

## **DECLARATION OF DR. DARRYL MCDONALD**

1. My name is Darryl McDonald. My date of birth is August 9, 1962. My current address is 6415 West State Hwy. 21, Bryan, TX 77807.

2. I am a licensed Texas veterinarian, a rancher, a landowner, and a hunter. I hold Bachelor of Science degrees in Biomedical Science ('85) and Veterinary Science ('87) from Texas A&M University, as well as a Doctor of Veterinary Medicine ('89) and a Master of Science ('93) degrees from Texas A&M University. I practiced veterinary medicine in a large referral practice in the Dallas-Fort Worth metroplex for 16 years. I was the Texas Veterinary Medical Association Veterinary Specialist of the Year in 2000. In addition, I have served as president of the Dallas County Veterinary Medical Association and on the Board of Directors for the Texas Veterinary Medical Association. From 2009-2014, I was an adjunct professor in the Texas A&M College of Veterinary Medicine. I have also served on the Board of Directors for the International Red Brangus Breeders Association. Currently, I serve on the Development Council for the Texas A&M University College of Veterinary Medicine. A copy of my resume is attached to this Declaration as Exhibit A.

3. I have substantial professional experience with warfarin, which is frequently found in rat poison. Warfarin is an anticoagulant. As a poison, warfarin kills animals by inhibiting the synthesis of vitamin K-dependent clotting factors, which include Factors II, VII, IX, and X. In essence, these factors stop the blood from clotting. Warfarin is lethal because the body constantly develops minor hemorrhages, particularly around the joints and the skin surface. The process of death by warfarin is both protracted and very painful for the animal. Without an ability to clot, the ingesting animal bleeds constantly, eventually leading to death. Exactly how

the death occurs varies. It's usually through dehydration and nutrient loss. The animal is unable to drink enough to maintain blood pressure and cannot eat enough to replace the nutrients lost from the bloodstream. This is often compounded because bleeding into the joints produces signs akin to severe arthritis and they are unable to forage. Sadly, it is extraordinarily painful. From the few accounts of people who have experienced warfarin toxicity, it is described as "the worst case of flu you ever had," and includes severe joint pain, unquenchable thirst, and constant abdominal cramps. Over 27 years, I have treated many dogs that have ingested warfarin, either directly by consuming warfarin-based rat poison or indirectly by secondary poisoning caused when the dogs eat rats that have been poisoned by warfarin-based rat poison. In some cases, when recognized and treated early, the pets have been spared. Sadly however, in cases that were not caught early enough, patients succumbed to the painful effects of the lethal intoxication.

4. I have reviewed literature and studies concerning use of warfarin as a poison for feral hogs. The physical processes of poisoning and death for feral hogs are very similar for the processes for dogs. Thus, death of a feral hog from ingestion of warfarin can be quite painful for the animal. Death can take several days to occur after initial ingestion. According to published literature, in past testing on hogs, the clinical signs of warfarin poisoning have included bleeding from the nose, blood in feces and urine, and lameness. Some of the symptoms persist for a considerable period of time. For example, food consumption by tested hogs has lasted for 6 days following a latent period of several days after poisoning. O'Brien and Lukins (1990) also found that for 6 days before death, anticoagulant intoxicated pigs showed distinct behavioral changes, including lack of appetite and depression. The symptoms also have implications for exotic disease outbreaks (Hone and Kleba 1984).

5. I also have reviewed the “emergency rule” and related documents issued by the Texas Department of Agriculture concerning the proposed use of warfarin as a poison for feral hogs. In my opinion, that program is inadvisable for several reasons. As a landowner and rancher, I recognize and deal with the challenges posed by feral hogs and long for a humane solution to feral-hog population control. I deal with pastures and hay meadows that are destroyed by feral hogs. These animals consume hundreds of pounds of grain from bulk feeders intended for cattle consumption. They are a financial and management drain to my operation. However, as do most landowners, I consider myself a steward of the land, wildlife, and resources I oversee. As a veterinarian, I oppose unnecessary animal suffering, regardless of how noble the intent. Understand, I do not like feral hogs, but because of my knowledge of the type of death, length of suffering, and potential for significant adverse impacts on non-target animals, I would not use a warfarin-based poison on my ranches. Additionally, I stand in opposition to any proposed approved use in Texas.

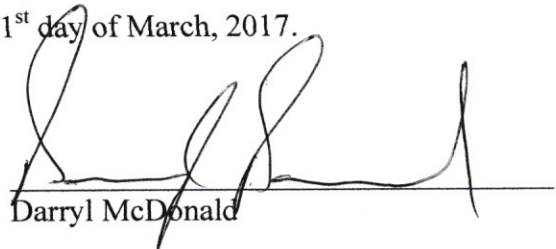
6. I also have discussed with various experts certain issues concerning the use of warfarin on feral hogs. These discussions have included concerns about the ineffectiveness of the warfarin delivery system (specifically, the 10-pound lid feeder) in limiting access of the poison to non-target species, spillage around the feeders, toxic effects of consumption of feral-hog carcasses by non-target species (including humans), and the potential for safer alternative solutions such as Sodium Nitrite, which results in a quicker, much less painful, and much safer mechanism of action.

7. As a rancher, landowner, and hunter, I will not use warfarin for feral-hog control. In my opinion, the program is not likely to be effective. Because so much land in Texas is privately owned, it is highly unlikely that consistent application of warfarin will occur in a

substantial area of land on adjacent ranches or farms. Without such controlled, region-wide application, feral-hog control will be spotty, temporary, and will occur only on treated properties. Further, feral hogs that have ingested warfarin can take up to 9 days to die. It is highly likely that feral hogs that ingest warfarin on one ranch would die on another ranch. Consequently, as a practical matter, successful implementation of prescribed precautions and procedures (e.g., burial of poison-laded carcasses) often will not be feasible. In that situation, exposure of the poison to livestock, domestic animals, and wildlife is highly likely.

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Brazos County, State of Texas, on the 1<sup>st</sup> day of March, 2017.



Darryl McDonald