for waste disposal or re-use.
Reference to other sections: Refer to Section 7, 8 and 13 for further details of personal precautions, protective equipment and disposal considerations.

SECTION 7: HANDLING AND STORAGE

Storage Temperature: Room temperature
Average Shelf Life: Bait is stable for a minimum of 1 year when stored correctly at room temperature
Special Sensitivity: Avoid exposure to excessive heat or cold.
Precautions in Handling and Storage: Store in original container in a cool, dry area inaccessible to children and pets. Avoid contamination of lakes, streams and ponds. Wash hands thoroughly with soap and water after handling.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Established Limits:

Component	OSHA	ACGIH	Other Limits
Warfarin	Not established	Not established	Not established

Other Protective Measures:
Appropriate Engineering Controls: Not required
Respiratory Protection: Not required
Eye Protection: Not required
Skin Protection: Wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves. Wash hands thoroughly with soap and water after handling the bait.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color:	Wax block, blue	**Vapor Pressure:**	Not applicable
Odor:	Grain-like	**Vapor Density:**	Not applicable
Odor Threshold:	Not determined	**Relative Density:**	36.45 lbs / cubic foot
pH:	5.4	**Solubility:**	Not applicable
Melting Point:	Not determined	**Partition coefficient: n-octanol/water:**	Not applicable
Boiling Point:	Not applicable	**Auto-Ignition Temperature:**	Not applicable
Flash Point:	Not applicable	**Decomposition Temperature:**	Not determined
Evaporation Point:	Not applicable	**Viscosity:**	Not applicable
Upper/lower flammability limits:	Not applicable		

Scimetrics

SAFETY DATA SHEET (SDS)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive
Chemical Stability: Stable under normal use and storage conditions
Possibility of hazardous reactions: Will not occur
Conditions to Avoid: Avoid extreme temperatures
Incompatible Materials: Avoid strongly alkaline materials
Hazardous Decomposition Products: None known

SECTION 11. TOXICOLOGICAL INFORMATION

Likely routes of exposure: Ingestion, Dermal
Symptoms of Exposure: Reduced blood clotting ability. Please refer to Section 4.
LD50 Oral Ingestion: >5000 mg/kg (rats)
LD50 Dermal (Skin Contact): >2000 mg/kg (rats)
LC50 Inhalation: N/A
Dermal Sensitization: Not Considered a Sensitizer
Skin Irritation: Non-Irritating
Eye Irritation: Minimally Irritating
Carcinogenicity: Contains no components known to have a carcinogenetic effect

Component	NTP	IARC	OSHA
Warfarin	Not listed	Not listed	Not listed

SECTION 12: ECOLOGICAL INFORMATION

This product may be toxic to fish, birds and other wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten the bait. Do not apply this product directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters.
Persistence and Degradability: Warfarin is biodegradable
Bioaccumulative Potential: Not determined
Mobility in Soil: Not determined
Other adverse effects: None

SECTION 13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals. Sweep up spillage carefully and dispose of as indicated below.
Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Container Handling: Non-refillable container. Do not reuse or refill this container. Offer container for recycling, if available, or reconditioning, if appropriate. Otherwise, dispose of empty container in a sanitary landfill.

SECTION 14. TRANSPORTATION INFORMATION

UN Number: Not regulated
UN Proper Shipping Name: Not regulated
Transport Hazard Class: Not hazardous
Packing Group Number: Not regulated
Environmental Hazards for DOT Road/Rail, DOT Maritime, DOT Air: Not considered hazardous for transportation via road/rail, vessel or air
Freight Classification: LTL Class 70

SECTION 15. REGULATORY INFORMATION

This product is subject to EPA FIFRA regulations. This pesticide product is regulated by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for Safety Data Sheets (SDS), and for workplace labels of non-pesticide chemicals. The safety, health, environmental and hazard information required on the pesticide is listed below:
Signal Word: CAUTION
Precautionary Statements:
CAUTION: Harmful if swallowed. Keep away from humans, domestic animals and pets. Any person who retrieves carcasses or unused bait following application of this product must wear protective gloves.
CA Proposition 65: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.
EPA Reg. No. 72500-26
TSCA Status: Exempt from TSCA, subject to FIFRA

SECTION 16. OTHER INFORMATION

NFPA Hazard Rating		HMIS Hazard Rating		
Health	1	Health	1	0 = Minimal
Flammability	0	Flammability	0	1 = Slight
Instability	0	Reactivity	0	2 = Moderate
				3 = Serious
				4 = Extreme

Disclaimer: Information provided in this Safety Data Sheet has been obtained from sources believed to be correct to the best of our knowledge but is not all inclusive and shall only be used as a guide. Scimetrics Ltd. Corp. shall not be held liable for any damage resulting from handling or from contact with the above product and provides no warranties either express or implied and assumes no responsibility for the accuracy or completeness of the data contained on this form.

Date created: January 17, 2017

72500-26 Kaput Feral Hog Bait SDS Page 2 of 2

Addendum N. 2005 EPA Regulatory Letter when used as a Rat Poison

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

March 10, 2005

Scimetrics Ltd.
120 Commerce Drive, Unit 4
Ft Collins, CO 80524

Attention: Mr. Richard Poche

Subject: Kaput Rat and Mouse Bait
EPA Reg. No. 72500-6
RegWest E-Mail of March 3, 2005

Purpose The purpose of the submission is to clarify the packaging of the product and to revise its labeling.

Package The package sizes for this product are as follows:

1. 4oz (2, 2 oz place packs), homeowner size
2. 12 oz (6, 2 oz place packs), homeowner size
3. 12.5 lbs (100, 2 oz place packs), non-homeowner size
4. 25 lb (200, 2 oz place packs), non-homeowner size

Labeling Each product has two types of labels: 1) an outer label on a paper box or plastic pail and 2) a separate label on each place pack.

The labeling submitted with the above letter, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) is acceptable, provided you submit one (1) copy of final printed labeling to us, with the following changes, before you ship your product.

1. On your Outer Label, revise the "Storage and Disposal" section as indicated in Enclosure 1.

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Labeling-continued

2. On your Outer Label of the **4 oz size**, which only contains 2, 2 oz place packs, change the "**RATS**" directions to read:

   RATS: Place at least 2 packs per placement. This package contains enough bait to kill 1 or 2 rats. Space ... cease.

3. On your Outer Label of the **12 oz size**, which only contains 6, 2 oz place packs, change the "**RATS**" directions to read:

   RATS: Place at least 2-6 packs per placement. This package contains enough bait to kill 3 or 4 rats. Space ... cease.

Existing stocks Stocks of product with existing labels may be used for eighteen (18) months.

Consequence for non-compliance If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Questions If you have questions about this letter, please contact me at 703-305-5407 (by phone), 703-305-6596 (by fax), or peacock.dan@epa.gov (by E-Mail).

Sincerely yours,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Enclosure

1. Guidance for "**STORAGE AND DISPOSAL**" Text, Kaput Rat and Mouse Bait, EPA Reg. No. 72500-6
2. Stamped label
3. Minimum Type Size for Final Printed Labels

Letter Dan Peacock, USB Flash Drive 1,E:\1-7-2005 Backup\Dan's Office Work\A Flash Drive 1\Warfarin\72500-6, revised label, 3-9-2005.wpd

Enclosure 1. GUIDANCE FOR "STORAGE AND DISPOSAL" TEXT

Kaput Rat and Mouse Bait, EPA Reg. No. 72500-6

A. Non-Homeowner Sizes (12.5 and 25 lb)

STORAGE AND DISPOSAL[1]

Do not contaminate water, food or feed by storage or disposal.

STORAGE: Storage in original container in a cool, dry place inaccessible to children and pets.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product maybe disposed of on site or at an approved waste disposal facility

CONTAINER DISPOSAL:

[For Plastic Containers]

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[For Paper Box Containers]

Dispose of empty paper box in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

B. Homeowner Sizes (4 oz and 12 oz)

STORAGE AND DISPOSAL[1]

STORAGE: Store in original container in a cool, dry place inaccessible to children and pets.

DISPOSAL: **If empty:** Do not reuse this container. Place in trash or offer for recycling if available.

If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

[1] Heading has same minimum type size as "KEEP OUT OF REACH OF CHILDREN"

4/7

72500-6: Page 2 of 5
03/03/05

Sub-Label A: Box/Pail Outer Label

(Front Panel)

***Kaput*® Rat & Mouse Bait**
Place Pack

Kills Norway Rats, Roof Rats and House Mice
First dead rats and mice will appear 4 to 5 days after feeding begins.

Active Ingredient
Warfarin, 3-(alpha-Acetonylbenzyl-4-hydroxycoumarin) 0.025%
Other Ingredients 99.975%
Total 100.000%

Keep Out of Reach of Children
CAUTION
Harmful if swallowed.
See back panel for additional precautionary statements.

EPA Reg. No. 72500-6 **EPA Est. 72500-CO-1**

Net Weight: _____
{Unit Packaging}:
4 oz (2 packs x 2 oz.)
[12 oz. (6 packs x 2 oz.)]
[12.5 lbs. (100 packs x 2 oz.)]
[25 lbs. (200 packs x 2 oz.)]

ACCEPTED with COMMENTS in EPA Letter Dated: MAR 10 2005
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 72500-6

Manufactured by:
Scimetrics Ltd. Corp
120 Commerce Drive Unit 4
Ft. Collins, CO 80524

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read this Label:
Read this entire label and follow all use directions and use precautions.
IMPORTANT: Do not expose children, pets or other non-target animals to rodenticides. To help prevent accidents:

1. Store product no in use in a location out of reach of children and pets.
2. Apply bait in location out of reach of children, pets, domestic animals and non-target wildlife, OR in tamper-resistant bait stations. These stations must be resistant to destruction by dogs and children under six year of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from stations when they are lifted, units must be secured or otherwise immobilized. Even stronger bait stations are needed in areas open to hoofed livestock, raccoons, bears, other potentially destructive animals or in areas prone to vandalism.
3. Dispose of product container, unused, spoiled and unconsumed bait as specified on this label.

USE RESTRICTIONS: This product may be used to control Norway Rats, Roof Rats, and House Mice. Do not place bait in areas where there is a possibility of contaminating food or surfaces that come into contact with food.

URBAN AREAS: This product may be used in and around homes, and industrial, commercial and public buildings. This product may also be used in transport vehicles (ships, trains, aircraft) and in and around related port or terminal buildings. Applications "around" buildings must be made in tamper-resistant bait stations placed along walls or other external parts of buildings (e.g. doorways, ramps, loading docks) where rats or mice might seek to gain entrance.

5/7

NON-URBAN AREAS: In non-urban areas, this product may be used in and around homes and agricultural buildings.

SELECTION OF TREATMENT AREAS: Determine areas where rats or mice will most likely find and consume bait. Generally, these are along walls, by gnawed openings, in corners and concealed places, between floors or walls, or in locations where rodents or their signs have been seen. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:
Rats: Place at least 2-8 packs per placement. Space placements at 15-30 foot intervals. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease.
Mice: Place one pack per placement. Space placements at 8-12 foot intervals. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.
Rats and Mice: Replace contaminated or spoiled bait immediately. Collect and dispose of all visible dead animals and leftover bait properly. To discourage reinfestation, limit sources of rodent food, water and harborage as much as possible. If reinfestation occurs, repeat treatment. For a continuous infestation, set up permanent bait stations and replenish bait as needed.

(Back Panel)

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

Storage: Store in original container in a cool, dry place inaccessible to children and pets. **Disposal: If empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency of 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Keep away from humans, domestic animals and pets. Harmful if swallowed or absorbed through the skin because this material may reduce the clotting ability of blood and cause bleeding. Do not get in eyes, on skin or clothing. Wash arms, hands and face with soap and water after applying and before eating or smoking.

First Aid

Have the product container or label with you when calling a poison control center or doctor or going for treatment.
If swallowed, call a poison control center, doctor or 1-800-858-7378 for immediate treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

Notice to Physician or Veterinarian

This material may reduce the clotting ability of blood and cause bleeding. If ingested, administer Vitamin K-1 intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

Environmental Hazards

This product is toxic to fish and wildlife. Keep out of lakes, streams or ponds.

Warranty: Manufacturer and Seller make no warranty of merchantability, fitness for any purpose or otherwise express or implied, concerning this product or its use which extend beyond the statements on this label.

[ ] Denotes optional/alternate language
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Sub-Label B: Place Pack Label

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(Front Panel)

***Kaput*® Rat & Mouse Bait**
Place Pack

Kills Norway Rats, Roof Rats and House Mice
First dead rats and mice will appear 4 to 5 days after feeding begins.

Active Ingredient	
Warfarin, 3-(alpha-Acetonylbenzyl-4-hydroxycoumarin)	0.025%
Other Ingredients	99.975%
Total	100.000%

Keep Out of Reach of Children
CAUTION
Harmful if swallowed.
See back panel for additional precautionary statements.

EPA Reg. No. 72500-6 **EPA Est. 72500-CO-1**

Net Weight: 2 oz. (56 grams)

Manufactured by:
Scimetrics Ltd. Corp
120 Commerce Drive Unit 4
Ft. Collins, CO 80524

(Back Panel)

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read the entire label on the outer package before using this product. It is illegal to sell these place packs individually.

Storage and Disposal
Do not contaminate water, food or feed by storage or disposal.
Storage: Store in original container in a cool, dry place inaccessible to children and pets. **Disposal: If empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency of 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION
Keep away from humans, domestic animals and pets. Harmful if swallowed or absorbed through the skin because this material may reduce the clotting ability of blood and cause bleeding. Do not get in eyes, on skin or clothing. Wash arms, hands and face with soap and water after applying and before eating or smoking.

First Aid
Have the product container or label with you when calling a poison control center or doctor or going for treatment.
If swallowed, call a poison control center, doctor or 1-800-858-7378 for immediate treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

Notice to Physician or Veterinarian

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This material may reduce the clotting ability of blood and cause bleeding. If ingested, administer Vitamin K-1 intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

Environmental Hazards

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