

## **THE SKY IS NOT FALLING!**

**Dr. James C. Kroll**

In 2011, Texas experienced its worst drought in 1,000 years; without a doubt the most economically devastating disaster in our history. Economic losses to Texas agriculture were estimated to be in excess of \$8 billion. The wild fires (over 31,000) that followed destroyed some 4 million acres of ranch and timber land, 3,000 homes and almost 3,000 structures. The wild fire acreage accounted for 50% of all fires nationally. Timber losses due to drought and fire in East Texas added an additional \$1.6 billion in lost wood products, with an estimated economic impact on the region of over \$3 billion. In 2015, Texas experienced the worst floods in 200 years, with \$27 million in property damage (still accruing) and over 30 lives lost in Texas and the Mexico border.

In 2012, Chronic Wasting Disease was discovered in a mule deer sample from the Trans Pecos region just south of the New Mexico border; where deer had been infected for a number of years. In July, 2015 a two-year old whitetail buck in a Medina County breeding facility tested positive for the malady. The appearance of CWD in this herd, not only is devastating to the owners, but also to the hunters, landowners, outfitters and providers of goods and services to the deer hunting industry in our state.

What do these events have in common? Whenever disaster strikes, Texans band together and get the problem solved. We do not whine, we do not complain, we do not ask for handouts, and we certainly do not look to government for solutions. We put on our boots and go to work! Every time disaster strikes, we recover and become stronger!

It is no secret for almost two decades, two factions have been at war regarding white-tailed deer management. One side believes deer are an important agricultural commodity that can save rural lands and the rural lifestyle. The other believes strongly that wildlife is held in the public trust and that economic development of these resources is counter to the North American Wildlife Model. The battles have degraded to a gorilla war, where ethics and truth often have been the primary casualties. I have no doubt, when word of the positive buck was reported, there were folks who shouted, "Eureka, we finally have them!" Talk of lawsuits and injunctions already are rampant. It is time to act more like Texans than litigants!

I am not going to rehash the usual "boilerplate" material littering every press release issued when CWD is found in a new area. We all know about the history of the disease. I want to limit my comments to putting the issues in some common sense perspective. In 2011, I was appointed by Governor Scott Walker of Wisconsin to serve as the nation's first "Deer Trustee." Governor Walker took this unprecedented step in response of public outcry against and loss of public confidence by the Wisconsin Department of Natural Resources (WDNR). My assignment was to determine why the credibility of the WDNR had lost public support of its deer management efforts; and, in particular how they had handled the largest outbreak of CWD in the country. In February, 2002 deer tested positive for CWD near Mt. Horeb, triggering one of the best known and most ill-fated attempts to eradicate CWD to date. An "eradication" plan was developed and quickly implemented. The speed of implementation was spurred

by the assertion of professional biologists that, if something was not done quickly, CWD would literally wipe out the Wisconsin herd and a deer hunting tradition with it. Over the next 5 years, thousands of deer would lose their lives to sharpshooters and over-zealous private citizens rallying together for the “good of the deer and hunting.” However, by 2006 public support waned and the Wisconsin Legislature launched an audit of the program. Their conclusions were not very complimentary:

***“In the past five fiscal years, four state agencies have spent \$32.3 million to address the disease and monitor its spread, both in the wild and among farm-raised deer. The Department of Natural Resources (DNR), which accounted for 82.9 percent of all expenditures, has attempted to eradicate CWD by reducing the number of free-ranging deer in areas where it has been identified.... Available data indicate that to date, DNR’s efforts to eradicate CWD have not been effective:***

- ***in CWD zones, the number of deer killed has declined from 23.1 per square mile during the 2003 hunting season to 17.4 per square mile during the 2005 hunting season;***
- ***the CWD infection rate in the 210-square-mile “core area” DNR uses to monitor infection rates has not declined; and***
- ***the estimated number of deer in CWD zones has increased from a post-hunt population of 26.4 deer per square mile in 2002 to 38.3 deer per square mile in 2005.”***

The Deer Trustee Committee conducted an exhaustive review of all procedures and data pertaining to deer management and the CWD eradication effort to determine if these actions were indeed science-based. To our surprise, there were very little scientific data to support many of the decisions made by WDNR for deer or CWD management. Most notable was the lack of corroborating data about the mortality rates due to CWD. In fact, the agency was only able to produce a handful of necropsy (animal autopsy) and diagnostic data, none of which attributed the cause of death to CWD. The legislature was correct in pointing out the herd had actually grown in the “Eradication Zone.” Furthermore, the source of the infection to this day remains a mystery. In reference to implications of deer and elk farms, we appended a letter to our report from the Wisconsin State Veterinarian, pointing out:

***“CWD has been found on eight [in Wisconsin] WTD farms and one elk farm. Every infected WTD farm but one had either historically started with captured wild WTD or adopted orphan fawns. In one case the only infected animal was an illegally adopted wild fawn. The farm that did not adopt fawns was also a taxidermy operation located near the CWD zone. There is a plausible link that the source of infection on Wisconsin deer farms is the wild herd...”***

Lastly, we found serious issues with sampling protocols and reporting for the rate of spread or increase in CWD in Wisconsin. We often hear about infection rates increasing rapidly in the CWD zone. We discovered that, after the Wisconsin legislature issued its criticism of the effectiveness of the program, the sampling protocol changed in 2009 to a focus on deer within the “epicenter” of the disease and on the most susceptible individuals.

This June, I received trail photographs from a landowner located in the center of infection. Shortly after initiating the CWD program, researchers captured and collared deer to determine their life expectancy.

The photograph below is one of those obtained by the landowner of a collared doe with a fawn that must be about 12 years of age, given the time since she was captured. The fact she is not only healthy but also a fawn provides impeachment to those who think deer will go extinct from CWD. In the future, I am recommending resurrecting the study to determine life expectancies from these deer.



***This Wisconsin doe with a fawn was radio-collared at the beginning of the CWD eradication program and probably now is at least 12 years old. According to the landowner, she is not the only collared deer in the CWD area.***

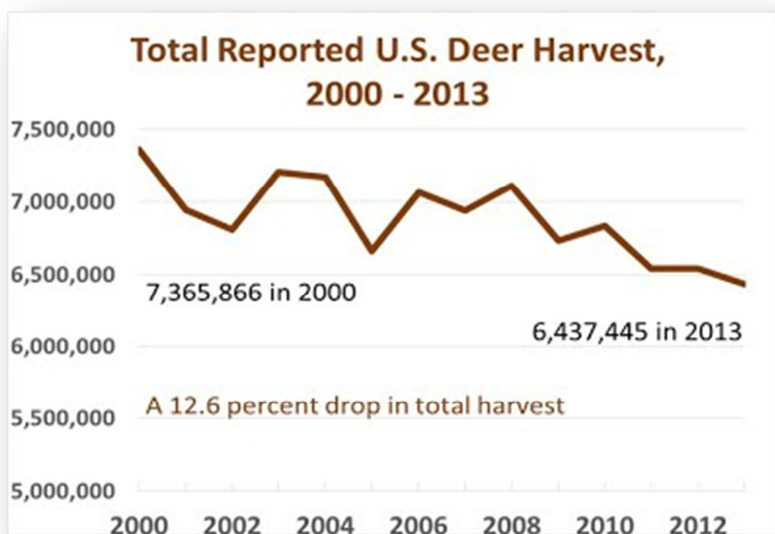
There are two primary concerns about CWD: 1) that it will decimate herds, thereby affecting our entire industry, and 2) there may be zoonotic (spreading to humans) issues. In regard to the first, a university professor developed an infection rate spread model that predicted the virtual extinction of deer from Wisconsin in only 20 years. Not only is there no sign this is happening, but the herd in the Zone has grown! I will discuss this more below. Regarding the second concern, there is no evidence whatsoever that CWD has infected any human, in spite of sensational press to the contrary immediately after 2002. For answers, let's examine what happened with so-called "Mad Cow" disease in the United Kingdom (UK). Bovine Spongiform Encephalopathy first appeared among cattle that had been fed feed including animal waste. The furor virtually destroyed the cattle industry in the UK, and although growing, it probably never will recover to pre-1980s levels. In 1996 humans were diagnosed with what was later diagnosed as variant Creutzfeldt-Jakob Disease (vCJD). This created a virtual panic among UK and European consumers. Although each human life is precious, since the 1980s a total of 220 humans have contracted vCJD worldwide, with 177 in the UK and 27 in France. Considering several million pounds of beef were sold and distributed from UK herds, the risk is not a great as we are led to believe.

Returning to the issue of the potential effect of CWD on deer herds, whitetails, mule and blacktail deer populations are indeed declining (see graph) in at least 30 states and 2 Canadian provinces. However, not a single state agency has attributed declines in populations and harvest to CWD. To the contrary, the

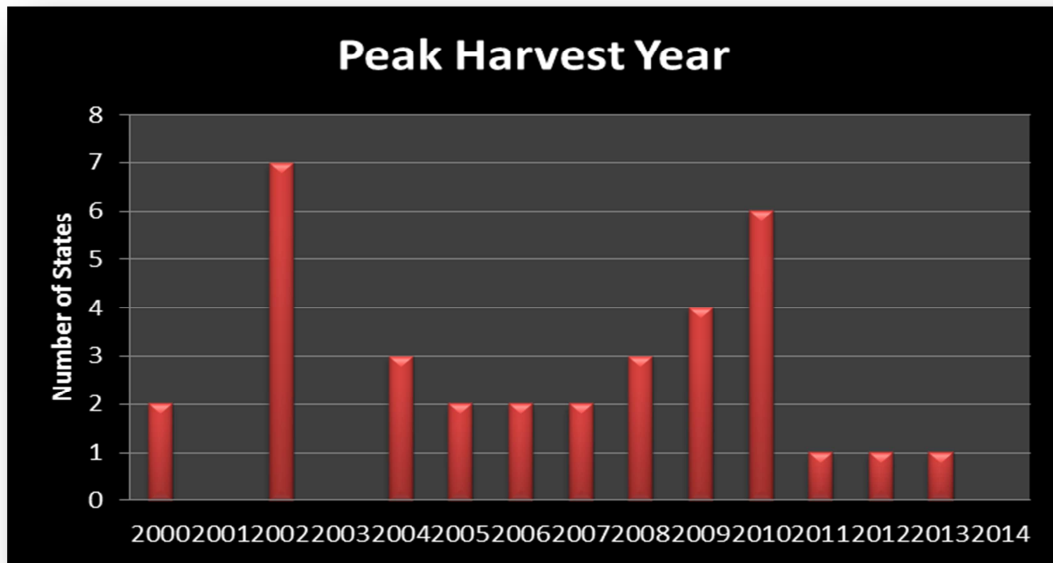
most common causes put forward are habitat destruction and predators (although I feel over-harvest must be included). All but three states show deer harvest peaking by 2010. Further, there is not a single peer-reviewed scientific study to date that clearly shows causation between CWD and herd declines. Since CWD has been known to exist since the 1960s, surely one herd would have shown signs of loss by this time.

Texas has about 10% of the Nation's deer herd; and also more breeder deer than any state. Considering this, the only thing surprising about the appearance of CWD in Texas is how long it took to find it! If we had sampled the wild deer at the intensity imposed on deer breeders, it would have been found long ago. So, what should we do now that CWD has finally come to our state?

Chronic wasting disease clearly is a threat to the breeding industry. Since it is a reportable disease, an operator with an infected herd has a large liability and economic impact. So, I would be the last to suggest we relegate CWD to insignificance. However, I would recommend a more reasoned approach to our next steps. IF the breeding industry is to survive, we must develop effective management protocols to "manage" the disease; not unlike those shown to be successful for Scrapie in sheep. Already there are advances in live animal testing and genetic screening that show promise. The problem has been that the idea of managing CWD, rather than the ill-fated approach of "eradicating" it has not been popular. It is not easy to estimate how much money has been appropriated for CWD research, but Wisconsin now has spent over \$50 million. My best guess is we are well on the way to \$1 billion nationwide. Yet, with all



Source: <http://www.deerfriendly.com/decline-of-deer-populations>



this support of public research projects, how many have focused on ways to manage or mitigate CWD? How much research has been done on live animal testing and genetic solutions?

The initial steps taken by the task force has not been unreasonable, although there is need for attitudinal adjustment on the part of regulators. Providing the public with sound information about the situation as it develops will go far not to repeat the Wisconsin mistakes. The Texas Department of Animal Health and Texas Parks & Wildlife Department must move quickly, yet prudently to maintain the viability of the deer industry. Although the deer breeding industry often is portrayed as “fat cats,” the average deer breeder is a family-owned operation on heritage lands. Comments by staff involving “what if’s” should be banned by these agencies. It is time for the warring parties to come together for a reasonable solution going forward.

In my wildlife disease course, the first admonition I give my students is, when a disease situation first shows up, you have to define the universe of infection. So, it does seem logical to start with the infected premise to see if this is a spontaneous occurrence or an infective event? Of course, this means operators acquiring deer from the source must be closed until this is done. But, time is of the essence. The time of year when breeders and hunting operations make their greatest income soon will be upon us. Again, we must move quickly but prudently. Next, the hold on producers who have gained certified status should be released as soon as possible. If you do not, you create the perception that participating at that level is just a waste of time and money!

As to next steps, I strongly urge that we adopt a mentality aimed at facilitation rather than regulation. Facilitation is not looking the other way, it is developing an attitude that agencies truly are there to assure the safety and sustainability of agricultural enterprises. Deer breeding and even hunting is an

agricultural operation. The Texas Animal Health Commission is there more to protect operators than to punish them.

We are Texans, and Texans band together in times of crisis. Deer management began in Texas and the entire whitetail world has benefitted by from what we have accomplished in Texas. Now, the deer world is watching to see how we handle CWD. I sure do not want us to end up a good, bad example.