Docket No. APHIS-2018-0011 Chronic Wasting Disease Herd Certification Program Standards Singeltary Submission March 30, 2018

Greetings APHIS, USDA, Dr. Tracy Nichols, et al,

I wish to kindly submit my comments on the Docket No. APHIS-2018-0011 Chronic Wasting Disease Herd Certification Program Standards please. i have submitted online and sent a hard copy to Dr. Nichols via email. i know that my concern may not be the same concern as others, but ramifications from cwd tse prion can be long lasting, and science is still emerging. however, the science today warrants immediate and further actions be taken. my comments, with reference materials, are as follows, and will be formatted in such a way, i will address issues by numbers 1-10, and under each one of my comments by each number, i will reference my comments with science to back up what i am stating/asking...thank you kindly, terry

1. I believe that immediately, there should be a 'DECLARATION OF EXTRAORDINARY EMERGENCY FOR FOREIGN ANIMAL DISEASE OF THE United States of America USA' due to Chronic Wasting Disease CWD Transmissible Spongiform Encephalopathy TSE Prion disease. All Intercontinental, International, Interstate movements of cervid should be banned immediately from the USA, and documented CWD TSE Prion Countries. There was a 'DECLARATION OF EXTRAORDINARY EMERGENCY FOR FOREIGN ANIMAL DISEASE' declared in the USA way back On July 10, 2000, several sheep from the flock tested positive for a TSE, a class of degenerative neurological diseases that is characterized by a very long incubation period and a 100 percent mortality rate in infected sheep. Two of the better known varieties of TSE are scrapie in sheep and BSE in cattle. On July 14, 2000, USDA issued a declaration of extraordinary emergency to acquire the sheep. but those test were wrong, and a decade later after FOIA request after request, turns out those sheep from Belgium never had any TSE Prion disease. long story, but what is the difference here, especially since we are dealing with Chronic Wasting Disease CWD TSE Prion, and the fact now that not only has CWD been exported from North America to South Korea, and to Norway, but now Finland has confirmed it's first case of Chronic Wasting Disease CWD TSE Prion. So, where does the 'BUCK' stop? why has this 'DECLARATION OF EXTRAORDINARY EMERGENCY FOR FOREIGN ANIMAL DISEASE OF THE United States of America USA' due to Chronic Wasting Disease CWD Transmissible Spongiform Encephalopathy TSE Prion disease, not already been declared, and why has not a Intercontinental, International, Interstate movements of cervid BAN not already been put in place, especially since the recent findings of oral transmission studies with the Macaque, in relations with oral transmission of muscle meat with cwd, and oral transmission of cwd to the pig? do we just continue to truck, ship, or fly this CWD TSE Prion all around the globe, just to save the industry? see; August 15, 2000 OIG case # NY-3399-56 REDACTED, VT "Enclosed is OIG's notification that they have scheduled an investigation of the following individual. REDACTED is alleged to have provided possibly inaccurate test results involving diseased sheep. However, because the results were determined to be inconclusive, no actual violation was actually committed."

http://foiamadsheepmadrivervalley.blogspot.com/

2. Voluntary Chronic Wasting Disease Herd Certification Program should be made MANDATORY immediately, OR NO PERMIT TO FARM DEER OR ELK, PERIOD! you don't want to join, then fine, you don't farm cervid and or any product there from.

3. INDEMNITY, NO MORE Federal indemnity program, or what i call, ENTITLEMENT PROGRAM for game farm industry. NO MORE BAIL OUTS FROM TAX PAYERS. if the captive industry can't buy insurance to protect not only themselves, but also their customers, and especially the STATE, from Chronic Wasting Disease CWD TSE Prion or what some call mad deer disease and harm therefrom, IF they can't afford to buy that insurance that will cover all of it, then they DO NOT GET A PERMIT to have a game farm for anything. This CWD TSE Prion can/could/has caused property values to fall from some reports in some places. roll the dice, how much is a state willing to lose?

4. QUARANTINE OF ALL CAPTIVE, BREEDERS, URINE, ANTLER, VELVET, SPERM, OR ANY FACILITY that has been confirmed to have Chronic Wasting Disease CWD TSE Prion, the QUARANTINE should be for 21 years due to science showing what scrapie can do. 5 years is NOT enough. see; Infectious agent of sheep scrapie may persist in the environment for at least 16 years
Gudmundur Georgsson,1 Sigurdur Sigurdarson2 and Paul Brown3 Correspondence Gudmundur Georgsson ggeorgs@hi.is 1 Institute for Experimental Pathology, University of Iceland, Keldur v/vesturlandsveg, IS-112 Reykjavı´k, Iceland 2 Laboratory of the Chief Veterinary Officer, Keldur, Iceland 3 Bethesda, Maryland, USA Received 7 March 2006 Accepted 6 August 2006 In 1978, a rigorous programme was implemented to stop the spread of, and subsequently eradicate, sheep scrapie in Iceland. Affected flocks were culled, premises were disinfected and, after 2–3 years, restocked with lambs from scrapie-free areas. Between 1978 and 2004, scrapie recurred on 33 farms. Nine of these recurrences occurred 14–21 years after culling, apparently as the result of environmental contamination, but outside entry could not always be absolutely excluded. Of special interest was one farm with a small, completely self-contained flock where scrapie recurred 18 years after culling, 2 years after some lambs had been housed in an old sheephouse that had never been disinfected. Epidemiological investigation established with near certitude that the disease had not been introduced from the outside and it is concluded that the agent may have persisted in the old sheep-house for at least 16 years.

http://www.microbiologyresearch.org/docserver/fulltext/jgv/87/12/3737.pdf?expires=1521907990&id=id&accname=guest&checksum=51DB085BD612A0603240F09E29D4AADD

Survival of Scrapie virus after 3 years interment

Paul Brown, D. Carleton Gajdusek

https://web.archive.org/web/20090505211734/http://www.bseinquiry.gov.uk/files/sc/Seac07/tab03.pdf

Back around 2000, 2001, or so, I was corresponding with officials abroad during the bse inquiry, passing info back and forth, and some officials from here inside USDA aphis FSIS et al. In fact helped me get into the USA 50 state emergency BSE conference call way back. That one was a doozy. But I always remember what “deep throat” I never knew who they were, but I never forgot;

Some unofficial information from a source on the inside looking out -

Confidential!!!!

As early as 1992-3 there had been long studies conducted on small pastures containing scrapie infected sheep at the sheep research station associated with the Neuropathogenesis Unit in Edinburgh, Scotland. Whether these are documented...I don't know. But personal recounts both heard and recorded in a daily journal indicate that leaving the pastures free and replacing the topsoil completely at least 2 feet of thickness each year for SEVEN years....and then when very clean (proven scrapie free) sheep were placed on these small pastures.... the new

sheep also broke out with scrapie and passed it to offspring. I am not sure that TSE contaminated ground could ever be free of the agent!! A very frightening revelation!!!

---end personal email---end...tss

5. DESCRIBING APHIS' intent to amend the regulations to define susceptible species based on scientific evidence of natural infection or experimental infections through natural routes and adding the genera Rangifer and Muntiacus to the list of susceptible species...

WELL, THAT WOULD BE A START, especially with Norway CWD and Reindeer there naturally in the field, and muntiacus reefesi in the lab, ORALLY, BUT, WHAT ABOUT HUMANS AND PIGS ??? cwd transmits to the macaque in the lab, orally, by muscle meat, infected with cwd, and CWD HAS TRANSMITTED TO PIGS, orally, in the lab. so, do we continue to roll the dice there with human life? if so, why? and what about feed? pigs are still allowed in the feed, along with cwd risk deer. absolutely crazy imo. let's see what DEFRA/MAFF have to say about this;

Friday, December 14, 2012

DEFRA U.K. What is the risk of Chronic Wasting Disease CWD being introduced into Great Britain? A Qualitative Risk Assessment October 2012

snip...

In the USA, under the Food and Drug Administration's BSE Feed Regulation (21 CFR 589.2000) most material (exceptions include milk, tallow, and gelatin) from deer and elk is prohibited for use in feed for ruminant animals. With regards to feed for non-ruminant animals, under FDA law, CWD positive deer may not be used for any animal feed or feed ingredients. For elk and deer considered at high risk for CWD, the FDA recommends that these animals do not enter the animal feed system. However, this recommendation is guidance and not a requirement by law.

Animals considered at high risk for CWD include:

1) animals from areas declared to be endemic for CWD and/or to be CWD eradication zones and

2) deer and elk that at some time during the 60-month period prior to slaughter were in a captive herd that contained a CWD-positive animal.

Therefore, in the USA, materials from cervids other than CWD positive animals may be used in animal feed and feed ingredients for non-ruminants.

The amount of animal PAP that is of deer and/or elk origin imported from the USA to GB can not be determined, however, as it is not specified in TRACES. It may constitute a small percentage of the 8412 kilos of non-fish origin processed animal proteins that were imported from US into GB in 2011.

Overall, therefore, it is considered there is a __greater than negligible risk___ that (nonruminant) animal feed and pet food containing deer and/or elk protein is imported into GB.

There is uncertainty associated with this estimate given the lack of data on the amount of deer and/or elk protein possibly being imported in these products.

snip...

36% in 2007 (Almberg et al., 2011). In such areas, population declines of deer of up to 30 to 50% have been observed (Almberg et al., 2011). In areas of Colorado, the prevalence can be as high as 30% (EFSA, 2011).

The clinical signs of CWD in affected adults are weight loss and behavioural changes that can span weeks or months (Williams, 2005). In addition, signs might include excessive salivation, behavioural alterations including a fixed stare and changes in interaction with other animals in the herd, and an altered stance (Williams, 2005). These signs are indistinguishable from cervids experimentally infected with bovine spongiform encephalopathy (BSE).

Given this, if CWD was to be introduced into countries with BSE such as GB, for example, infected deer populations

would need to be tested to differentiate if they were infected with CWD or BSE to minimise the risk of BSE entering the human food-chain via affected venison.

snip...

The rate of transmission of CWD has been reported to be as high as 30% and can approach 100% among captive animals in endemic areas (Safar et al., 2008).

snip...

In summary, in endemic areas, there is a medium probability that the soil and surrounding environment is contaminated with CWD prions and in a bioavailable form. In rural areas where CWD has not been reported and deer are present, there is a greater than negligible risk the soil is contaminated with CWD prion.

snip...

In summary, given the volume of tourists, hunters and servicemen moving between GB and North America, the probability of at least one person travelling to/from a CWD affected area and, in doing so, contaminating their clothing, footwear and/or equipment prior to arriving in GB is greater than negligible. For deer hunters, specifically, the risk is likely to be greater given the increased contact with deer and their environment. However, there is significant uncertainty associated with these estimates.

snip...

Therefore, it is considered that farmed and park deer may have a higher probability of exposure to CWD transferred to the environment than wild deer given the restricted habitat range and higher frequency of contact with tourists and returning GB residents.

snip...

http://webarchive.nationalarchives.gov.uk/20130908115835/http://www.defra.gov.uk/animal-diseases/files/qra_chronic-wasting-disease-121029.pdf

CWD TO PIGS

Research Project: TRANSMISSION, DIFFERENTIATION, AND PATHOBIOLOGY OF TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES

Location: Virus and Prion Research

Title: Disease-associated prion protein detected in lymphoid tissues from pigs challenged with the agent of chronic wasting disease

Author item Moore, Sarah item Kunkle, Robert item Kondru, Naveen item Manne, Sireesha item Smith, Jodi item Kanthasamy, Anumantha item West Greenlee, M item Greenlee, Justin

Submitted to: Prion Publication Type: Abstract Only Publication Acceptance Date: 3/15/2017 Publication Date: N/A Citation: N/A Interpretive Summary:

Technical Abstract: Aims: Chronic wasting disease (CWD) is a naturally-occurring, fatal neurodegenerative disease of cervids. We previously demonstrated that disease-associated prion protein (PrPSc) can be detected in the brain and retina from pigs challenged intracranially or orally with the CWD agent. In that study, neurological signs consistent with prion disease were observed only in one pig: an intracranially challenged pig that was euthanized at 64 months post-challenge. The purpose of this study was to use an antigen-capture immunoassay (EIA) and real-time quaking-induced conversion (QuIC) to determine whether PrPSc is present in lymphoid tissues from pigs challenged with the CWD agent.

Methods: At two months of age, crossbred pigs were challenged by the intracranial route (n=20), oral route (n=19), or were left unchallenged (n=9). At approximately 6 months of age, the time at which commercial pigs reach market weight, half of the pigs in each group were culled (<6 month challenge groups). The remaining pigs (>6 month

challenge groups) were allowed to incubate for up to 73 months post challenge (mpc). The retropharyngeal lymph node (RPLN) was screened for the presence of PrPSc by EIA and immunohistochemistry (IHC). The RPLN, palatine tonsil, and mesenteric lymph node (MLN) from 6-7 pigs per challenge group were also tested using EIA and QuIC.

Results: PrPSc was not detected by EIA and IHC in any RPLNs. All tonsils and MLNs were negative by IHC, though the MLN from one pig in the oral <6 month group was positive by EIA. PrPSc was detected by QuIC in at least one of the lymphoid tissues examined in 5/6 pigs in the intracranial <6 months group, 6/7 intracranial >6 months group, 5/6 pigs in the oral <6 months group, and 4/6 oral >6 months group. Overall, the MLN was positive in 14/19 (74%) of samples examined, the RPLN in 8/18 (44%), and the tonsil in 10/25 (40%). Conclusions:

This study demonstrates that PrPSc accumulates in lymphoid tissues from pigs challenged intracranially or orally with the CWD agent, and can be detected as early as 4 months after challenge.

CWD-infected pigs rarely develop clinical disease and if they do, they do so after a long incubation period. This raises the possibility that CWD-infected pigs could shed prions into their environment long before they develop clinical disease.

Furthermore, lymphoid tissues from CWD-infected pigs could present a potential source of CWD infectivity in the animal and human food chains.

https://www.ars.usda.gov/research/publications/publication/?seqNo115=337105

CONFIDENTIAL

EXPERIMENTAL PORCINE SPONGIFORM ENCEPHALOPATHY

While this clearly is a cause for concern we should not jump to the conclusion that this means that pigs will necessarily be infected by bone and meat meal fed by the oral route as is the case with cattle. ...

http://web.archive.org/web/20031026000118/www.bseinquiry.gov.uk/files/yb/1990/08/23004001.pdf

we cannot rule out the possibility that unrecognised subclinical spongiform encephalopathy could be present in British pigs though there is no evidence for this: only with parenteral/implantable pharmaceuticals/devices is the theoretical risk to humans of sufficient concern to consider any action.

http://web.archive.org/web/20030822031154/www.bseinquiry.gov.uk/files/yb/1990/09/10007001.pdf

Our records show that while some use is made of porcine materials in medicinal products, the only products which would appear to be in a hypothetically "higher risk" area are the adrenocorticotrophic hormone for which the source material comes from outside the United Kingdom, namely America China Sweden France and Germany. The products are manufactured by Ferring and Armour. A further product, "Zenoderm Corium implant" manufactured by Ethicon, makes use of porcine skin - which is not considered to be a "high risk" tissue, but one of its uses is described in the data sheet as "in dural replacement". This product is sourced from the United Kingdom.....

http://web.archive.org/web/20030822054419/www.bseinquiry.gov.uk/files/yb/1990/09/21009001.pdf

snip...see much more here ;

WEDNESDAY, APRIL 05, 2017

Disease-associated prion protein detected in lymphoid tissues from pigs challenged with the agent of chronic wasting disease

http://chronic-wasting-disease.blogspot.com/2017/04/disease-associated-prion-protein.html

WEDNESDAY, APRIL 05, 2017

*** Disease-associated prion protein detected in lymphoid tissues from pigs challenged with the agent of chronic wasting disease ***

http://chronic-wasting-disease.blogspot.com/2017/04/disease-associated-prion-protein.html

Docket No. FDA-2003-D-0432 (formerly 03D-0186) Use of Material from Deer and Elk in Animal Feed Singeltary Submission

Greetings again FDA and Mr. Pritchett et al,

MY comments and source reference of sound science on this very important issue are as follows ;

Docket No. FDA-2003-D-0432 (formerly 03D-0186) Use of Material from Deer and Elk in Animal Feed Singeltary Submission

I kindly wish to once again submit to Docket No. FDA-2003-D-0432 (formerly 03D-0186) Use of Material from Deer and Elk in Animal Feed.

Thank you kindly for allowing me to comment again, ...and again...and again, on a topic so important, why it is 'NON-BINDING' is beyond me.

this should have been finalized and made 'BINDING' or MANDATORY OVER A DECADE AGO.

but here lay the problem, once made 'BINDING' or 'MANDATORY', it is still nothing but ink on paper.

we have had a mad cow feed ban in place since August 1997, and since then, literally 100s of millions of pounds BANNED MAD COW FEED has been sent out to commerce and fed out (see reference materials).

ENFORCEMENT OF SAID BINDING REGULATIONS HAS FAILED US TOO MANY TIMES.

so, in my opinion, any non-binding or voluntary regulations will not work, and to state further, 'BINDING' or MANDATORY regulations will not work unless enforced.

with that said, we know that Chronic Wasting Disease CWD TSE Prion easily transmits to other cervid through the oral route.

the old transmission studies of BSE TSE floored scientist once they figured out what they had, and please don't forget about those mink that were fed 95%+ dead stock downer cow, that all came down with TME. please see ;

It is clear that the designing scientists must also have shared Mr Bradleys surprise at the results because all the dose levels right down to 1 gram triggered infection...snip...see full text Singeltary submission;

https://www.regulations.gov/document?D=FDA-2013-N-0764-0008

ALABAMA MAD COW FEED IN COMMERCE 2006

RECALLS AND FIELD CORRECTIONS: VETERINARY MEDICINE -- CLASS II

PRODUCT

a) CO-OP 32% Sinking Catfish, Recall # V-100-6;

b) Performance Sheep Pell W/Decox/A/N, medicated, net wt. 50 lbs, Recall # V-101-6;

c) Pro 40% Swine Conc Meal -- 50 lb, Recall # V-102-6;

d) CO-OP 32% Sinking Catfish Food Medicated, Recall # V-103-6;

e) "Big Jim's" BBB Deer Ration, Big Buck Blend, Recall # V-104-6;

f) CO-OP 40% Hog Supplement Medicated Pelleted, Tylosin 100 grams/ton, 50 lb. bag, Recall # V-105-6;

g) Pig Starter Pell II, 18% W/MCDX Medicated 282020, Carbadox -- 0.0055%, Recall # V-106-6;

h) CO-OP STARTER-GROWER CRUMBLES, Complete Feed for Chickens from Hatch to 20 Weeks, Medicated, Bacitracin Methylene Disalicylate, 25 and 50 Lbs, Recall # V-107-6;

i) CO-OP LAYING PELLETS, Complete Feed for Laying Chickens, Recall # 108-6;

j) CO-OP LAYING CRUMBLES, Recall # V-109-6;

k) CO-OP QUAIL FLIGHT CONDITIONER MEDICATED, net wt 50 Lbs, Recall # V-110-6;

l) CO-OP QUAIL STARTER MEDICATED, Net Wt. 50 Lbs, Recall # V-111-6;

m) CO-OP QUAIL GROWER MEDICATED, 50 Lbs, Recall # V-112-6

CODE

Product manufactured from 02/01/2005 until 06/06/2006

RECALLING FIRM/MANUFACTURER

Alabama Farmers Cooperative, Inc., Decatur, AL, by telephone, fax, email and visit on June 9, 2006. FDA initiated recall is complete.

REASON

Animal and fish feeds which were possibly contaminated with ruminant based protein not labeled as "Do not feed to ruminants".

VOLUME OF PRODUCT IN COMMERCE

125 tons

DISTRIBUTION

AL and FL

PRODUCT

Bulk custom dairy feds manufactured from concentrates, Recall # V-113-6

CODE

All dairy feeds produced between 2/1/05 and 6/16/06 and containing H. J. Baker recalled feed products.

RECALLING FIRM/MANUFACTURER

Vita Plus Corp., Gagetown, MI, by visit beginning on June 21, 2006. Firm initiated recall is complete.

REASON

The feed was manufactured from materials that may have been contaminated with mammalian protein.

VOLUME OF PRODUCT IN COMMERCE

27,694,240 lbs

DISTRIBUTION

MI

_____

PRODUCT

Bulk custom made dairy feed, Recall # V-114-6

CODE

None

RECALLING FIRM/MANUFACTURER

Burkmann Feeds LLC, Glasgow, KY, by letter on July 14, 2006. Firm initiated recall is ongoing.

REASON

Custom made feeds contain ingredient called Pro-Lak, which may contain ruminant derived meat and bone meal.

VOLUME OF PRODUCT IN COMMERCE

?????

DISTRIBUTION

KY

END OF ENFORCEMENT REPORT FOR AUGUST 2, 2006

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http://data.nber.org/fda/enforcement-report/2006/ucm120413.htm

http://bovineprp.blogspot.com/2017/11/fda-5892000-section-21-cfr-animal.html

http://efsaopinionbseanimalprotein.blogspot.com/2017/10/efsa-asked-to-review-risk-from.html

THURSDAY, JULY 20, 2017

USDA OIE Alabama Atypical L-type BASE Bovine Spongiform Encephalopathy BSE animal feeds for ruminants rule, 21 CFR 589.200

http://bovineprp.blogspot.com/2017/07/usda-oie-alabama-atypical-l-type-base.html

Discussion: The C, L and H type BSE cases in Canada exhibit molecular characteristics similar to those described for classical and atypical BSE cases from Europe and Japan. This supports the theory that the importation of BSE contaminated feedstuff is the source of C-type BSE in Canada. It also suggests a similar cause or source for atypical BSE in these countries.

see page 176 of 201 pages...tss

http://www.neuroprion.org/resources/pdf_docs/conferences/prion2009/prion2009_bookofabstracts.pdf

*** Singeltary reply ; Molecular, Biochemical and Genetic Characteristics of BSE in Canada Singeltary reply;

>>> The occurrence of atypical cases of BSE in countries such as Canada with low BSE prevalence and transmission risk argues for the occurrence of sporadic forms of BSE worldwide. <<<

In my opinion ;

THE statement above is about as non-scientific as a statement can be. There is no proof what-so-ever that any of the atypical BSE cases or atypical scrapie cases anywhere on the globe was a spontaneous case without any route and source of the TSE agent. This is a myth...

http://www.plosone.org/annotation/listThread.action;jsessionid=635CE9094E0EA15D5362B7D7B809448C?root=7143

cattle are highly susceptible to white-tailed deer CWD and mule deer CWD

***In contrast, cattle are highly susceptible to white-tailed deer CWD and mule deer CWD in experimental conditions but no natural CWD infections in cattle have been reported (Sigurdson, 2008; Hamir et al., 2006). It is not known how susceptible humans are to CWD but given that the prion can be present in muscle, it is likely that humans have been exposed to the agent via consumption of venison (Sigurdson, 2008). Initial experimental research, however, suggests that human susceptibility to CWD is low and there may be a robust species barrier for CWD transmission to humans (Sigurdson, 2008). It is apparent, though, that CWD is affecting wild and farmed cervid populations in endemic areas with some deer populations decreasing as a result.

SNIP...

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/514401/qra-chronic-wasting-disease.pdf

price of prion poker goes up for cwd to cattle;

Monday, April 04, 2016

*** Limited amplification of chronic wasting disease prions in the peripheral tissues of intracerebrally inoculated cattle ***

http://chronic-wasting-disease.blogspot.com/2016/04/limited-amplification-of-chronic.html

Thursday, August 08, 2013 C

haracterization of the first case of naturally occurring chronic wasting disease in a captive red deer (Cervus elaphus) in North America

http://chronic-wasting-disease.blogspot.com/2013/08/characterization-of-first-case-of.html

MONDAY, JUNE 12, 2017

Rethinking Major grain organizations opposition to CFIA's control zone approach to Chronic Wasting CWD TSE Prion Mad Deer Type Disease 2017?

http://chronic-wasting-disease.blogspot.com/2017/06/rethinking-major-grain-organizations.html

i am thinking of that 10,000,000 POUNDS OF BLOOD LACED MEAT AND BONE MEAL IN COMMERCE WARNING LETTER back in 2007, see;

SATURDAY, NOVEMBER 4, 2017

FDA 589.2000, Section 21 C.F.R. Animal Proteins Prohibited in Ruminant Feed WARNING Letters and FEED MILL VIOLATIONS OBSERVATIONS 2017 to 2006

http://bovineprp.blogspot.com/2017/11/fda-5892000-section-21-cfr-animal.html

FRIDAY, NOVEMBER 3, 2017

BSE MAD COW TSE PRION DISEASE PET FOOD FEED IN COMMERCE INDUSTRY VS TERRY S. SINGELTARY Sr. A REVIEW

"I have a neighbor who is a dairy farmer. He tells me that he knows of several farmers who feed their cattle expired dog food. These farmers are unaware of any dangers posed to their cattle from the pet food contents. For these farmers, the pet food is just another source of protein."

IN CONFIDENCE

http://madcowfeed.blogspot.com/2017/11/bse-mad-cow-tse-prion-disease-pet-food.html

6. Providing support for implementing antemortem immunohistochemistry testing of rectal anal mucosa associated lymphoid tissue (RAMALT) and medial retropharyngeal lymph node (MRPLN) biopsies conducted as a whole-herd test concurrently with genotyping at Prion Protein Gene (PRNP) codon 96 in white-tailed deer in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds. AND, Providing support for initiating pilot projects using RAMALT and MRPLN biopsies conducted concurrently with genotyping at PRNP codon 132 in elk in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds to inform decisions about testing protocols...

***>We hypothesized that the real-time quaking-induced conversion (RT-QuIC) assay, a developing amplification assay, would offer greater detection capabilities over immunohistochemistry (IHC) in the identification of infected animals using recto-anal mucosa associated lymphoid tissue (RAMALT).

***> Successful transmission of an emergent strain of CWD prion, H95+, into mice resulted in infection. Thus, emergent CWD prion strains may have higher zoonotic potential than common strains.

***> to date, there is no cervid that has been documented to be totally resistant to cwd tse prion.

***at present, no cervid PrP allele conferring absolute resistance to prion infection has been identified.

***> we found that the retropharyngeal lymph nodes of red deer, white-tailed deer and elk contained similar prion titres to brain from the same individuals

Research Paper

Chronic wasting disease management in ranched elk using rectal biopsy testing

Nicholas J. Haley, Davin M. Henderson, Sarah Wycoff, Joanne Tennant, Edward A. Hoover, Dan Love,

show all Page 00 | Received 25 Oct 2017, Accepted 25 Jan 2018, Accepted author version posted online: 09 Feb 2018 Download citation https://doi.org/10.1080/19336896.2018.1436925 Select Language▼ Translator disclaimer Accepted author version

ABSTRACT

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy (TSE) affecting members of the cervid species, and is one of the few TSEs with an expanding geographic range. Diagnostic limitations, efficient transmission, and the movement of infected animals are important contributing factors in the ongoing spread of disease. Managing CWD in affected populations has proven difficult, relying on population reduction in the case of wild deer and elk, or quarantine and depopulation in farmed cervids. In the present study, we evaluated the effectiveness of managing endemic CWD in a closed elk herd using antemortem sampling combined with both conventional and experimental diagnostic testing, and selective, targeted culling of infected animals. We hypothesized that the real-time quaking-induced conversion (RT-QuIC) assay, a developing amplification assay, would offer greater detection capabilities over immunohistochemistry (IHC) in the identification of infected animals using recto-anal mucosa associated lymphoid tissue (RAMALT). We further sought to develop a better understanding of CWD epidemiology in elk with various PRNP alleles, and predicted that CWD prevalence would decrease with targeted culling. We found that RT-QuIC identified significantly more CWD-positive animals than IHC using RAMALT tissues (121 vs. 86, respectively, out of 553 unique animals), and that longstanding disease presence was associated with an increasing frequency of less susceptible PRNP alleles. Prevalence of CWD increased significantly over the first two years of the study, implying that refinements in our management strategy are necessary to reduce the prevalence of CWD in this herd.

KEYWORDS: amplification, chronic wasting disease, diagnosis, deer, elk, genotype, RAMALT, RT-QuIC, prion

http://www.tandfonline.com/doi/abs/10.1080/19336896.2018.1436925

SATURDAY, FEBRUARY 10, 2018

Chronic wasting disease management in ranched elk using rectal biopsy testing Research Paper 09 Feb 2018

http://chronic-wasting-disease.blogspot.com/2018/02/chronic-wasting-disease-management-in.html

Volume 23, Number 9—September 2017 Research Letter

Chronic Wasting Disease Prion Strain Emergence and Host Range Expansion

Allen Herbst1, Camilo Duque Velásquez1, Elizabeth Triscott, Judd M. Aiken, and Debbie McKenzieComments to Author Author affiliations: University of Alberta, Edmonton, Alberta, Canada

Abstract

Human and mouse prion proteins share a structural motif that regulates resistance to common chronic wasting disease (CWD) prion strains. Successful transmission of an emergent strain of CWD prion, H95+, into mice resulted in infection. Thus, emergent CWD prion strains may have higher zoonotic potential than common strains.

https://wwwnc.cdc.gov/eid/article/23/9/16-1474_article

P-145 Estimating chronic wasting disease resistance in cervids using real time quaking- induced conversion

Nicholas J Haley1, Rachel Rielinqer2, Kristen A Davenport3, W. David Walter4, Katherine I O'Rourke5, Gordon

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In mammalian species, the susceptibility to prion diseases is affected, in part, by the sequence of the host's prion protein (PrP). In sheep, a gradation from scrapie susceptible to resistant has been established both in vivo and in vitro based on the amino acids present at PrP positions 136, 154, and 171, which has led to global breeding programs to reduce the prevalence of scrapie in domestic sheep. In cervids, resistance is commonly characterized as a delayed progression of chronic wasting disease (CWD); at present, no cervid PrP allele conferring absolute resistance to prion infection has been identified. To model the susceptibility of various naturally-occurring and hypothetical cervid PrP alleles in vitro, we compared the amplification rates and efficiency of various CWD isolates in recombinant PrPC using real time quaking-induced conversion. We hypothesized that amplification metrics of these isolates in cervid PrP substrates would correlate to in vivo susceptibility - allowing susceptibility prediction for alleles found at 10 frequency in nature, and that there would be an additive effect of multiple resistant codons in hypothetical alleles. Our studies demonstrate that in vitro amplification metrics predict in vivo susceptibility, and that alleles with multiple codons, each influencing resistance independently, do not necessarily contribute additively to resistance. Importantly, we found that the white-tailed deer 226K substrate exhibited the slowest amplification rate among those evaluated, suggesting that further investigation of this allele and its resistance in vivo are warranted to determine if absolute resistance to CWD is possible.

***at present, no cervid PrP allele conferring absolute resistance to prion infection has been identified.

PRION 2016 CONFERENCE TOKYO

http://prion2016.org/dl/newsletter_03.pdf

"There are no known familial or genetic TSEs of animals, although polymorphisms in the PRNP gene of some species (sheep for example) may influence the length of the incubation period and occurrence of disease."

c) The commonest form of CJD occurs as a sporadic disease, the cause of which is unknown, although genetic factors (particularly the codon 129 polymorphism in the prion protein gene (PRNP)) influence disease susceptibility. The familial forms of human TSEs (see Box 1) appear to have a solely genetic origin and are closely associated with mutations or insertions in the PRNP gene. Most, but not all, of the familial forms of human TSEs have been transmitted experimentally to animals. There are no known familial or genetic TSEs of animals, although polymorphisms in the PRNP gene of some species (sheep for example) may influence the length of the incubation period and occurrence of disease.

https://www.gov.uk/government/uploa...nt_data/file/209755/Part_1_-_Introduction.pdf

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https://www.gov.uk/government/uploa...nt_data/file/209755/Part_1_-_Introduction.pdf

Subject: cwd genetic susceptibility

Genetic susceptibility to chronic wasting disease in free-ranging white-tailed deer: Complement component C1q and Prnp polymorphisms§

Julie A. Blanchong a, *, Dennis M. Heisey b , Kim T. Scribner c , Scot V. Libants d , Chad Johnson e , Judd M.

Aiken e , Julia A. Langenberg f , Michael D. Samuel g

snip...

Identifying the genetic basis for heterogeneity in disease susceptibility or progression can improve our understanding of individual variation in disease susceptibility in both free-ranging and captive populations. What this individual variation in disease susceptibility means for the trajectory of disease in a population, however, is not straightforward. For example, the greater, but not complete, resistance to CWD in deer with at least one Serine (S) at amino acid 96 of the Prnp gene appears to be associated with slower progression of disease (e.g., Johnson et al., 2006; Keane et al., 2008a). If slower disease progression results in longer-lived, infected deer with longer periods of infectiousness, resistance may lead to increased disease transmission rates, higher prion concentrations in the environment, and increased prevalence, as has been observed in some captive deer herds (Miller et al., 2006; Keane et al., 2008a). Alternatively, if the slower progression of disease in resistant deer is not associated with longer periods of infectiousness, but might instead indicate a higher dose of PrPCWD is required for infection, transmission rates in the population could decline especially if, as in Wisconsin, deer suffer high rates of mortality from other sources (e.g., hunting). Clearly, determining the relationship between genetic susceptibility to infection, dose requirements, disease progression, and the period of PrPCWD infectiousness are key components for understanding the consequences of CWD to free-ranging populations.

http://forest.wisc.edu/files/pdfs/samuel/2009%20blanchong%20et%20al%20genetic%20susceptibility%20chronic%20wasting.pdf

http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1083&context=nrem_pubs

http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2017.4667/epdf

http://www.tandfonline.com/doi/full/10.1080/19336896.2015.1115179

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4964855/pdf/kprn-09-06-1115179.pdf

http://www.sciencedirect.com/science/article/pii/S1567134809001956?via=ihub

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4964855/

Comparative analysis of prions in nervous and lymphoid tissues of chronic wasting disease-infected cervids

Buy:$35.00

Authors: Kristen A. Davenport1,†, Jeffrey R. Christiansen1,†, Jifeng Bian1, Michael Young1, Joseph Gallegos1, Sehun Kim1, Aru Balachandran2, Candace K. Mathiason1, Edward A. Hoover1, Glenn C. Telling1

VIEW AFFILIATIONS *

Correspondence: Glenn C. Telling glenn.telling@colostate.edu First Published Online: 26 March 2018, Journal of General Virology doi: 10.1099/jgv.0.001053 Subject: Short Communication - TSE Agents Received: 09/01/2018 Accepted: 14/03/2018 Cover date: 26/03/2018

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The prevalence, host range and geographical bounds of chronic wasting disease (CWD), the prion disease of cervids, are expanding. Horizontal transmission likely contributes the majority of new CWD cases, but the mechanism by which prions are transmitted among CWD-affected cervids remains unclear. To address the extent to which prion amplification in peripheral tissues contributes to contagious transmission, we assessed the prion levels in central nervous and lymphoreticular system tissues in white-tailed deer (Odocoileus virginianus), red deer (Cervus elaphus elaphus) and elk (Cervus canadensis). Using real-time quaking-induced conversion, cervid prion cell assay and transgenic mouse bioassay, we found that the retropharyngeal lymph nodes of red deer, white-tailed deer and elk contained similar prion titres to brain from the same individuals. We propose that marked lymphotropism is essential for the horizontal transmission of prion diseases and postulate that shed CWD prions are produced in the periphery.

Keyword(s): lymphoid tissue, prion, cervid prion cell assay, chronic wasting disease, RT-QuIC, transmissible spongiform encephalopathy

http://jgv.microbiologyresearch.org/content/journal/jgv/10.1099/jgv.0.001053#tab2

7. UPDATING and streamlining Appendix IV: Guidelines for ENVIRONMENTAL CONTAMINATION...

the tse prion aka mad cow type disease is not your normal pathogen.

The TSE prion disease survives ashing to 600 degrees celsius, that's around 1112 degrees farenheit.

you cannot cook the TSE prion disease out of meat.

you can take the ash and mix it with saline and inject that ash into a mouse, and the mouse will go down with TSE.

Prion Infected Meat-and-Bone Meal Is Still Infectious after Biodiesel Production as well.

the TSE prion agent also survives Simulated Wastewater Treatment Processes.

IN fact, you should also know that the TSE Prion agent will survive in the environment for years, if not decades.

you can bury it and it will not go away.

The TSE agent is capable of infected your water table i.e. Detection of protease-resistant cervid prion protein in water from a CWD-endemic area.

it's not your ordinary pathogen you can just cook it out and be done with.

that's what's so worrisome about Iatrogenic mode of transmission, a simple autoclave will not kill this TSE prion agent.

1: J Neurol Neurosurg Psychiatry 1994 Jun;57(6):757-8

Transmission of Creutzfeldt-Jakob disease to a chimpanzee by electrodes contaminated during neurosurgery.

Gibbs CJ Jr, Asher DM, Kobrine A, Amyx HL, Sulima MP, Gajdusek DC.

Laboratory of Central Nervous System Studies, National Institute of

Neurological Disorders and Stroke, National Institutes of Health,

Bethesda, MD 20892.

Stereotactic multicontact electrodes used to probe the cerebral cortex of a middle aged woman with progressive dementia were previously implicated in the accidental transmission of Creutzfeldt-Jakob disease (CJD) to two younger patients. The diagnoses of CJD have been confirmed for all three cases. More than two years after their last use in humans, after three cleanings and repeated sterilisation in ethanol and formaldehyde vapour, the electrodes were implanted in the cortex of a chimpanzee. Eighteen months later the animal became ill with CJD. This finding serves to re-emphasise the potential danger posed by reuse of instruments contaminated with the agents of spongiform encephalopathies, even after scrupulous attempts to clean them.

PMID: 8006664 [PubMed - indexed for MEDLINE]

https://www.ncbi.nlm.nih.gov/pubmed/8006664?dopt=Abstract

Discussion Classical scrapie is an environmentally transmissible disease because it has been reported in naïve, supposedly previously unexposed sheep placed in pastures formerly occupied by scrapie-infected sheep (4, 19, 20).

***> Although the vector for disease transmission is not known, soil is likely to be an important reservoir for prions

(2) where – based on studies in rodents – prions can adhere to minerals as a biologically active form (21) and remain infectious for more than 2 years (22).

***> Similarly, chronic wasting disease (CWD) has re-occurred in mule deer housed in paddocks used by infected deer 2 years earlier, which was assumed to be through foraging and soil consumption (23).

***> Our study suggested that the risk of acquiring scrapie infection was greater through exposure to contaminated wooden, plastic, and metal surfaces via water or food troughs, fencing, and hurdles than through grazing.

***> Drinking from a water trough used by the scrapie flock was sufficient to cause infection in sheep in a clean building.

***> Exposure to fences and other objects used for rubbing also led to infection, which supported the hypothesis that skin may be a vector for disease transmission (9).

***> The risk of these objects to cause infection was further demonstrated when 87% of 23 sheep presented with PrPSc in lymphoid tissue after grazing on one of the paddocks, which contained metal hurdles, a metal lamb creep and a water trough in contact with the scrapie flock up to 8 weeks earlier, whereas no infection had been demonstrated previously in sheep grazing on this paddock, when equipped with new fencing and field furniture.

***> When the contaminated furniture and fencing were removed, the infection rate dropped significantly to 8% of 12 sheep, with soil of the paddock as the most likely source of infection caused by shedding of prions from the scrapie-infected sheep in this paddock up to a week earlier.

This study also indicated that the level of contamination of field furniture sufficient to cause infection was dependent on two factors: stage of incubation period and time of last use by scrapie-infected sheep.

Drinking from a water trough that had been used by scrapie sheep in the predominantly pre-clinical phase did not appear to cause infection, whereas infection was shown in sheep drinking from the water trough used by scrapie sheep in the later stage of the disease.

It is possible that contamination occurred through shedding of prions in saliva, which may have contaminated the surface of the water trough and subsequently the water when it was refilled.

Contamination appeared to be sufficient to cause infection only if the trough was in contact with sheep that included clinical cases.

Indeed, there is an increased risk of bodily fluid infectivity with disease progression in scrapie (24) and CWD (25) based on PrPSc detection by sPMCA.

Although ultraviolet light and heat under natural conditions do not inactivate prions (26), furniture in contact with the scrapie flock, which was assumed to be sufficiently contaminated to cause infection, did not act as vector for disease if not used for 18 months, which suggest that the weathering process alone was sufficient to inactivate prions.

PrPSc detection by sPMCA is increasingly used as a surrogate for infectivity measurements by bioassay in sheep or mice.

In this reported study, however, the levels of PrPSc present in the environment were below the limit of detection of the sPMCA method, yet were still sufficient to cause infection of in-contact animals.

In the present study, the outdoor objects were removed from the infected flock 8 weeks prior to sampling and were positive by sPMCA at very low levels (2 out of 37 reactions).

As this sPMCA assay also yielded 2 positive reactions out of 139 in samples from the scrapie-free farm, the sPMCA assay could not detect PrPSc on any of the objects above the background of the assay.

False positive reactions with sPMCA at a low frequency associated with de novo formation of infectious prions have been reported (27, 28).

This is in contrast to our previous study where we demonstrated that outdoor objects that had been in contact with the scrapie-infected flock up to 20 days prior to sampling harbored PrPSc that was detectable by sPMCA analysis [4 out of 15 reactions (12)] and was significantly more positive by the assay compared to analogous samples from the scrapie-free farm.

This discrepancy could be due to the use of a different sPMCA substrate between the studies that may alter the efficiency of amplification of the environmental PrPSc.

In addition, the present study had a longer timeframe between the objects being in contact with the infected flock and sampling, which may affect the levels of extractable PrPSc.

Alternatively, there may be potentially patchy contamination of this furniture with PrPSc, which may have been missed by swabbing.

The failure of sPMCA to detect CWD-associated PrP in saliva from clinically affected deer despite confirmation of infectivity in saliva-inoculated transgenic mice was associated with as yet unidentified inhibitors in saliva (29), and it is possible that the sensitivity of sPMCA is affected by other substances in the tested material.

In addition, sampling of amplifiable PrPSc and subsequent detection by sPMCA may be more difficult from furniture exposed to weather, which is supported by the observation that PrPSc was detected by sPMCA more frequently in indoor than outdoor furniture (12).

A recent experimental study has demonstrated that repeated cycles of drying and wetting of prion-contaminated soil, equivalent to what is expected under natural weathering conditions, could reduce PMCA amplification efficiency and extend the incubation period in hamsters inoculated with soil samples (30).

This seems to apply also to this study even though the reduction in infectivity was more dramatic in the sPMCA assays than in the sheep model.

Sheep were not kept until clinical end-point, which would have enabled us to compare incubation periods, but the lack of infection in sheep exposed to furniture that had not been in contact with scrapie sheep for a longer time period supports the hypothesis that prion degradation and subsequent loss of infectivity occurs even under natural conditions.

In conclusion, the results in the current study indicate that removal of furniture that had been in contact with scrapie-infected animals should be recommended, particularly since cleaning and decontamination may not effectively remove scrapie infectivity (31), even though infectivity declines considerably if the pasture and the field furniture have not been in contact with scrapie-infected sheep for several months. As sPMCA failed to detect PrPSc in furniture that was subjected to weathering, even though exposure led to infection in sheep, this method may not always be reliable in predicting the risk of scrapie infection through environmental contamination.

These results suggest that the VRQ/VRQ sheep model may be more sensitive than sPMCA for the detection of environmentally associated scrapie, and suggest that extremely low levels of scrapie contamination are able to cause infection in susceptible sheep genotypes.

Keywords: classical scrapie, prion, transmissible spongiform encephalopathy, sheep, field furniture, reservoir, serial protein misfolding cyclic amplification

http://journal.frontiersin.org/article/10.3389/fvets.2015.00032/full

Wednesday, December 16, 2015

*** Objects in contact with classical scrapie sheep act as a reservoir for scrapie transmission ***

http://scrapie-usa.blogspot.com/2015/12/objects-in-contact-with-classical.html

Back around 2000, 2001, or so, I was corresponding with officials abroad during the bse inquiry, passing info back and forth, and some officials from here inside USDA aphis FSIS et al. In fact helped me get into the USA 50 state emergency BSE conference call way back. That one was a doozy. But I always remember what “deep throat” I never knew who they were, but I never forgot;

Some unofficial information from a source on the inside looking out -

Confidential!!!!

As early as 1992-3 there had been long studies conducted on small pastures containing scrapie infected sheep at the sheep research station associated with the Neuropathogenesis Unit in Edinburgh, Scotland. Whether these are documented...I don't know. But personal recounts both heard and recorded in a daily journal indicate that leaving the pastures free and replacing the topsoil completely at least 2 feet of thickness each year for SEVEN years....and then when very clean (proven scrapie free) sheep were placed on these small pastures.... the new sheep also broke out with scrapie and passed it to offspring. I am not sure that TSE contaminated ground could ever be free of the agent!! A very frightening revelation!!!

---end personal email---end...tss

*** Infectious agent of sheep scrapie may persist in the environment for at least 16 years ***

Gudmundur Georgsson1, Sigurdur Sigurdarson2 and Paul Brown3

http://jgv.sgmjournals.org/content/87/12/3737.full

Infectious agent of sheep scrapie may persist in the environment for at least 16 years Gudmundur Georgsson,1 Sigurdur Sigurdarson2 and Paul Brown3 Correspondence Gudmundur Georgsson ggeorgs@hi.is 1 Institute for Experimental Pathology, University of Iceland, Keldur v/vesturlandsveg, IS-112 Reykjavı´k, Iceland 2 Laboratory of the Chief Veterinary Officer, Keldur, Iceland 3 Bethesda, Maryland, USA Received 7 March 2006 Accepted 6 August 2006 In 1978, a rigorous programme was implemented to stop the spread of, and subsequently eradicate, sheep scrapie in Iceland. Affected flocks were culled, premises were disinfected and, after 2–3 years, restocked with lambs from scrapie-free areas. Between 1978 and 2004, scrapie recurred on 33 farms. Nine of these recurrences occurred 14–21 years after culling, apparently as the result of environmental contamination, but outside entry could not always be absolutely excluded. Of special interest was one farm with a small, completely self-contained flock where scrapie recurred 18 years after culling, 2 years after some lambs had been housed in an old sheephouse that had never been disinfected. Epidemiological investigation established with near certitude that the disease had not been introduced from the outside and it is concluded that the agent may have persisted in the old sheep-house for at least 16 years.
http://www.microbiologyresearch.org/docserver/fulltext/jgv/87/12/3737.pdf?expires=1521907990&id=id&accname=guest&checksum=51DB085BD612A0603240F09E29D4AADD

Survival of Scrapie virus after 3 years interment

Paul Brown, D. Carleton Gajdusek

https://web.archive.org/web/20090505211734/http://www.bseinquiry.gov.uk/files/sc/Seac07/tab03.pdf

***> TITLE: PATHOLOGICAL FEATURES OF CHRONIC WASTING DISEASE IN REINDEER AND DEMONSTRATION OF HORIZONTAL TRANSMISSION

https://www.ars.usda.gov/research/publications/publication/?seqNo115=328261

***> DECEMBER 2016 CDC EMERGING INFECTIOUS DISEASE JOURNAL CWD HORIZONTAL TRANSMISSION

http://wwwnc.cdc.gov/eid/article/22/12/16-0635_article

Using in vitro Prion replication for high sensitive detection of prions and prionlike proteins and for understanding mechanisms of transmission.

Claudio Soto Mitchell Center for Alzheimer's diseases and related Brain disorders, Department of Neurology, University of Texas Medical School at Houston.

Prion and prion-like proteins are misfolded protein aggregates with the ability to selfpropagate to spread disease between cells, organs and in some cases across individuals. I n T r a n s m i s s i b l e s p o n g i f o r m encephalopathies (TSEs), prions are mostly composed by a misfolded form of the prion protein (PrPSc), which propagates by transmitting its misfolding to the normal prion protein (PrPC). The availability of a procedure to replicate prions in the laboratory may be important to study the mechanism of prion and prion-like spreading and to develop high sensitive detection of small quantities of misfolded proteins in biological fluids, tissues and environmental samples. Protein Misfolding Cyclic Amplification (PMCA) is a simple, fast and efficient methodology to mimic prion replication in the test tube. PMCA is a platform technology that may enable amplification of any prion-like misfolded protein aggregating through a seeding/nucleation process. In TSEs, PMCA is able to detect the equivalent of one single molecule of infectious PrPSc and propagate prions that maintain high infectivity, strain properties and species specificity. Using PMCA we have been able to detect PrPSc in blood and urine of experimentally infected animals and humans affected by vCJD with high sensitivity and specificity. Recently, we have expanded the principles of PMCA to amplify amyloid-beta (Aβ) and alphasynuclein (α-syn) aggregates implicated in Alzheimer's and Parkinson's diseases, respectively. Experiments are ongoing to study the utility of this technology to detect Aβ and α-syn aggregates in samples of CSF and blood from patients affected by these diseases.

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***Recently, we have been using PMCA to study the role of environmental prion contamination on the horizontal spreading of TSEs. These experiments have focused on the study of the interaction of prions with plants and environmentally relevant surfaces. Our results show that plants (both leaves and roots) bind tightly to prions present in brain extracts and excreta (urine and feces) and retain even small quantities of PrPSc for long periods of time. Strikingly, ingestion of prioncontaminated leaves and roots produced disease with a 100% attack rate and an incubation period not substantially longer than feeding animals directly with scrapie brain homogenate. Furthermore, plants can uptake prions from contaminated soil and transport them to different parts of the plant tissue (stem and leaves). Similarly, prions bind tightly to a variety of environmentally relevant surfaces, including stones, wood, metals, plastic, glass, cement, etc. Prion contaminated surfaces efficiently transmit prion disease when these materials were directly injected into the brain of animals and strikingly when the contaminated surfaces were just placed in the animal cage. These findings demonstrate that environmental materials can efficiently bind infectious prions and act as carriers of infectivity, suggesting that they may play an important role in the horizontal transmission of the disease.

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Since its invention 13 years ago, PMCA has helped to answer fundamental questions of prion propagation and has broad applications in research areas including the food industry, blood bank safety and human and veterinary disease diagnosis.

https://prion2015.files.wordpress.com/2015/05/programguide1.pdf

New studies on the heat resistance of hamster-adapted scrapie agent: Threshold survival after ashing at 600°C suggests an inorganic template of replication

http://www.pnas.org/content/97/7/3418.full

Prion Infected Meat-and-Bone Meal Is Still Infectious after Biodiesel Production

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2493038/

Detection of protease-resistant cervid prion protein in water from a CWD-endemic area

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2802782/pdf/prion0303_0171.pdf

A Quantitative Assessment of the Amount of Prion Diverted to Category 1 Materials and Wastewater During Processing

http://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.2012.01922.x/abstract

Rapid assessment of bovine spongiform encephalopathy prion inactivation by heat treatment in yellow grease produced in the industrial manufacturing process of meat and bone meals

http://transmissiblespongiformencephalopathy.blogspot.com/2013/07/rapid-assessment-of-bovine-spongiform.html

PPo4-4:

Survival and Limited Spread of TSE Infectivity after Burial

http://www.neuroprion.org/resources/pdf_docs/conferences/prion2010/prion_2010_programme.pdf

http://chronic-wasting-disease.blogspot.com/2010/09/cwd-prion-2010.html

WEDNESDAY, MARCH 28, 2018

The executioner in Nordfjella and Chronic Wasting Disease CWD TSE Prion Skrantesjuke

http://chronic-wasting-disease.blogspot.com/2018/03/the-executioner-in-nordfjella-and.html

8. Clarifying the consequences of poor quality and missing post-mortem surveillance samples on herd status, as well as describing options States may consider as substitutions for these samples. Making the Program Standards language consistent with that of the regulations by requiring CWD testing of all mortalities from certified herds, including at slaughter and on hunt facilities when animals remain under the same ownership. Streamlining the description of fencing characteristics considered necessary to prevent ingress and egress of cervids for HCP-enrolled herds. Eliminating Appendix II: Fencing Requirements and References, and making these scientific references available upon request...

GAME FARM INDUSTRY MUST BE MADE TO COMPLY WITH ALL REGULATIONS, IF FENCING IS NOT MAINTAINED, FIRST OFFENCE should be call to revoke permit for game farming, as with 1st escapee, FIRST OFFENCE should be call to revoke permit for game farming...see;

”The occurrence of CWD must be viewed against the contest of the locations in which it occurred. It was an incidental and unwelcome complication of the respective wildlife research programmes. Despite it’s subsequent recognition as a new disease of cervids, therefore justifying direct investigation, no specific research funding was forthcoming. The USDA veiwed it as a wildlife problem and consequently not their province!” page 26.

https://web.archive.org/web/20060307063531/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

SHOOTING PENS (HIGH/LOW FENCE), CAPTIVE CERVID FARMING, BREEDING, SPERM MILLS, ANTLER MILLS, URINE MILLS, a petri dish for cwd tse prion disease...

*** Spraker suggested an interesting explanation for the occurrence of CWD. The deer pens at the Foot Hills Campus were built some 30-40 years ago by a Dr. Bob Davis. At or abut that time, allegedly, some scrapie work was conducted at this site. When deer were introduced to the pens they occupied ground that had previously been occupied by sheep.

https://web.archive.org/web/20170126060744/http://collections.europarchive.org/tna/20080102193705/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

IN CONFIDENCE, REPORT OF AN UNCONVENTIONAL SLOW VIRUS DISEASE IN ANIMALS IN THE USA 1989

http://webarchive.nationalarchives.gov.uk/20080102193705/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

ALSO, one of the most, if not the most top TSE Prion God in Science today is Professor Adriano Aguzzi, and he recently commented on just this, on a cwd post on my facebook page August 20 at 1:44pm, quote;

"it pains me to no end to even comtemplate the possibility, but it seems entirely plausible that CWD originated from scientist-made spread of scrapie from sheep to deer in the colorado research facility. If true, a terrible burden for those involved." August 20 at 1:44pm ...end

Sunday, January 06, 2013

USDA TO PGC ONCE CAPTIVES ESCAPE

*** "it's no longer its business."

http://chronic-wasting-disease.blogspot.com/2013/01/usda-to-pgc-once-captives-escape-its-no.html

deer farmers and fences and cwd tse prion aka mad deer elk disease

12. The Brakkes depopulated the Hunting Preserve, as specified in the Agreement, from September 10, 2012 to January 31, 2013. As part of this effort, the Brakkes, the staff and their customers killed 199 captive deer and nine captive elk. The DNR obtained 170 CWD samples. (Samples were not taken from fawns and one adult female who was killed in a manner that made sampling impossible.) Of these 199 deer, two additional adult male deer tested positive for CWD. Information provided by the Brakkes confirmed that these two additional deer originated from the Brakke Breeding Facility.

13. DNR installed, with the Brakke's permission, an interior electric fence on October 1 and 2, 2012.

14. The Brakkes cleaned and disinfected, under DNR supervision, the feeders and ground surrounding the feeders on April 5, 2013.

15. On April 26, 2013, the Brakkes hand-delivered a notice to the DNR's Chief of Law Enforcement Bureau, notifying the DNR that they would no longer operate a hunting preserve on the Quarantined Premises. The Brakkes did not reveal any plans to remove the fence around the Quarantined Premises or to remove the gates to and from the Quarantined Premises in this April 26, 2013 letter.

16. On June 3, 2013, DNR became aware that sections of the exterior fence surrounding the Quarantined Premises had been removed and that some, if not all, of the exterior gates to and from the Quarantined Premises were open.

17. On June 4, 2013, DNR received reports from the public in the area that four wild deer were observed inside the Quarantined Premises.

18. On June 5, 2013, DNR conducted a fence inspection, after gaining approval from surrounding landowners, and confirmed that the fenced had been cut or removed in at least four separate locations; that the fence had degraded and was failing to maintain the enclosure around the Quarantined Premises in at least one area; that at least three gates had been opened; and that deer tracks were visible in and around one of the open areas in the sand on both sides of the fence, evidencing movement of deer into the Quarantined Premises.

IV. CONCLUSIONS OF LAW

snip...

http://www.iowadnr.gov/Portals/idnr/uploads/Hunting/060613_consent_order.pdf

http://chronic-wasting-disease.blogspot.com/2013/08/iowa-dnr-emergency-consent-order-in.html

#10 This is What CWD Looks Like on Our Farm:

post #10 G O Whitetails G O Whitetails Senior Member

Posted August 03 2014 - 02:51 PM

I think we should do what they did at Wind Cave. Let's just take the fence down and let them loose. Gary

Whitetail Sanctuary, IowaMike, sdbigbucks and 2 others like this

#11 This is What CWD Looks Like on Our Farm: post #11 Bell Bell Senior Member

Posted August 03 2014 - 03:04 PM Gary

That would bring the news. If 100 deer farmers showed up and started taking the fence down. I think another great idea would be to take all the staples out but one then as soon as they fired the first killing shot with all the media present let it go. They will knock that last staple out.

Rhonda Brakke and Deer MGR 200 like this

Jonathan Bell & Jerry Bell Hurricane Creek Whitetails Greensburg, Indiana

http://www.deerforums.org/

https://chronic-wasting-disease.blogspot.com/2014/08/iowa-brakkes-cwd-infected-game-farm-et.html

436 Deer Have Escaped From Farms to Wild Tuesday, 18 March 2003 00:00

As the DNR prepared to hand over authority for overseeing game farms to the agriculture department, it sent 209 conservation wardens to 550 farms to collect information, attempt to pinpoint the source of the disease and to learn whether other deer had been exposed to it.

The audit found that most farms were in compliance, but the DNR found many violations and instances of poor record keeping. Also in numerous instances, fences did not stop wild and captive deer from intermingling.

see;

436 Deer Have Escaped From Farms to Wild

Tuesday, 18 March 2003 00:00

http://cwd-info.org/436-deer-have-escaped-from-farms-to-wild/

TUESDAY, JULY 14, 2015

TWO Escaped Captive Deer on the loose in Eau Claire County Wisconsin CWD postive farm Yellow ear tag

http://chronic-wasting-disease.blogspot.com/2015/07/two-escaped-captive-deer-on-loose-in.html

WEDNESDAY, FEBRUARY 10, 2016

Wisconsin Two deer that escaped farm had chronic wasting disease CWD

http://chronic-wasting-disease.blogspot.com/2016/02/wisconsin-two-deer-that-escaped-farm.html

FRIDAY, FEBRUARY 03, 2012

Wisconsin Farm-Raised Deer Farms and CWD there from 2012 report Singeltary et al

http://chronic-wasting-disease.blogspot.com/2012/02/wisconsin-farm-raised-deer-farms-and.html

Monday, January 16, 2012

9 GAME FARMS IN WISCONSIN TEST POSITIVE FOR CWD

http://chronic-wasting-disease.blogspot.com/2012/01/9-game-farms-in-wisconsin-test-positive.html

see full text and more here ;

http://chronic-wasting-disease.blogspot.com/2011/12/chronic-wasting-disease-cwd-wisconsin.html

Saturday, March 10, 2012

CWD, GAME FARMS, urine, feces, soil, lichens, and banned mad cow protein feed CUSTOM MADE for deer and elk

http://chronic-wasting-disease.blogspot.com/2012/03/cwd-game-farms-urine-feces-soil-lichens.html

Thursday, May 31, 2012

CHRONIC WASTING DISEASE CWD PRION2012 Aerosol, Inhalation transmission, Scrapie, cats, species barrier, burial, and more

http://chronic-wasting-disease.blogspot.com/2012/05/chronic-wasting-disease-cwd-prion2012.html

Thursday, February 09, 2012

50 GAME FARMS IN USA INFECTED WITH CHRONIC WASTING DISEASE

http://chronic-wasting-disease.blogspot.com/2012/02/50-game-farms-to-date-in-usa-infected.html

early days and game farms

http://www.mad-cow.org/99feb_cwd_special.html#fff

http://www.mad-cow.org/99feb_cwd_special.html

https://www.hcn.org/issues/171/5518

https://www.hcn.org/issues/189/10031

SHOCKING ONES CONSCIENCE VIDEO

*** Danger of Canned Hunting Indiana Wildlife VIDEO ***

https://vimeo.com/5680646

http://vimeo.com/5680646

https://www.indystar.com/videos/news/investigations/2014/03/28/6955651/

Has the infection already spread?

The Star Tribune reported this week that the fence around the Winona County deer farm had been sagging for years, and that BAH inspectors failed to identify and correct the problem. If that is true, it means that captive deer could have escaped or wild deer could have gotten into the enclosure.

In an interview, Glaser stated that the tree fall that damaged the fence had not yet occurred when BAH inspectors last visited the farm, in October 2017. She added, “We do not have any records of escapes from this herd, and I believe [the farm owner] that that hasn’t happened.”

‘‘I read the [Star Tribune] article, and how the fence was out of compliance,” Cornicelli said. “Does that increase risk? It kind of does.”

http://www.winonapost.com/Article/ArticleID/58405/Chronic-wasting-disease-in-Winona-County

SATURDAY, MARCH 03, 2018

Minnesota CWD All seven of the remaining white-tailed deer on farm Positive Samples positive for CWD from depopulated deer farm

http://chronic-wasting-disease.blogspot.com/2018/03/minnesota-cwd-all-seven-of-remaining.html

FOR THE game farm industry, and their constituents, to continue to believe that they are _NOT_, and or insinuate that they have _NEVER_ been part of the CWD TSE Prion problem, will only continue to help spread cwd. the game farming industry, from the shooting pens, to the urine mills, the antler mills, the sperm mills, velvet mills, small farms, to large ranches, are not the only problem, but it is painfully obvious that they have been part of the problem for decades and decades, just spreading it around, as with transportation and or exportation and or importation of cervids from game farming industry, and have been proven to spread cwd. no one need to look any further than South Korea blunder. for the game farming industry to continue down this blame game road, refusing to accept any responsibility for cwd tse prion, and to continue to work to dismantle CWD TSE Prion regulations, should be cause to dismantle and ban all game farms across the Nation, or we risk losing it all in the wild...

9. Consolidating the discussion of carcass disposal options in the main body of the Program Standards and deleting Appendix V: Carcass Disposal.

YOU better work to solve this carcass disposal options, or once again, you risk spreading this cwd tse prion. incineration is the best option imo. see;

THURSDAY, MARCH 08, 2018

Cervid, Wild Hogs, Coyotes, Wolves, Cats, Rodents, Gut Piles and Scavengers, A Potential Risk as Regards Disease Transmission CWD TSE Prion

http://chronic-wasting-disease.blogspot.com/2018/03/cervid-wild-hogs-coyotes-wolves-cats.html

SATURDAY, DECEMBER 12, 2015

NOTICE: Environmental Impact Statement on Large Livestock Carcasses TSE Prion REPORT December 14, 2015

http://transmissiblespongiformencephalopathy.blogspot.com/2015/12/notice-environmental-impact-statement.html

Your comment was submitted successfully!. View all documents and comments in this Docket Success! You will now be commenting directly on:

The Animal and Plant Health Inspection Service (APHIS) Notice: Environmental Impact Statements; Availability, etc.: Animal Carcass Management

FRIDAY, AUGUST 14, 2015

Carcass Management During a Mass Animal Health Emergency Draft Programmatic Environmental Impact

Statement—August 2015

http://transmissiblespongiformencephalopathy.blogspot.com/2015/08/carcass-management-during-mass-animal.html

Uploaded File(s)(Optional) No files uploaded [Docket No. APHIS-2013-0044] COMMENT SUBMISSION TERRY S. SINGELTARY SR..pdf: success

end...

November 2013...TSS

Singeltary Submission Environmental Impact Statements; Availability, etc.: Animal Carcass Management [Docket No. APHIS-2013-0044]

Sunday, November 3, 2013

Environmental Impact Statements; Availability, etc.: Animal Carcass Management [Docket No. APHIS-2013-0044]

http://transmissiblespongiformencephalopathy.blogspot.com/2013/11/environmental-impact-statements.html

10. ZOONOTIC, ZOONOSIS, CHRONIC WASTING DISEASE CWD TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHY TSE PRION AKA MAD DEER ELK DISEASE IN HUMANS, has it already happened, that should be the question...

"In particular the US data do not clearly exclude the possibility of human (sporadic or familial) TSE development due to consumption of venison. The Working Group thus recognizes a potential risk to consumers if a TSE would be present in European cervids."

Scientific opinion on chronic wasting disease (II)

EFSA Panel on Biological Hazards (BIOHAZ) Antonia Ricci Ana Allende Declan Bolton Marianne Chemaly Robert Davies Pablo Salvador Fernández Escámez ... See all authors

First published: 17 January 2018 https://doi.org/10.2903/j.efsa.2018.5132 ;

also, see; 8. Even though human TSE-exposure risk through consumption of game from European cervids can be assumed to be minor, if at all existing, no final conclusion can be drawn due to the overall lack of scientific data. In particular the US data do not clearly exclude the possibility of human (sporadic or familial) TSE development due to consumption of venison. The Working Group thus recognizes a potential risk to consumers if a TSE would be present in European cervids. It might be prudent considering appropriate measures to reduce such a risk, e.g. excluding tissues such as CNS and lymphoid tissues from the human food chain, which would greatly reduce any potential risk for consumers. However, it is stressed that currently, no data regarding a risk of TSE infections from cervid products are available.

snip...

The tissue distribution of infectivity in CWD-infected cervids is now known to extend beyond CNS and lymphoid

tissues. While the removal of these specific tissues from the food chain would reduce human dietary exposure to infectivity, exclusion from the food chain of the whole carcass of any infected animal would be required to eliminate human dietary exposure.

https://efsa.onlinelibrary.wiley.com/doi/full/10.2903/j.efsa.2018.5132

zoonosis zoonotic cervid tse prion cwd to humans, preparing for the storm

An alternative to modeling the species barrier is the cell-free conversion assay which points to CWD as the animal prion disease with the greatest zoonotic potential, after (and very much less than) BSE.116

https://www.tandfonline.com/doi/pdf/10.4161/pri.29237

***> However, to date, no CWD infections have been reported in people.

key word here is 'reported'. science has shown that CWD in humans will look like sporadic CJD. SO, how can one assume that CWD has not already transmitted to humans? they can't, and it's as simple as that. from all recorded science to date, CWD has already transmitted to humans, and it's being misdiagnosed as sporadic CJD. ...terry

LOOKING FOR CWD IN HUMANS AS nvCJD or as an ATYPICAL CJD, LOOKING IN ALL THE WRONG PLACES $$$

*** These results would seem to suggest that CWD does indeed have zoonotic potential, at least as judged by the compatibility of CWD prions and their human PrPC target. Furthermore, extrapolation from this simple in vitro assay suggests that if zoonotic CWD occurred, it would most likely effect those of the PRNP codon 129-MM genotype and that the PrPres type would be similar to that found in the most common subtype of sCJD (MM1).***

http://www.tandfonline.com/doi/full/10.4161/pri.28124?src=recsys

http://www.tandfonline.com/doi/pdf/10.4161/pri.28124?needAccess=true

https://wwwnc.cdc.gov/eid/article/20/1/13-0858_article

To date there is no direct evidence that CWD has been or can be transmitted from animals to humans.

However, initial findings from a laboratory research project funded by the Alberta Prion Research Institute (APRI) and Alberta Livestock Meat Agency (ALMA), and led by a Canadian Food Inspection Agency (CFIA) scientist indicate that CWD has been transmitted to cynomolgus macaques (the non-human primate species most closely related to humans that may be used in research), through both the intracranial and oral routes of exposure.

Both infected brain and muscle tissues were found to transmit disease.

Health Canada's Health Products and Food Branch (HPFB) was asked to consider the impact of these findings on the Branch's current position on CWD in health products and foods.

Summary and Recommendation:

snip...

Health Portfolio partners were recently made aware of initial findings from a research project led by a CFIA scientist that have demonstrated that cynomolgus macaques can be infected via intracranial exposure and oral gavage with CWD infected muscle.

These findings suggest that CWD, under specific experimental conditions, has the potential to cross the human species barrier, including by enteral feeding of CWD infected muscle.

https://www.thetyee.ca/Documents/2017/06/24/Risk-Advisory-Opinion-CWD-2017.pdf

*** WDA 2016 NEW YORK ***

We found that CWD adapts to a new host more readily than BSE and that human PrP was unexpectedly prone to misfolding by CWD prions.

In addition, we investigated the role of specific regions of the bovine, deer and human PrP protein in resistance to conversion by prions from another species.

***We have concluded that the human protein has a region that confers unusual susceptibility to conversion by CWD prions.

Student Presentations Session 2

The species barriers and public health threat of CWD and BSE prions

Ms. Kristen Davenport1, Dr. Davin Henderson1, Dr. Candace Mathiason1, Dr. Edward Hoover1 1Colorado State University

Chronic wasting disease (CWD) is spreading rapidly through cervid populations in the USA. Bovine spongiform encephalopathy (BSE, mad cow disease) arose in the 1980s because cattle were fed recycled animal protein.

These and other prion diseases are caused by abnormal folding of the normal prion protein (PrP) into a disease causing form (PrPd), which is pathogenic to nervous system cells and can cause subsequent PrP to misfold. CWD spreads among cervids very efficiently, but it has not yet infected humans. On the other hand, BSE was spread only when cattle consumed infected bovine or ovine tissue, but did infect humans and other species.

The objective of this research is to understand the role of PrP structure in cross-species infection by CWD and BSE. To study the propensity of each species' PrP to be induced to misfold by the presence of PrPd from verious species, we have used an in vitro system that permits detection of PrPd in real-time.

We measured the conversion efficiency of various combinations of PrPd seeds and PrP substrate combinations.

We observed the cross-species behavior of CWD and BSE, in addition to feline-adapted CWD and BSE. We found that CWD adapts to a new host more readily than BSE and that human PrP was unexpectedly prone to misfolding by CWD prions. In addition, we investigated the role of specific regions of the bovine, deer and human PrP protein in resistance to conversion by prions from another species.

***We have concluded that the human protein has a region that confers unusual susceptibility to conversion by CWD prions. CWD is unique among prion diseases in its rapid spread in natural populations. BSE prions are essentially unaltered upon passage to a new species, while CWD adapts to the new species. This adaptation has consequences for surveillance of humans exposed to CWD. Wildlife Disease Risk Communication Research Contributes to Wildlife Trust Administration Exploring perceptions about chronic wasting disease risks among wildlife and agriculture professionals and stakeholders

http://www.wda2016.org/uploads/5/8/6/1/58613359/wda_2016_conference_proceedings_low_res.pdf

PRION 2016 TOKYO Zoonotic Potential of CWD Prions:

An Update

Chronic wasting disease (CWD) is a widespread and highly transmissible prion disease in free-ranging and captive cervid species in North America. The zoonotic potential of CWD prions is a serious public health concern, but the susceptibility of human CNS and peripheral organs to CWD prions remains largely unresolved. We reported earlier that peripheral and CNS infections were detected in transgenic mice expressing human PrP129M or PrP129V. Here we will present an update on this project, including evidence for strain dependence and influence of cervid PrP polymorphisms on CWD zoonosis as well as the characteristics of experimental human

CWD prions.

PRION 2016 TOKYO In Conjunction with Asia Pacific Prion Symposium 2016 PRION 2016 Tokyo Prion 2016

http://prion2016.org/dl/newsletter_03.pdf

Cervid to human prion transmission

Kong, Qingzhong Case Western Reserve University, Cleveland, OH, United States

Abstract

Prion disease is transmissible and invariably fatal. Chronic wasting disease (CWD) is the prion disease affecting deer, elk and moose, and it is a widespread and expanding epidemic affecting 22 US States and 2 Canadian provinces so far.

CWD poses the most serious zoonotic prion transmission risks in North America because of huge venison consumption (>6 million deer/elk hunted and consumed annually in the USA alone), significant prion infectivity in muscles and other tissues/fluids from CWD-affected cervids, and usually high levels of individual exposure to CWD resulting from consumption of the affected animal among often just family and friends.

However, we still do not know whether CWD prions can infect humans in the brain or peripheral tissues or whether clinical/asymptomatic CWD zoonosis has already occurred, and we have no essays to reliably detect CWD infection in humans. We hypothesize that:

(1) The classic CWD prion strain can infect humans at low levels in the brain and peripheral lymphoid tissues;

(2) The cervid-to-human transmission barrier is dependent on the cervid prion strain and influenced by the host (human) prion protein (PrP) primary sequence;

(3) Reliable essays can be established to detect CWD infection in humans; and

***(4) CWD transmission to humans has already occurred.

We will test these hypotheses in 4 Aims using transgenic (Tg) mouse models and complementary in vitro approaches.

Aim 1 will prove that the classical CWD strain may infect humans in brain or peripheral lymphoid tissues at low levels by conducting systemic bioassays in a set of "humanized" Tg mouse lines expressing common human PrP variants using a number of CWD isolates at varying doses and routes. Experimental "human CWD" samples will also be generated for Aim 3.

Aim 2 will test the hypothesis that the cervid-to-human prion transmission barrier is dependent on prion strain and influenced by the host (human) PrP sequence by examining and comparing the transmission efficiency and phenotypes of several atypical/unusual CWD isolates/strains as well as a few prion strains from other species that have adapted to cervid PrP sequence, utilizing the same panel of humanized Tg mouse lines as in Aim 1.

Aim 3 will establish reliable essays for detection and surveillance of CWD infection in humans by examining in details the clinical, pathological, biochemical and in vitro seeding properties of existing and future experimental "human CWD" samples generated from Aims 1-2 and compare them with those of common sporadic human Creutzfeldt-Jakob disease (sCJD) prions.

Aim 4 will attempt to detect clinical CWD-affected human cases by examining a significant number of brain samples from prion-affected human subjects in the USA and Canada who have consumed venison from CWD-endemic areas utilizing the criteria and essays established in Aim 3.

The findings from this proposal will greatly advance our understandings on the potential and characteristics of cervid prion transmission in humans, establish reliable essays for CWD zoonosis and potentially discover the first case(s) of CWD infection in humans. Public Health Relevance There are significant and increasing human

exposure to cervid prions because chronic wasting disease (CWD, a widespread and highly infectious prion disease among deer and elk in North America) continues spreading and consumption of venison remains popular, but our understanding on cervid-to-human prion transmission is still very limited, raising public health concerns.

This proposal aims to define the zoonotic risks of cervid prions and set up and apply essays to detect CWD zoonosis using mouse models and in vitro methods. The findings will greatly expand our knowledge on the potentials and characteristics of cervid prion transmission in humans, establish reliable essays for such infections and may discover the first case(s) of CWD infection in humans.

http://grantome.com/grant/NIH/R01-NS088604-01A1

Prion Infectivity in Fat of Deer with Chronic Wasting Disease▿

Brent Race#, Kimberly Meade-White#, Richard Race and Bruce Chesebro* + Author Affiliations

In mice, prion infectivity was recently detected in fat. Since ruminant fat is consumed by humans and fed to animals, we determined infectivity titers in fat from two CWD-infected deer. Deer fat devoid of muscle contained low levels of CWD infectivity and might be a risk factor for prion infection of other species.

http://jvi.asm.org/content/83/18/9608.full

Prions in Skeletal Muscles of Deer with Chronic Wasting Disease

Here bioassays in transgenic mice expressing cervid prion protein revealed the presence of infectious prions in skeletal muscles of CWD-infected deer, demonstrating that humans consuming or handling meat from CWD-infected deer are at risk to prion exposure.

http://science.sciencemag.org/content/311/5764/1117.long

Chronic Wasting Disease and Potential Transmission to Humans

Ermias D. Belay,* Ryan A. Maddox,* Elizabeth S. Williams,† Michael W. Miller,‡ Pierluigi Gambetti,§ and Lawrence B. Schonberger*

Chronic wasting disease (CWD) of deer and elk is endemic in a tri-corner area of Colorado, Wyoming, and Nebraska, and new foci of CWD have been detected in other parts of the United States. Although detection in some areas may be related to increased surveillance, introduction of CWD due to translocation or natural migration of animals may account for some new foci of infection. Increasing spread of CWD has raised concerns about the potential for increasing human exposure to the CWD agent. The foodborne transmission of bovine spongiform encephalopathy to humans indicates that the species barrier may not completely protect humans from animal prion diseases. Conversion of human prion protein by CWDassociated prions has been demonstrated in an in vitro cellfree experiment, but limited investigations have not identified strong evidence for CWD transmission to humans. More epidemiologic and laboratory studies are needed to monitor the possibility of such transmissions.

https://wwwnc.cdc.gov/eid/article/10/6/pdfs/03-1082.pdf

*** now, let's see what the authors said about this casual link, personal communications years ago, and then the latest on the zoonotic potential from CWD to humans from the TOKYO PRION 2016 CONFERENCE.

see where it is stated NO STRONG evidence. so, does this mean there IS casual evidence ???? "Our conclusion stating that we found no strong evidence of CWD transmission to humans"

From: TSS (216-119-163-189.ipset45.wt.net)

Subject: CWD aka MAD DEER/ELK TO HUMANS ???

Date: September 30, 2002 at 7:06 am PST

From: "Belay, Ermias"

To: Cc: "Race, Richard (NIH)" ; ; "Belay, Ermias"

Sent: Monday, September 30, 2002 9:22 AM

Subject: RE: TO CDC AND NIH - PUB MED- 3 MORE DEATHS - CWD - YOUNG HUNTERS

Dear Sir/Madam,

In the Archives of Neurology you quoted (the abstract of which was attached to your email), we did not say CWD in humans will present like variant CJD. That assumption would be wrong. I encourage you to read the whole article and call me if you have questions or need more clarification (phone: 404-639-3091). Also, we do not claim that "no-one has ever been infected with prion disease from eating venison." Our conclusion stating that we found no strong evidence of CWD transmission to humans in the article you quoted or in any other forum is limited to the patients we investigated.

Ermias Belay, M.D. Centers for Disease Control and Prevention

-----Original Message-----

From: Sent: Sunday, September 29, 2002 10:15 AM

To: rr26k@nih.gov; rrace@niaid.nih.gov; ebb8@CDC.GOV

Subject: TO CDC AND NIH - PUB MED- 3 MORE DEATHS - CWD - YOUNG HUNTERS

Sunday, November 10, 2002 6:26 PM .....snip.....end.....TSS

Thursday, April 03, 2008

A prion disease of cervids: Chronic wasting disease 2008 1: Vet Res. 2008 Apr 3;39(4):41 A prion disease of cervids: Chronic wasting disease Sigurdson CJ.

snip...

*** twenty-seven CJD patients who regularly consumed venison were reported to the Surveillance Center***,

snip... full text ;

http://chronic-wasting-disease.blogspot.com/2008/04/prion-disease-of-cervids-chronic.html

I urge everyone to watch this video closely...terry

*** you can see video here and interview with Jeff's Mom, and scientist telling you to test everything and potential risk factors for humans ***

https://histodb11.usz.ch/Images/videos/video-004/video-004.html

Transmission Studies

Mule deer transmissions of CWD were by intracerebral inoculation and compared with natural cases {the following was written but with a single line marked through it "first passage (by this route)}...TSS

resulted in a more rapidly progressive clinical disease with repeated episodes of synocopy ending in coma. One control animal became affected, it is believed through contamination of inoculum (?saline). Further CWD transmissions were carried out by Dick Marsh into ferret, mink and squirrel monkey. Transmission occurred in ALL of these species with the shortest incubation period in the ferret.

snip...

https://web.archive.org/web/20090506002237/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

http://www.fsis.usda.gov/OPPDE/Comments/03-025IFA/03-025IFA-2.pdf

Transmissible Spongiform Encephalopathies

Spongiform Encephalopathy in Captive Wild ZOO BSE INQUIRY

https://web.archive.org/web/20090506001201/http://www.bseinquiry.gov.uk/files/mb/m09a/tab03.pdf

BSE INQUIRY

CJD9/10022

October 1994

Mr R.N. Elmhirst Chairman British Deer Farmers Association Holly Lodge Spencers Lane

BerksWell Coventry CV7 7BZ

Dear Mr Elmhirst,

CREUTZFELDT-JAKOB DISEASE (CJD) SURVEILLANCE UNIT REPORT

Thank you for your recent letter concerning the publication of the third annual report from the CJD Surveillance Unit. I am sorry that you are dissatisfied with the way in which this report was published.

The Surveillance Unit is a completely independant outside body and the Department of Health is committed to publishing their reports as soon as they become available. In the circumstances it is not the practice to circulate the report for comment since the findings of the report would not be amended. In future we can ensure that the British Deer Farmers Association receives a copy of the report in advance of publication.

The Chief Medical Officer has undertaken to keep the public fully informed of the results of any research in respect of CJD. This report was entirely the work of the unit and was produced completely independantly of the the

Department.

The statistical results reqarding the consumption of venison was put into perspective in the body of the report and was not mentioned at all in the press release. Media attention regarding this report was low key but gave a realistic presentation of the statistical findings of the Unit. This approach to publication was successful in that consumption of venison was highlighted only once by the media ie. in the News at one television proqramme.

I believe that a further statement about the report, or indeed statistical links between CJD and consumption of venison, would increase, and quite possibly give damaging credence, to the whole issue. From the low key media reports of which I am aware it seems unlikely that venison consumption will suffer adversely, if at all.

http://web.archive.org/web/20030511010117/http://www.bseinquiry.gov.uk/files/yb/1994/10/00003001.pdf

*** The association between venison eating and risk of CJD shows similar pattern, with regular venison eating associated with a 9 FOLD INCREASE IN RISK OF CJD (p = 0.04). ***

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*** The association between venison eating and risk of CJD shows similar pattern, with regular venison eating associated with a 9 FOLD INCREASE IN RISK OF CJD (p = 0.04). ***

There is some evidence that risk of CJD INCREASES WITH INCREASING FREQUENCY OF LAMB EATING (p = 0.02).

The evidence for such an association between beef eating and CJD is weaker (p = 0.14). When only controls for whom a relative was interviewed are included, this evidence becomes a little STRONGER (p = 0.08).

snip...

It was found that when veal was included in the model with another exposure, the association between veal and CJD remained statistically significant (p = < 0.05 for all exposures), while the other exposures ceased to be statistically significant (p = > 0.05).

snip...

In conclusion, an analysis of dietary histories revealed statistical associations between various meats/animal products and INCREASED RISK OF CJD. When some account was taken of possible confounding, the association between VEAL EATING AND RISK OF CJD EMERGED AS THE STRONGEST OF THESE ASSOCIATIONS STATISTICALLY. ...

snip...

In the study in the USA, a range of foodstuffs were associated with an increased risk of CJD, including liver consumption which was associated with an apparent SIX-FOLD INCREASE IN THE RISK OF CJD. By comparing the data from 3 studies in relation to this particular dietary factor, the risk of liver consumption became non-significant with an odds ratio of 1.2 (PERSONAL COMMUNICATION, PROFESSOR A. HOFMAN. ERASMUS UNIVERSITY, ROTTERDAM). (???...TSS)

snip...see full report ;

https://web.archive.org/web/20170126073306/http://collections..europarchive.org/tna/20090505194948/http://bseinquiry.gov.uk/files/yb/1994/08/00004001.pdf

TUESDAY, SEPTEMBER 12, 2017

CDC Now Recommends Strongly consider having the deer or elk tested for CWD before you eat the meat

http://chronic-wasting-disease.blogspot.com/2017/09/cdc-now-recommends-strongly-consider.html

SATURDAY, JANUARY 27, 2018

CDC CHRONIC WASTING DISEASE CWD TSE PRION UPDATE REPORT USA JANUARY 2018

http://chronic-wasting-disease.blogspot.com/2018/01/cdc-chronic-wasting-disease-cwd-tse.html

Subject: CDC CHRONIC WASTING DISEASE CWD TSE PRION UPDATE REPORT USA JANUARY 2018

CHRONIC WASTING DISEASE CWD TSE PRION IS THE USA AND NORTH AMERICA'S MAD COW DISEASE.

THE USDA INC ET AL WORKED VERY HARD CONCEALING BSE TSE PRION IN CATTLE. they almost succeeded $$$

BUT CWD TSE PRION IN CERVIDS IS A DIFFERENT BEAST, THE COVER UP THERE, USDA INC COULD NOT CONTAIN.

SPORADIC CJD IS 85%+ OF ALL HUMAN TSE PRION DISEASE.

SPORADIC CJD HAS NOW BEEN LINKED TO TYPICAL AND ATYPICAL BSE, SCRAPIE, AND CWD.

SPORADIC/SPONTANEOUS TSE HAS NEVER BEEN PROVEN.

Moreover, sporadic disease has never been observed in breeding colonies or primate research laboratories, most notably among hundreds of animals over several decades of study at the National Institutes of Health25, and in nearly twenty older animals continuously housed in our own facility.

https://www.nature.com/articles/srep11573

CDC CWD TSE PRION UPDATE USA JANUARY 2018

As of January 2018, CWD in free-ranging deer, elk and/or moose has been reported in at least 22 states in the continental United States, as well as two provinces in Canada. In addition, CWD has been reported in reindeer and moose in Norway, and a small number of imported cases have been reported in South Korea. The disease has also been found in farmed deer and elk. CWD was first identified in captive deer in the late 1960s in Colorado and in wild deer in 1981. By the 1990s, it had been reported in surrounding areas in northern Colorado and southern Wyoming. Since 2000, the area known to be affected by CWD in free-ranging animals has increased to at least 22 states, including states in the Midwest, Southwest, and limited areas on the East Coast.. It is possible that CWD may also occur in other states without strong animal surveillance systems, but that cases haven't been detected yet. Once CWD is established in an area, the risk can remain for a long time in the environment. The affected areas are likely to continue to expand. Nationwide, the overall occurrence of CWD in free-ranging deer and elk is relatively low. However, in several locations where the disease is established, infection rates may exceed 10 percent (1 in 10), and localized infection rates of more than 25 percent (1 in 4) have been reported. The infection rates among some captive deer can be much higher, with a rate of 79% (nearly 4 in 5) reported from at least one captive herd. As of January 2018, there were 186 counties in 22 states with reported CWD in free-ranging cervids.

Chronic Wasting Disease Among Free-Ranging Cervids by County, United States, January 2018

snip....

https://www.cdc.gov/prions/cwd/occurrence.html

*** 2017-2018 CWD TSE Prion UPDATE

https://www.cdc.gov/prions/cwd/occurrence.html

Prion 2017 Conference Abstracts CWD

2017 PRION CONFERENCE

First evidence of intracranial and peroral transmission of Chronic Wasting Disease (CWD) into Cynomolgus macaques: a work in progress

Stefanie Czub1, Walter Schulz-Schaeffer2, Christiane Stahl-Hennig3, Michael Beekes4, Hermann Schaetzl5 and Dirk Motzkus6 1

University of Calgary Faculty of Veterinary Medicine/Canadian Food Inspection Agency; 2Universitatsklinikum des Saarlandes und Medizinische Fakultat der Universitat des Saarlandes; 3 Deutsches Primaten Zentrum/Goettingen; 4 Robert-Koch-Institut Berlin; 5 University of Calgary Faculty of Veterinary Medicine; 6 presently: Boehringer Ingelheim Veterinary Research Center; previously: Deutsches Primaten Zentrum/Goettingen

This is a progress report of a project which started in 2009. 21 cynomolgus macaques were challenged with characterized CWD material from white-tailed deer (WTD) or elk by intracerebral (ic), oral, and skin exposure routes. Additional blood transfusion experiments are supposed to assess the CWD contamination risk of human blood product. Challenge materials originated from symptomatic cervids for ic, skin scarification and partially per oral routes (WTD brain). Challenge material for feeding of muscle derived from preclinical WTD and from preclinical macaques for blood transfusion experiments. We have confirmed that the CWD challenge material contained at least two different CWD agents (brain material) as well as CWD prions in muscle-associated nerves.

Here we present first data on a group of animals either challenged ic with steel wires or per orally and sacrificed with incubation times ranging from 4.5 to 6.9 years at postmortem. Three animals displayed signs of mild clinical disease, including anxiety, apathy, ataxia and/or tremor. In four animals wasting was observed, two of those had confirmed diabetes. All animals have variable signs of prion neuropathology in spinal cords and brains and by supersensitive IHC, reaction was detected in spinal cord segments of all animals. Protein misfolding cyclic amplification (PMCA), real-time quaking-induced conversion (RT-QuiC) and PET-blot assays to further substantiate these findings are on the way, as well as bioassays in bank voles and transgenic mice.

At present, a total of 10 animals are sacrificed and read-outs are ongoing. Preclinical incubation of the remaining macaques covers a range from 6.4 to 7.10 years. Based on the species barrier and an incubation time of > 5 years for BSE in macaques and about 10 years for scrapie in macaques, we expected an onset of clinical disease beyond 6 years post inoculation.

PRION 2017 DECIPHERING NEURODEGENERATIVE DISORDERS

Subject: PRION 2017 CONFERENCE DECIPHERING NEURODEGENERATIVE DISORDERS VIDEO

PRION 2017 CONFERENCE DECIPHERING NEURODEGENERATIVE DISORDERS

*** PRION 2017 CONFERENCE VIDEO

https://www.youtube.com/embed/Vtt1kAVDhDQ

http://prion2017.org/programme/

TUESDAY, JUNE 13, 2017

PRION 2017 CONFERENCE ABSTRACT

First evidence of intracranial and peroral transmission of Chronic Wasting Disease (CWD) into Cynomolgus macaques: a work in progress

http://chronic-wasting-disease.blogspot.com/2017/06/prion-2017-conference-abstract-first.html

*** The potential impact of prion diseases on human health was greatly magnified by the recognition that interspecies transfer of BSE to humans by beef ingestion resulted in vCJD. While changes in animal feed constituents and slaughter practices appear to have curtailed vCJD, there is concern that CWD of free-ranging deer and elk in the U.S. might also cross the species barrier. Thus, consuming venison could be a source of human prion disease. Whether BSE and CWD represent interspecies scrapie transfer or are newly arisen prion diseases is unknown. Therefore, the possibility of transmission of prion disease through other food animals cannot be ruled out. There is evidence that vCJD can be transmitted through blood transfusion. There is likely a pool of unknown size of asymptomatic individuals infected with vCJD, and there may be asymptomatic individuals infected with the CWD equivalent. These circumstances represent a potential threat to blood, blood products, and plasma supplies.

http://cdmrp.army.mil/prevfunded/nprp/NPRP_Summit_Final_Report.pdf

thank you, further reference materials as follows below;

Terry S. Singeltary Sr., Bacliff, Texas USA 77518 flounder9@verizon.net

Action

Notice of availability.

Summary

We are advising the public that we are making available for review and comment a revised version of the Chronic Wasting Disease (CWD) Herd Certification Program Standards. The CWD Program Standards provide guidance on how to meet CWD Herd Certification Program and interstate movement requirements. We are taking this action to address concerns of State and industry participants about the existing standards.

Dates

We will consider all comments that we receive on or before April 30, 2018.

Addresses

You may submit comments by either of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011.*
- *Postal Mail/Commercial Delivery:* Send your comment to Docket No. APHIS-2018-0011, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road Unit 118, Riverdale, MD 20737-1238.

Supporting documents and any comments we receive on this docket may be viewed at *http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011* or in our reading room, which is located in Room 1141 of the USDA South Building, 14th Street and Independence Avenue SW, Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 799-7039 before coming.

For Further Information Contact

Dr. Tracy Nichols, Staff Officer, Cervid Health Team, Surveillance, Preparedness, and Response Services, VS, APHIS, USDA, 2150 Centre Avenue, Bldg. B, Fort Collins, CO 80526; (970) 494-7380.

Supplementary Information

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy of cervids (members of Cervidae, the deer family). Species currently known to be susceptible to CWD include elk, mule deer, moose, white-tailed deer, sika deer, muntjac, reindeer, and black-tailed deer.

In 2014, the Animal and Plant Health Inspection Service (APHIS) implemented the National CWD Herd Certification Program (HCP), a voluntary Federal-State-industry cooperative program administered by APHIS and implemented by participating States. Currently, 28 States participate in the program. States and herd owners choosing to participate must comply with the provisions of 9 CFR parts 55 and 81 (referred to below as the regulations), which include requirements for animal identification, interstate movement, fencing, recordkeeping, herd inspections and inventories, animal mortality testing, and response to any findings of CWD-exposed, -suspect, or -positive herds. APHIS monitors the approved State HCPs to ensure consistency with Federal standards by means of annual State reporting. With each year of successful surveillance, participating herds will advance in status. After 5 years with no evidence of CWD, APHIS will certify the herd as being low risk for CWD. Only captive cervids from enrolled herds certified as low risk for CWD may move interstate.

The CWD Program Standards provide detailed guidance on how to meet the regulatory requirements referred to above. An annual review of the Program Standards is conducted by APHIS in collaboration with State agencies and industry representatives.

In response to concerns expressed by industry and State partners about the existing CWD Program Standards, published in 2014, we convened a working group in 2016 to review the document. Based on the group's discussions, as well as recommendations from an internal review, we determined that the Program Standards needed to undergo a number of revisions.

We are advising the public that we have prepared a revised version of the CWD Program Standards. The proposed revisions include the following:

- Revising the goal statement to focus on reducing the risk of interstate transmission of CWD.
- Clarifying that the Program Standards include detailed descriptions of suggested methods approved by the APHIS Administrator to meet the regulatory requirements.
- Making definitions of terms in the Program Standards consistent with the official definitions in the regulations.
- Describing APHIS' intent to amend the regulations to define susceptible species based on scientific evidence of natural infection or experimental infections through natural routes and adding the genera *Rangifer* and *Muntiacus* to the list of susceptible species.
- Providing support for implementing antemortem immunohistochemistry testing of rectal anal mucosa associated lymphoid tissue (RAMALT) and medial retropharyngeal lymph node (MRPLN) biopsies conducted as a whole-herd test concurrently with genotyping at Prion Protein Gene (PRNP) codon 96 in white-tailed deer in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds.
- Providing support for initiating pilot projects using RAMALT and MRPLN biopsies conducted concurrently with genotyping at PRNP codon 132 in elk in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds to inform decisions about testing protocols.
- Clarifying the definitions and processes for performing epidemiological investigations.

- Replacing Appendix VI with a worksheet that States must submit for all positive herds enrolled in the HCP as part of their annual HCP report. Additionally, for any herd for which Federal indemnity is to be paid, a preliminary and final worksheet must have been completed as part of the herd plan by a State representative.
- Describing the factors that APHIS will consider when making decisions about providing indemnity for CWD-positive, -exposed, and -suspect animals and describing the relative priority of each factor.
- Clarifying the consequences of poor quality and missing post-mortem surveillance samples on herd status, as well as describing options States may consider as substitutions for these samples.
- Making the Program Standards language consistent with that of the regulations by requiring CWD testing of all mortalities from certified herds, including at slaughter and on hunt facilities when animals remain under the same ownership.
- Streamlining the description of fencing characteristics considered necessary to prevent ingress and egress of cervids for HCP-enrolled herds.
- Eliminating Appendix II: Fencing Requirements and References, and making these scientific references available upon request.
- Moving Part B, Section 5: Sanitary Precautions and Biosecurity Practices for Herd Plans and Depopulations to an appendix, and simplifying recommendations for premises decontamination.
- Updating and streamlining Appendix IV: Guidelines for Environmental Contamination.
- Consolidating the discussion of carcass disposal options in the main body of the Program Standards and deleting Appendix V: Carcass Disposal.

The revised Program Standards may be viewed on the *Regulations.gov* website or in our reading room. (Instructions for accessing *Regulations.gov* and information on the location and hours of the reading room are provided under the heading ADDRESSES at the beginning of this notice.) The documents are also available by contacting the person listed under FOR FURTHER INFORMATION CONTACT.

After reviewing any comments we receive on the proposed updates, we will publish a second notice in the Federal Register announcing our decision regarding the proposed changes.

Authority

7 U.S.C. 8301-8317; 7 CFR 2.22, 2.80, and 371.4.

Done in Washington, DC, this 23rd day of March 2018.

Kevin Shea,

Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 2018-06341 Filed 3-28-18; 8:45 am]

BILLING CODE 3410-34-P

https://www.regulations.gov/document?D=APHIS-2018-0011-0001

18-011-1 Program Standards

https://www.regulations.gov/contentStreamer?documentId=APHIS-2018-0011-0002&contentType=pdf

NOTICE: APHIS Revises Chronic Wasting Disease Program Standards

USDA Animal and Plant Health Inspection Service sent this bulletin at 03/28/2018 02:11 PM EDT

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) is revising its Chronic Wasting Disease (CWD) Program Standards to better meet the needs of both animal health officials and the cervid industry. To ensure consistent terminology, APHIS is aligning the language in the program standards with the Code of Federal Regulations.

CWD is a transmissible spongiform encephalopathy (TSE), a progressive and fatal brain disease that can affect cervids, including deer, elk and moose. The CWD Herd Certification Program (HCP) provides a national approach to control CWD in farmed cervids. The program is a cooperative effort between APHIS, State animal health and wildlife agencies, and farmed cervid owners. APHIS coordinates with State agencies to encourage cervid owners to certify their herds and comply with the CWD Herd Certification Program Standards to prevent the introduction and spread of CWD.

The revisions cover a variety of topics including: adding guidelines for live animal testing in specific situations, clarifying how disease investigations should be handled, aligning with the Code of Federal Regulations' requirement for mortality testing, simplifying fencing requirements, adding biosecurity recommendations, and describing our intended approach to update the CWD-susceptible species list. APHIS also outlines factors for determining indemnity and includes a table that outlines possible reductions in herd certification status that States may consider for herd owners that do not submit required mortality surveillance samples or consistently submit unusable testing samples.

The revisions are based on input from internal and external stakeholders, including scientific experts on CWD and TSEs from the United States and Canada, a working group of State and Federal animal health and wildlife officials and representatives from the farmed cervid industry. These stakeholders reviewed the program standards, identified sections for revision, and provided options for those revisions.

APHIS issued a summary of the working group's discussions and recommended changes to the CWD Program Standards at the 2016 United States Animal Health Association meeting. The summary was available for public comment and 35 written comments were received.

This notice is on display in the Federal Register at https://s3.amazonaws.com/public-inspection.federalregister.gov/2018-06341.pdf.

Members of the public will be able to view the evaluation and submit comments beginning tomorrow at http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011. The revised program standards will take effect after the 30-day comment period ends, unless members of the public raise significant regulatory issues during the comment period.

APHIS will accept comments until April 30. Comments may be submitted through the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011.
- Postal Mail/Commercial Delivery: Send your comment to Docket No. APHIS-2018-0011, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road Unit 118, Riverdale, MD 20737-1238.
- Supporting documents and any comments we receive on this docket may be

viewed at http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011 or in our reading room, which is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 799-7039 before coming.

* * *

Please share the following link with others who may be interested in these updates. Click here to subscribe to the VS Animal Health Stakeholder Registry. This link will also allow you to change or cancel your subscription.

https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/1e555fb

2016 summary;

https://www.aphis.usda.gov/animal_health/animal_diseases/cwd/downloads/ps-wg-deliverable-for-usaha.pdf

This document is scheduled to be published in the Federal Register on 03/29/2018 and available online at https://federalregister.gov/d/2018-06341 , and on http://FDsys.gov

BILLING CODE: 3410-34-P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. APHIS-2018-0011]

Notice of Availability of Proposed Changes to the Chronic Wasting Disease Herd Certification

Program Standards

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice of availability.

SUMMARY: We are advising the public that we are making available for review and comment a revised version of the Chronic Wasting Disease (CWD) Herd Certification Program Standards. The CWD Program Standards provide guidance on how to meet CWD Herd Certification Program and interstate movement requirements. We are taking this action to address concerns of State and industry participants about the existing standards.

DATES: We will consider all comments that we receive on or before [INSERT DATE 30

DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments by either of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov/#!docketDetail;D=APHIS-2018-0011. ;

- Postal Mail/Commercial Delivery: Send your comment to Docket No. APHIS-2018 0011, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road Unit 118, Riverdale, MD 20737-1238.

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FOR FURTHER INFORMATION CONTACT: Dr. Tracy Nichols, Staff Officer, Cervid Health Team, Surveillance, Preparedness, and Response Services, VS, APHIS, USDA, 2150 Centre Avenue, Bldg. B, Fort Collins, CO 80526; (970) 494-7380.

SUPPLEMENTARY INFORMATION:

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy of cervids (members of Cervidae, the deer family). Species currently known to be susceptible to CWD include elk, mule deer, moose, white-tailed deer, sika deer, muntjac, reindeer, and black-tailed deer.

In 2014, the Animal and Plant Health Inspection Service (APHIS) implemented the National CWD Herd Certification Program (HCP), a voluntary Federal-State-industry cooperative program administered by APHIS and implemented by participating States. Currently, 28 States participate in the program. States and herd owners choosing to participate must comply with the provisions of 9 CFR parts 55 and 81 (referred to below as the regulations), which include requirements for animal identification, interstate movement, fencing, recordkeeping, herd inspections and inventories, animal mortality testing, and response to any findings of CWD-exposed, -suspect, or -positive herds. APHIS monitors the approved State HCPs to ensure consistency with Federal standards by means of annual State reporting. With

each year of successful surveillance, participating herds will advance in status. After 5 years with no evidence of CWD, APHIS will certify the herd as being low risk for CWD. Only captive cervids from enrolled herds certified as low risk for CWD may move interstate.

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- Describing APHIS' intent to amend the regulations to define susceptible species based on scientific evidence of natural infection or experimental infections through natural routes and adding the genera Rangifer and Muntiacus to the list of susceptible species.

- Providing support for implementing antemortem immunohistochemistry testing of rectal anal mucosa associated lymphoid tissue (RAMALT) and medial retropharyngeal lymph

node (MRPLN) biopsies conducted as a whole-herd test concurrently with genotyping at Prion Protein Gene (PRNP) codon 96 in white-tailed deer in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds.

- Providing support for initiating pilot projects using RAMALT and MRPLN biopsies conducted concurrently with genotyping at PRNP codon 132 in elk in traceback, traceforward, and CWD-exposed herds and for disease management in CWD-positive herds to inform decisions about testing protocols.

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- Streamlining the description of fencing characteristics considered necessary to prevent ingress and egress of cervids for HCP-enrolled herds.

- Eliminating Appendix II: Fencing Requirements and References, and making these scientific references available upon request.

- Moving Part B, Section 5: Sanitary Precautions and Biosecurity Practices for Herd Plans and Depopulations to an appendix, and simplifying recommendations for premises decontamination.

- Updating and streamlining Appendix IV: Guidelines for Environmental Contamination.

- Consolidating the discussion of carcass disposal options in the main body of the Program Standards and deleting Appendix V: Carcass Disposal.

The revised Program Standards may be viewed on the Regulations.gov website or in our reading room. (Instructions for accessing Regulations.gov and information on the location and hours of the reading room are provided under the heading ADDRESSES at the beginning of this notice.) The documents are also available by contacting the person listed under FOR FURTHER

INFORMATION CONTACT.

After reviewing any comments we receive on the proposed updates, we will publish a second notice in the Federal Register announcing our decision regarding the proposed changes.

Authority: 7 U.S.C. 8301-8317; 7 CFR 2.22, 2.80, and 371.4.

Done in Washington, DC, this 23rd day of March 2018.

Kevin Shea,

Administrator, Animal and Plant Health Inspection Service. [FR Doc. 2018-06341 Filed: 3/28/2018 8:45 am; Publication Date: 3/29/2018]

https://s3.amazonaws.com/public-inspection.federalregister.gov/2018-06341.pdf

Two commenters recommended that we add requirements to address the potential escape of urine and feces from conveyances being used to move farmed or captive cervids interstate. One commenter stated that research has demonstrated that CWD can be transmitted by environmental transmission, and prions are excreted in the urine and feces of infected animals. The other commenter recommended that we also require decontamination for all transport vehicles and equipment that cross state lines and transporter recordkeeping to allow traceback of all live animals.

We do not consider these requirements to be necessary to mitigate the low risk associated with the movement through a State of farmed or captive cervids that are eligible for interstate movement under 9 CFR part 81. Such farmed or captive cervids are already at low risk for CWD. Wild cervids are unlikely to receive sustained exposure from urine or feces that inadvertently escapes a cervid transport vehicle moving on an interstate highway, for example. Decontamination of transport vehicles and equipment could be required by the receiving State after the animals have been offloaded at their destination. If the commenter is referring to decontamination during transport of a vehicle loaded with animals before the vehicle enters a State en route to its final destination, that would require unloading the cervids, which would potentially pose a greater risk of escape and may affect the welfare of the animals. Finally, all farmed or captive cervids moved interstate are required to be identified in accordance with § 81.2, which requires two forms of animal identification, one of which is official. Under § 81.4, the animal identification must be included on the certificate that accompanies the farmed or captive cervids moved interstate. These requirements allow for any traceback that should be necessary.

snip..

Wild Cervids

Both the July 2006 final rule and the June 2012 interim final rule included requirements for the interstate movement of wild cervids. Specifically, paragraph (b) of § 81.3 requires captive cervids captured from a wild population for interstate movement and release to be accompanied by a certificate stating that the source population has been determined to be low risk for CWD, based on a CWD surveillance program in wild cervid populations that is approved by the State Government of the receiving State and by APHIS.
One commenter stated that this provision preempts the authority of States to control the movement of wild cervids.

As noted in the Background section of the June 2012 interim final rule, the Federal CWD regulations indeed set minimum standards for CWD control. We believe that these are the minimum standards necessary to have an effective CWD control program. The movement of wild cervids captured for interstate movement and release could easily spread CWD. As a result, we have determined that it is necessary to impose minimum restrictions on this movement.

https://www.federalregister.gov/documents/2014/04/29/2014-09714/chronic-wasting-disease-herd-certification-program-and-interstate-movement-of-farmed-or-captive-deer

Animal and Plant Health Inspection Service (APHIS) Notice: **Program Standards: Chronic Wasting Disease Herd Certification Program and Interstate Movement of Farmed or Captive Deer, Elk, and Moose**

For related information, **Open Docket Folder**

Comment

Docket No. 00-108-10 Chronic Wasting Disease Herd Certification Program and Interstate Movement of Farmed or Captive Deer, Elk, and Moose; Program Standards

>>>The CWD herd certification program is a voluntary, cooperative program that establishes minimum requirements for the interstate movement of farmed or captive cervids, provisions for participating States to administer Approved State CWD Herd Certification Programs, and provisions for participating herds to become certified as having a low risk of being infected with CWD<<<

Greetings USDA/APHIS et al,

I kindly would like to comment on Docket No. 00-108-10 Chronic Wasting Disease Herd Certification Program and Interstate Movement of Farmed or Captive Deer, Elk, and Moose; Program Standards.

I believe, and in my opinion, and this has been proven by scientific facts, that without a validated and certified test for chronic wasting disease cwd, that is 100% sensitive, and in use, any voluntary effort will be futile. the voluntary ban on mad cow feed and SRMs have failed terribly, the bse mad cow surveillance program has failed terribly, as well as the testing for bse tse prion in cattle, this too has failed terrible. all this has been proven time and time again via OIG reports and GOA reports.

I believe that until this happens, 100% cwd testing with validated test, ALL MOVEMENT OF CERVIDS BETWEEN STATES MUST BE BANNED, AND THE BORDERS CLOSED TO INTERSTATE MOVEMENT OF CERVIDS. there is simply to much at risk.

In my opinion, and the opinions of many scientists and DNR officials, that these so called game farms are the cause of the spreading of chronic wasting disease cwd through much negligence. the game farms in my opinion are not the only cause, but a big factor. I kindly wish to submit the following to show what these factors are, and why interstate movement of cervids must be banned.

*** Spraker suggested an interesting explanation for the occurrence of CWD. The deer pens at the Foot Hills Campus were built some 30-40 years ago by a Dr. Bob Davis. At or abut that time, allegedly, some

scrapie work was conducted at this site. When deer were introduced to the pens they occupied ground that had previously been occupied by sheep. ...

also, see where even decades back, the USDA had the same thought as they do today with CWD, not their problem...see page 27 below as well, where USDA stated back then, the same thing they stated in the state of Pennsylvania, not their damn business, once they escape, and they said the same thing about CWD in general back then ;

”The occurrence of CWD must be viewed against the contest of the locations in which it occurred. It was an incidental and unwelcome complication of the respective wildlife research programmes. Despite it’s subsequent recognition as a new disease of cervids, therefore justifying direct investigation, no specific research funding was forthcoming. The USDA veiwed it as a wildlife problem and consequently not their province!” ...page 26.

http://collections.europarchive.org/tna/20080102193705/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf ;

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sound familiar $$$

Sunday, January 06, 2013

USDA TO PGC ONCE CAPTIVES ESCAPE

*** "it‘s no longer its business.”

http://chronic-wasting-disease.blogspot.com/2013/01/usda-to-pgc-once-captives-escape-its-no.html ;

Wednesday, September 04, 2013

*** cwd - cervid captive livestock escapes, loose and on the run in the wild

http://chronic-wasting-disease.blogspot.com/2013/09/cwd-cervid-captive-livestock-escapes.html

Monday, March 03, 2014

APHIS to Offer Indemnity for CWD Positive Herds as Part of Its Cervid Health Activities

http://chronic-wasting-disease.blogspot.com/2014/03/aphis-to-offer-indemnity-for-cwd.html

Thursday, March 6, 2014

TEXAS RECALL LIST MASSIVE FROM DEAD STOCK DOWNER CANCER COWS OFFAL from Class I Recall 002-2014 and 013-2014 Health Risk: High Jan 13, 2014 and Feb 8, 2014 shipped to Texas, Florida, and Illinois UPDATE FEBRUARY 14, 2014

http://downercattle.blogspot.com/2014/03/texas-recall-list-massive-from-dead.html

See attached file(s)

Attachments

(1)

https://www.regulations.gov/document?D=APHIS-2006-0118-0411

Sunday, June 23, 2013

National Animal Health Laboratory Network Reorganization Concept Paper (Document ID APHIS-2012-0105-0001)

***Terry S. Singeltary Sr. submission

http://transmissiblespongiformencephalopathy.blogspot.com/2013/06/national-animal-health-laboratory.html

Singeltary submission ;

Program Standards: Chronic Wasting Disease Herd Certification Program and Interstate Movement of Farmed or Captive Deer, Elk, and Moose

DOCUMENT ID: APHIS-2006-0118-0411

***Singeltary submission

http://www.regulations.gov/#!documentDetail;D=APHIS-2006-0118-0411

http://chronic-wasting-disease.blogspot.com/2014/03/docket-no-00-108-10-chronic-wasting.html

Singeltary Submissions to EU on CWD TSE Prion

Friday, November 22, 2013

Wasting disease is threat to the entire UK deer population CWD TSE PRION disease in cervids

***SINGELTARY SUBMISSION

The Scottish Parliament's Rural Affairs, Climate Change and Environment Committee has been looking into deer management, as you can see from the following press release,

***and your email has been forwarded to the committee for information:

http://www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/29878.aspx

http://chronic-wasting-disease.blogspot.com/2013/11/wasting-disease-is-threat-to-entire-uk.html

Friday, November 22, 2013

Wasting disease is threat to the entire UK deer population

http://chronic-wasting-disease.blogspot.com/2013/11/wasting-disease-is-threat-to-entire-uk.html

Sunday, July 21, 2013

Welsh Government and Food Standards Agency Wales Joint Public Consultation on the Proposed Transmissible Spongiform Encephalopathies (Wales) Regulations 2013

*** Singeltary Submission WG18417

http://transmissiblespongiformencephalopathy.blogspot.com/2013/07/welsh-government-and-food-standards.html

WEDNESDAY, MARCH 28, 2018

The executioner in Nordfjella and Chronic Wasting Disease CWD TSE Prion Skrantesjuke

http://chronic-wasting-disease.blogspot.com/2018/03/the-executioner-in-nordfjella-and.html

SATURDAY, MARCH 10, 2018

Chronic Wasting Disease CWD TSE Prion Goes Global Finland Falls, Behind Norway and S. Korea

FINLAND REPORTS FIRST CASE OF CHRONIC WASTING DISEASE CWD TSE PRION IN A moose or European elk (Alces alces)

http://chronic-wasting-disease.blogspot.com/2018/03/finland-reports-first-case-of-chronic.html

TUESDAY, FEBRUARY 27, 2018

NORWAY CWD TSE PRION Skrantesjuke Nordfjella zone 1 Complete Eradication Complete

http://chronic-wasting-disease.blogspot.com/2018/02/norway-cwd-tse-prion-skrantesjuke.html

TUESDAY, DECEMBER 05, 2017

Norway 30,000 deer animals have so far been tested for Skrantesyke chronic wasting disease CWD TSE PRION DISEASE

http://chronic-wasting-disease.blogspot.com/2017/12/norway-30000-deer-animals-have-so-far.html

THURSDAY, NOVEMBER 30, 2017

Norway Animal welfare surveillance at Nordfjella Skrantesjuke CWD TSE Prion Update

http://chronic-wasting-disease.blogspot.com/2017/11/norway-animal-welfare-surveillance-at.html

CWD TSE PRION AND REAL ESTATE LAND VALUES

Fatal deer disease would impact more than hunters in Alabama LAND VALUES

The impact

Alabama is a hunting crazy state.

‘‘The economic impact, of course, is huge,” Sykes said. “Hunting is a major part of the economy in rural areas of Alabama. And hunting is a huge part of the culture in Alabama. It is a part of the fabric of so many people’s lives.”

Land values will likely be the first indicator of bad news if CWD comes to the state, said Jeff Roberts, a real estate agent who sells hunting land in the Black Belt.

‘‘For farmers and landowners, leasing the hunting rights to their places is a huge secondary income for many,” he said. “If CWD comes to Alabama, the land values are going to go into the basement. I’ve had clients turn their backs on absolutely beautiful hunting tracts when they found out feral hogs were on the property. You can imagine what CWD would do to spook buyers.”

https://www.montgomeryadvertiser.com/story/news/2018/03/19/fatal-deer-disease-causing-concern-alabama/431635002/

WEDNESDAY, MAY 17, 2017

*** Chronic Wasting Disease CWD TSE Prion aka Mad Deer Disease and the Real Estate Market Land Values ***

http://chronic-wasting-disease.blogspot.com/2017/05/chronic-wasting-disease-cwd-tse-prion.html

*** After a natural route of exposure, 100% of WTD were susceptible to scrapie.

PO-039: A comparison of scrapie and chronic wasting disease in white-tailed deer Justin Greenlee, Jodi Smith, Eric Nicholson US Dept. Agriculture; Agricultural Research Service, National Animal Disease Center; Ames, IA USA

http://www.landesbioscience.com/journals/prion/03-Prion6-2-Transmission-and-strains.pdf

White-tailed deer are susceptible to the agent of sheep scrapie by intracerebral inoculation

snip...

It is unlikely that CWD will be eradicated from free-ranging cervids, and the disease is likely to continue to spread

geographically [10]. However, the potential that white-tailed deer may be susceptible to sheep scrapie by a natural route presents an additional confounding factor to halting the spread of CWD. This leads to the additional speculations that

1) infected deer could serve as a reservoir to infect sheep with scrapie offering challenges to scrapie eradication efforts and

2) CWD spread need not remain geographically confined to current endemic areas, but could occur anywhere that sheep with scrapie and susceptible cervids cohabitate.

This work demonstrates for the first time that white-tailed deer are susceptible to sheep scrapie by intracerebral inoculation with a high attack rate and that the disease that results has similarities to CWD. These experiments will be repeated with a more natural route of inoculation to determine the likelihood of the potential transmission of sheep scrapie to white-tailed deer. If scrapie were to occur in white-tailed deer, results of this study indicate that it would be detected as a TSE, but may be difficult to differentiate from CWD without in-depth biochemical analysis.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3199251/?tool=pubmed

http://chronic-wasting-disease.blogspot.com/2011/10/white-tailed-deer-are-susceptible-to.html

2012

PO-039: A comparison of scrapie and chronic wasting disease in white-tailed deer

Justin Greenlee, Jodi Smith, Eric Nicholson US Dept. Agriculture; Agricultural Research Service, National Animal Disease Center; Ames, IA USA

snip...

The results of this study suggest that there are many similarities in the manifestation of CWD and scrapie in WTD after IC inoculation including early and widespread presence of PrPSc in lymphoid tissues, clinical signs of depression and weight loss progressing to wasting, and an incubation time of 21-23 months. Moreover, western blots (WB) done on brain material from the obex region have a molecular profile similar to CWD and distinct from tissues of the cerebrum or the scrapie inoculum. However, results of microscopic and IHC examination indicate that there are differences between the lesions expected in CWD and those that occur in deer with scrapie: amyloid plaques were not noted in any sections of brain examined from these deer and the pattern of immunoreactivity by IHC was diffuse rather than plaque-like.

*** After a natural route of exposure, 100% of WTD were susceptible to scrapie.

Deer developed clinical signs of wasting and mental depression and were necropsied from 28 to 33 months PI. Tissues from these deer were positive for PrPSc by IHC and WB. Similar to IC inoculated deer, samples from these deer exhibited two different molecular profiles: samples from obex resembled CWD whereas those from cerebrum were similar to the original scrapie inoculum. On further examination by WB using a panel of antibodies, the tissues from deer with scrapie exhibit properties differing from tissues either from sheep with scrapie or WTD with CWD. Samples from WTD with CWD or sheep with scrapie are strongly immunoreactive when probed with mAb P4, however, samples from WTD with scrapie are only weakly immunoreactive. In contrast, when probed with mAb's 6H4 or SAF 84, samples from sheep with scrapie and WTD with CWD are weakly immunoreactive and samples from WTD with scrapie are strongly positive. This work demonstrates that WTD are highly susceptible to sheep scrapie, but on first passage, scrapie in WTD is differentiable from CWD.

http://www.landesbioscience.com/journals/prion/03-Prion6-2-Transmission-and-strains.pdf

2011

*** After a natural route of exposure, 100% of white-tailed deer were susceptible to scrapie.

http://www.usaha.org/Portals/6/Reports/2011/report-cwal-2011.pdf

TUESDAY, MARCH 28, 2017

*** Passage of scrapie to deer results in a new phenotype upon return passage to sheep ***

http://chronic-wasting-disease.blogspot.com/2017/03/passage-of-scrapie-to-deer-results-in.html

SHOOTING PENS (HIGH/LOW FENCE), CAPTIVE CERVID FARMING, BREEDING, SPERM MILLS, ANTLER MILLS, URINE MILLS, a petri dish for cwd tse prion disease...

*** Spraker suggested an interesting explanation for the occurrence of CWD. The deer pens at the Foot Hills Campus were built some 30-40 years ago by a Dr. Bob Davis. At or abut that time, allegedly, some scrapie work was conducted at this site. When deer were introduced to the pens they occupied ground that had previously been occupied by sheep.

https://web.archive.org/web/20170126060744/http://collections.europarchive.org/tna/20080102193705/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

COLORADO THE ORIGIN OF CHRONIC WASTING DISEASE CWD TSE PRION?

*** Spraker suggested an interesting explanation for the occurrence of CWD. The deer pens at the Foot Hills Campus were built some 30-40 years ago by a Dr. Bob Davis. At or abut that time, allegedly, some scrapie work was conducted at this site. When deer were introduced to the pens they occupied ground that had previously been occupied by sheep.

IN CONFIDENCE, REPORT OF AN UNCONVENTIONAL SLOW VIRUS DISEASE IN ANIMALS IN THE USA 1989

http://webarchive.nationalarchives.gov.uk/20080102193705/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

ALSO, one of the most, if not the most top TSE Prion God in Science today is Professor Adriano Aguzzi, and he recently commented on just this, on a cwd post on my facebook page August 20 at 1:44pm, quote;

"it pains me to no end to even comtemplate the possibility, but it seems entirely plausible that CWD originated from scientist-made spread of scrapie from sheep to deer in the colorado research facility. If true, a terrible burden for those involved." August 20 at 1:44pm ...end

MONDAY, SEPTEMBER 25, 2017

Colorado Chronic Wasting Disease CWD TSE Prion Mandatory Submission of test samples in some areas and zoonosis

http://chronic-wasting-disease.blogspot.com/2017/09/colorado-chronic-wasting-disease-cwd.html

TSE Scrapie, CWD, BSE, Prion, Soil

Clay content and pH: soil characteristic associations with the persistent presence of chronic wasting disease in northern Illinois

Sheena J. Dorak, Michelle L. Green, Michelle M. Wander, Marilyn O. Ruiz, Michael G. Buhnerkempe, Ting Tian, Jan E. Novakofski & Nohra E. Mateus-Pinilla

Scientific Reportsvolume 7, Article number: 18062(2017) doi:10.1038/s41598-017-18321-x

Download Citation

Ecological epidemiology Ecological modelling Infectious diseases Prions

Received: 21 August 2017

Accepted: 08 December 2017

Published online: 22 December 2017

Abstract

Environmental reservoirs are important to infectious disease transmission and persistence, but empirical analyses are relatively few. The natural environment is a reservoir for prions that cause chronic wasting disease (CWD) and influences the risk of transmission to susceptible cervids. Soil is one environmental component demonstrated to affect prion infectivity and persistence. Here we provide the first landscape predictive model for CWD based solely on soil characteristics. We built a boosted regression tree model to predict the probability of the persistent presence of CWD in a region of northern Illinois using CWD surveillance in deer and soils data. We evaluated the outcome for possible pathways by which soil characteristics may increase the probability of CWD transmission via environmental contamination. Soil clay content and pH were the most important predictive soil characteristics of the persistent presence of CWD. The results suggest that exposure to prions in the environment is greater where percent clay is less than 18% and soil pH is greater than 6.6. These characteristics could alter availability of prions immobilized in soil and contribute to the environmental risk factors involved in the epidemiological complexity of CWD infection in natural populations of white-tailed deer.

https://www.nature.com/articles/s41598-017-18321-x

Oral Transmissibility of Prion Disease Is Enhanced by Binding to Soil Particles

Author Summary

Transmissible spongiform encephalopathies (TSEs) are a group of incurable neurological diseases likely caused by a misfolded form of the prion protein. TSEs include scrapie in sheep, bovine spongiform encephalopathy (‘‘mad cow’’ disease) in cattle, chronic wasting disease in deer and elk, and Creutzfeldt-Jakob disease in humans. Scrapie and chronic wasting disease are unique among TSEs because they can be transmitted between animals, and the disease agents appear to persist in environments previously inhabited by infected animals. Soil has been hypothesized to act as a reservoir of infectivity and to bind the infectious agent. In the current study, we orally dosed experimental animals with a common clay mineral, montmorillonite, or whole soils laden with infectious prions, and compared the transmissibility to unbound agent. We found that prions bound to montmorillonite and whole soils remained orally infectious, and, in most cases, increased the oral transmission of disease compared to the unbound agent. The results presented in this study suggest that soil may contribute to environmental spread of TSEs by increasing the transmissibility of small amounts of infectious agent in the environment.

https://www.aphis.usda.gov/emergency_response/downloads/tools/johnson et al prions in soil.pdf

tse prion soil

http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0058630

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3567181/pdf/ppat.1003113.pdf

http://www.nature.com/srep/2015/150210/srep08358/full/srep08358.html?WT.ec_id=SREP-639-20150217

http://www.cell.com/cell-reports/pdfExtended/S2211-1247(15)00437-4

cwd tse prion and soil, see more ;

http://chronic-wasting-disease.blogspot.com/2017/01/chronic-wasting-disease-cwd-tse-

prion.html

January 14, 2018

Michigan's Chronic Wasting Disease Working Group Recommendations Report to the Natural Resources Commission Prepared December 2017 CWD Confirmed Cases holding for now at 57 cases

http://www.michigan.gov/emergingdiseases/0,4579,7-186-81018_25806-357110--,00.html

http://chronic-wasting-disease.blogspot.com/2018/01/michigans-chronic-wasting-disease.html

WEDNESDAY, MARCH 07, 2018

Michigan DNR CWD National Perspective: Captive Herd Certification Program - Dr. Tracy Nichols

CURRENT STATUS OF CWD IN CAPTIVE CERVID HERDS IN 16 STATES AS OF MAY 2017

43 ELK HERDS

37 WTD HERDS

1 RED DEER HERD

6 MIX SPECIES HERDS

85 CWD-POSITIVE CAPTIVE HERDS

snip...see

http://chronic-wasting-disease.blogspot.com/2018/03/michigan-dnr-cwd-national-perspective.html

WEDNESDAY, MARCH 07, 2018

Addressing deer disease: DNR, MSU collaborate on deer movement study in south-central Michigan

http://chronic-wasting-disease.blogspot.com/2018/03/addressing-deer-disease-dnr-msu.html

SATURDAY, MARCH 03, 2018

Minnesota CWD All seven of the remaining white-tailed deer on farm Positive

http://chronic-wasting-disease.blogspot.com/2018/03/minnesota-cwd-all-seven-of-remaining.html

FRIDAY, NOVEMBER 24, 2017

Todd Robbins-Miller President of Minnesota Deer Farmers Association is oblivious to Chronic Wasting CWD TSE PRION DISEASE risk factors

http://chronic-wasting-disease.blogspot.com/2017/11/todd-robbins-miller-president-of.html

FRIDAY, FEBRUARY 23, 2018

Pennsylvania NEW CWD MANAGEMENT AREA TO BE ANNOUNCED

http://chronic-wasting-disease.blogspot.com/2018/02/pennsylvania-new-cwd-management-area-to.html

MONDAY, FEBRUARY 12, 2018

Pennsylvania CWD TSE Prion has been found in captive deer in Huntingdon and Lancaster counties

http://chronic-wasting-disease.blogspot.com/2018/02/pennsylvania-cwd-tse-prion-has-been.html

Sent: Thu, Mar 22, 2018 4:00 pm

Subject: TEXAS CWD TSE PRION JUMP TO 100 POSITIVE, NEW CASES 17 BREEDER, 1 BREEDER RELEASE, AND 1 WILD SINCE JAN 31, 2018
TEXAS CWD TSE PRION JUMP TO 100 POSITIVE, NEW CASES 17 BREEDER, 1 BREEDER RELEASE, AND 1 WILD SINCE JAN 31, 2018

CWD Positives in Texas

Show entriesSearch:

CWD Positive

Year Confirmed CWD Positive

Confirmation Date Free Range / Captive County Source Species Sex Age

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 4.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/16/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 03/09/18 Release Site Uvalde Facility #3 Elk F 4.5

2018 02/28/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 2.5

2018 02/13/18 Free Range Hudspeth Mule Deer M 4.5

2018 02/13/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 7.5

2018 02/13/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 3.5

2018 02/13/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 1.5

2018 02/02/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 7.5

2018 01/31/18 Breeder Release Site Uvalde Facility #3 White-tailed Deer F 2.5

2018 01/29/18 Breeder Release Site Uvalde Facility #3 White-tailed Deer F 6.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 3.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer M 3.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 6.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 5.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 4.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 4.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 8.5

2018 01/08/18 Breeder Deer Uvalde Facility #3 White-tailed Deer F 3.5

2018 01/08/18 Breeder Release Site Uvalde Facility #3 White-tailed Deer F 5.5

2018 01/08/18 Breeder Release Site Uvalde Facility #3 White-tailed Deer F 4.5

2017 9/13/17 Breeder Deer Uvalde Facility #3 White-tailed Deer F 5

2017 7/6/17 Breeder Deer Medina Facility #5 White-tailed Deer M 4

2017 12/29/17 Free Range Hartley White-tailed Deer M 2.5

2017 12/22/17 Free Range Hartley Mule Deer M 2.5

2017 12/22/17 Free Range Hartley Mule Deer M 4.5

2017 12/18/17 Free Range El Paso Mule Deer M 5.5

2017 11/29/17 Breeder Release Site Medina Facility #3 White-tailed Deer M 4.5

2017 11/27/17 Breeder Release Site Medina Facility #4 White-tailed Deer M 4.5

2017 10/6/17 Release Site Medina Facility #3 Elk F 4

2017 10/6/17 Breeder Deer Uvalde Facility #3 White-tailed Deer F 1

2017 10/25/17 Breeder Deer Medina Facility #5 White-tailed Deer F 3

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer M 7

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 9

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 9

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 6

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer M 4

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2017 10/11/17 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 9/21/16 Breeder Release Site Medina Facility #3 White-tailed Deer M 3.5

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 1

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer M 1

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 1

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer M 1

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2016 6/29/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4

2nd page

CWD Positive

Year Confirmed CWD Positive

Confirmation Date Free Range / Captive County Source Species Sex Age

2016 6-Jan Free Range Dallam Mule Deer M 2.5

2016 4/13/16 Breeder Deer Lavaca Facility #2 White-tailed Deer M 3

2016 4/13/16 Breeder Deer Lavaca Facility #2 White-tailed Deer M 3

2016 4/13/16 Breeder Deer Lavaca Facility #2 White-tailed Deer M 3

2016 4/13/16 Breeder Deer Lavaca Facility #2 White-tailed Deer M 3

2016 4/1/16 Breeder Deer Medina Facility #4 White-tailed Deer F 4.5

2016 3/29/16 Breeder Deer Medina Facility #3 White-tailed Deer M 3

2016 2/9/17 Free Range Hudspeth Mule Deer M 3.5

2016 2/9/17 Free Range Hudspeth Mule Deer M 7.5

2016 2/4/16 Breeder Release Site Medina Facility #3 White-tailed Deer M 3

2016 2/18/17 Breeder Release Site Medina Facility #4 White-tailed Deer M 3.5

2016 2/17/17 Free Range Hudspeth Mule Deer M 7.5

2016 2/17/17 Free Range Hudspeth Mule Deer M 5.5

2016 12/6/16 Free Range Dallam Elk M 8.5

2016 10/28/16 Breeder Deer Uvalde Facility #3 White-tailed Deer M 5.5

2016 10/28/16 Breeder Deer Uvalde Facility #3 White-tailed Deer F 4.5

2016 1/6/17 Free Range El Paso Mule Deer M 4.5

2016 1/24/17 Free Range Medina White-tailed Deer M 1.5

2016 1/18/17 Free Range Hartley Mule Deer M 4.5

2016 1/18/17 Breeder Release Site Uvalde Facility #3 White-tailed Deer M 5.5

2016 1/18/17 Breeder Release Site Uvalde Facility #3 White-tailed Deer M 3.5

2015 9/14/15 Breeder Deer Lavaca Facility #2 White-tailed Deer M 3

2015 8/6/15 Breeder Deer Medina Facility #1 White-tailed Deer M 2.5

2015 8/6/15 Breeder Deer Medina Facility #1 White-tailed Deer M 2.5

2015 8/12/15 Breeder Deer Medina Facility #1 White-tailed Deer M 2.5

2015 6/30/15 Breeder Deer Medina Facility #1 White-tailed Deer M 2.5

2015 3/25/16 Free Range Hartley Mule Deer M 3.5

2015 3/18/16 Free Range Hudspeth Mule Deer M 5.5

2014 12/4/14 Free Range Hudspeth Mule Deer M 4.5

2012 7/12/12 Free Range Hudspeth Mule Deer F 6.5

2012 7/12/12 Free Range Hudspeth Mule Deer F 4.5

2012 12/28/12 Free Range Hudspeth Mule Deer M 3.5

2012 12/2/12 Free Range Hudspeth Mule Deer M 5.5

2012 12/10/12 Free Range Hudspeth Mule Deer M 4.5

2012 12/1/12 Free Range Hudspeth Mule Deer M 4.5

Showing 66 to 100 of 100 entries

https://tpwd.texas.gov/huntwild/wild/diseases/cwd/tracking/

THURSDAY, MARCH 22, 2018

TEXAS CWD TSE PRION JUMP TO 100 POSITIVE, NEW CASES 17 BREEDER, 1 BREEDER RELEASE, AND 1 WILD SINCE JAN 31, 2018

http://chronic-wasting-disease.blogspot.com/2018/03/texas-cwd-tse-prion-jump-to-100.html

TUESDAY, MARCH 27, 2018

Texas Chronic Wasting Disease CWD TSE Prion Mad Deer Disease TPWD EXPANDS CONTAINMENT ZONE IN PANHANDLE

http://chronic-wasting-disease.blogspot.com/2018/03/texas-chronic-wasting-disease-cwd-tse.html

WEDNESDAY, FEBRUARY 21, 2018

TEXAS TPWD CWD TSE PRION 2 MORE FROM BREEDER RELEASE SITE TOTALS 81 CASES TO DATE

http://chronic-wasting-disease.blogspot.com/2018/02/texas-tpwd-cwd-tse-prion-2-more-from.html

CWD MAP

https://www.nwhc.usgs.gov/images/cwd/cwd_map.jpg

WEDNESDAY, JANUARY 24, 2018

TEXAS CHRONIC WASTING DISEASE CWD TSE PRION MOUNTING, JUMPS TO 79 CASES TO DATE

http://chronic-wasting-disease.blogspot.com/2018/01/texas-chronic-wasting-disease-cwd-tse.html

FRIDAY, FEBRUARY 16, 2018

***> Texas Deer Breeders Continue fight against the state's wildlife agency and its regulations trying to contain CWD TSE Prion

http://chronic-wasting-disease.blogspot.com/2018/02/texas-deer-breeders-continue-fight.html

SUNDAY, MAY 22, 2016

***> TEXAS CWD DEER BREEDERS PLEA TO GOVERNOR ABBOTT TO CIRCUMVENT TPWD SOUND SCIENCE TO LET DISEASE SPREAD

http://chronic-wasting-disease.blogspot.com/2016/05/texas-cwd-deer-breeders-plea-to.html

TEXAS HISTORY OF CHRONIC WASTING DISEASE CWD TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHY TSE PRION AKA MAD COW TYPE DISEASE

http://chronic-wasting-disease.blogspot.com/2017/08/texas-chronic-wasting-disease-cwd-tse.html

WEDNESDAY, FEBRUARY 21, 2018

Maryland Chronic Wasting Disease CWD TSE Prion Found In Ten Deer Allegany and Washington Counties

http://chronic-wasting-disease.blogspot.com/2018/02/maryland-chronic-wasting-disease-cwd.html

SATURDAY, FEBRUARY 17, 2018

Montana Special Hunts 9 more cases CWD TSE Prion to date, more samples still pending

http://chronic-wasting-disease.blogspot.com/2018/02/montana-special-hunts-9-more-cases-cwd.html

FRIDAY, FEBRUARY 09, 2018

Mississippi Chronic Wasting Disease confirmed in a White-tailed Deer

http://chronic-wasting-disease.blogspot.com/2018/02/mississippi-chronic-wasting-disease.html

TUESDAY, FEBRUARY 13, 2018

*** MISSISSIPPI STATE DEPARTMENT OF HEALTH Chronic Wasting Disease: Public Health Recommendations ***

http://chronic-wasting-disease.blogspot.com/2018/02/mississippi-state-department-of-health.html

WEDNESDAY, FEBRUARY 07, 2018

New Mexico Bans All Live Cervid Importation Due To CWD TSE Prion still NO Final 2017 Positives Update for N.M.

http://chronic-wasting-disease.blogspot.com/2018/02/new-mexico-bans-all-live-cervid.html

FRIDAY, FEBRUARY 09, 2018

Virginia 2017 Hunt Confirms 16 Cases Chronic Wasting Disease CWD TSE Prion

http://chronic-wasting-disease.blogspot.com/2018/02/virginia-2017-hunt-confirms-16-cases.html

MONDAY, FEBRUARY 05, 2018

Nebraska Chronic Wasting Disease CWD TSE Prion 2017 Survey Confirms 203 Positives From 1,807 Deer Sampled

http://chronic-wasting-disease.blogspot.com/2018/02/nebraska-chronic-wasting-disease-cwd.html

SATURDAY, FEBRUARY 03, 2018

Arkansas Reports 346 Positive CWD TSE Prion cases found as of January 8, 2018

http://chronic-wasting-disease.blogspot.com/2018/02/arkansas-reports-346-positive-cwd-tse.html

THURSDAY, FEBRUARY 08, 2018

Utah Chronic Wasting Disease CWD TSE Prion Update to date from 2017 Hunting Season

http://chronic-wasting-disease.blogspot.com/2018/02/utah-chronic-wasting-disease-cwd-tse.html

TUESDAY, JANUARY 30, 2018

Colorado Chronic Wasting Disease CWD TSE Prion 7/2015-6/2016 Results (2017?)

http://chronic-wasting-disease.blogspot.com/2018/01/colorado-chronic-wasting-disease-cwd.html

THURSDAY, JANUARY 25, 2018

Ohio Chronic Wasting Disease CWD TSE Prioin aka mad deer update 2016-2017 SEASON SUMMARY

http://chronic-wasting-disease.blogspot.com/2018/01/ohio-chronic-wasting-disease-cwd-tse.html

SATURDAY, JANUARY 20, 2018

Pennsylvania CWD TSE Prion Cases Explodes 51 deer from the 2017-18 hunting seasons have tested positive for CWD majority of samples collected still are being analyzed

http://chronic-wasting-disease.blogspot.com/2018/01/pennsylvania-cwd-tse-prion-cases.html

WEDNESDAY, JANUARY 24, 2018

Illinois Chronic Wasting Disease CWD TSE Prion cases mounting with 75 confirmed 2017 and 685 total to date

http://chronic-wasting-disease.blogspot.com/2018/01/illinois-chronic-wasting-disease-cwd.html

THURSDAY, FEBRUARY 08, 2018

Iowa DNR Wayne County Confirms CWD with 7 additional CWD positive tests so far from deer in northeast from 2017 season

http://chronic-wasting-disease.blogspot.com/2018/02/iowa-dnr-wayne-county-confirms-cwd-with.html

SATURDAY, FEBRUARY 10, 2018

Chronic wasting disease management in ranched elk using rectal biopsy testing Research Paper 09 Feb 2018

http://chronic-wasting-disease.blogspot.com/2018/02/chronic-wasting-disease-management-in.html

January 14, 2018

Missouri MDC REPORTS 15 NEW CASES OF CWD TSE Prion in Deer

http://chronic-wasting-disease.blogspot.com/2018/01/missouri-mdc-reports-15-new-cases-of.html

MONDAY, JANUARY 29, 2018

Wyoming, Hanna, WGFD diagnosed chronic wasting disease (CWD) for the first time in Deer Hunt Area 161

http://chronic-wasting-disease.blogspot.com/2018/01/wyoming-hanna-wgfd-diagnosed-chronic.html

MONDAY, JANUARY 29, 2018

North Dakota CWD Confirmed whitetail buck and a mule deer doe 2017 deer gun season from unit 3F2

http://chronic-wasting-disease.blogspot.com/2018/01/north-dakota-cwd-confirmed-whitetail.html

SUNDAY, FEBRUARY 18, 2018

Chronic Wasting Disease CWD TSE Prion RoundUp February 18, 2018

http://chronic-wasting-disease.blogspot.com/2018/02/chronic-wasting-disease-cwd-tse-

prion.html

TUESDAY, DECEMBER 12, 2017

*** Chronic Wasting Disease CWD TSE Prion (aka mad deer disease) Update USA December 14, 2017 ***

(zoonosis and environmental risk factors towards the bottom, after state by state reports)

http://chronic-wasting-disease.blogspot.com/2017/12/chronic-wasting-disease-cwd-tse-prion.html

MONDAY, MARCH 13, 2017

CHRONIC WASTING DISEASE CWD TSE PRION UDATE March 13, 2017

http://chronic-wasting-disease.blogspot.com/2017/03/chronic-wasting-disease-cwd-tse-prion.html

SATURDAY, JANUARY 14, 2017

CHRONIC WASTING DISEASE CWD TSE PRION GLOBAL UPDATE JANUARY 14, 2017

http://chronic-wasting-disease.blogspot.com/2017/01/chronic-wasting-disease-cwd-tse-prion.html

CWD, spreading it around...

for the game farm industry, and their constituents, to continue to believe that they are _NOT_, and or insinuate that they have _NEVER_ been part of the problem, will only continue to help spread cwd. the game farming industry, from the shooting pens, to the urine mills, the antler mills, the sperm mills, velvet mills, shooting pens, to large ranches, are not the only problem, but it is painfully obvious that they have been part of the problem for decades and decades, just spreading it around, as with transportation and or exportation and or importation of cervids from game farming industry, and have been proven to spread cwd. no one need to look any further than South Korea blunder ;

trucking and spreading cwd around...

Between 1996 and 2002, chronic wasting disease was diagnosed in 39 herds of farmed elk in Saskatchewan in a single epidemic. All of these herds were depopulated as part of the Canadian Food Inspection Agency's (CFIA) disease eradication program. Animals, primarily over 12 mo of age, were tested for the presence CWD prions following euthanasia. Twenty-one of the herds were linked through movements of live animals with latent CWD from a single infected source herd in Saskatchewan, 17 through movements of animals from 7 of the secondarily infected herds.

***The source herd is believed to have become infected via importation of animals from a game farm in South Dakota where CWD was subsequently diagnosed (7,4). A wide range in herd prevalence of CWD at the time of herd depopulation of these herds was observed. Within-herd transmission was observed on some farms, while the disease remained confined to the introduced animals on other farms.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2081988/

spreading cwd around...

Chronic Wasting Disease (CWD) outbreaks and surveillance program in the Republic of Korea
Chronic Wasting Disease (CWD) outbreaks and surveillance program in the Republic of Korea

Hyun-Joo Sohn, Yoon-Hee Lee, Min-jeong Kim, Eun-Im Yun, Hyo-Jin Kim, Won-Yong Lee, Dong-Seob Tark, In- Soo Cho, Foreign Animal Disease Research Division, National Veterinary Research and Quarantine Service, Republic of Korea

Chronic wasting disease (CWD) has been recognized as an important prion disease in native North America deer and Rocky mountain elks. The disease is a unique member of the transmissible spongiform encephalopathies (TSEs), which naturally affects only a few species. CWD had been limited to USA and Canada until 2000.

On 28 December 2000, information from the Canadian government showed that a total of 95 elk had been exported from farms with CWD to Korea.

These consisted of 23 elk in 1994 originating from the so-called "source farm" in Canada, and 72 elk in 1997, which had been held in pre export quarantine at the "source farm".

Based on export information of CWD suspected elk from Canada to Korea, CWD surveillance program was initiated by the Ministry of Agriculture and Forestry (MAF) in 2001.

All elks imported in 1997 were traced back, however elks imported in 1994 were impossible to identify.

CWD control measures included stamping out of all animals in the affected farm, and thorough cleaning and disinfection of the premises.

In addition, nationwide clinical surveillance of Korean native cervids, and improved measures to ensure reporting of CWD suspect cases were implemented.

*Total of 9 elks were found to be affected. CWD was designated as a notifiable disease under the Act for Prevention of Livestock Epidemics in 2002.

*Additional CWD cases - 12 elks and 2 elks - were diagnosed in 2004 and 2005.

*Since February of 2005, when slaughtered elks were found to be positive, all slaughtered cervid for human consumption at abattoirs were designated as target of the CWD surveillance program.

Currently, CWD laboratory testing is only conducted by National Reference Laboratory on CWD, which is the Foreign Animal Disease Division (FADD) of National Veterinary Research and Quarantine Service (NVRQS).

*In July 2010, one out of 3 elks from Farm 1 which were slaughtered for the human consumption was confirmed as positive.

*Consequently, all cervid - 54 elks, 41 Sika deer and 5 Albino deer - were culled and one elk was found to be positive.

Epidemiological investigations were conducted by Veterinary Epidemiology Division (VED) of NVRQS in collaboration with provincial veterinary services.

*Epidemiologically related farms were found as 3 farms and all cervid at these farms were culled and subjected to CWD diagnosis.

*Three elks and 5 crossbreeds (Red deer and Sika deer) were confirmed as positive at farm 2.

All cervids at Farm 3 and Farm 4 - 15 elks and 47 elks - were culled and confirmed as negative.

Further epidemiological investigations showed that these CWD outbreaks were linked to the importation of elks from Canada in 1994 based on circumstantial evidences.

*In December 2010, one elk was confirmed as positive at Farm 5.

*Consequently, all cervid - 3 elks, 11 Manchurian Sika deer and 20 Sika deer - were culled and one Manchurian Sika deer and seven Sika deer were found to be positive.

This is the first report of CWD in these sub-species of deer.

*Epidemiological investigations found that the owner of the Farm 2 in CWD outbreaks in July 2010 had co-owned the Farm 5.

*In addition, it was newly revealed that one positive elk was introduced from Farm 6 of Jinju-si Gyeongsang Namdo.

All cervid - 19 elks, 15 crossbreed (species unknown) and 64 Sika deer - of Farm 6 were culled, but all confirmed as negative.

: Corresponding author: Dr. Hyun-Joo Sohn (+82-31-467-1867, E-mail: shonhj@korea.kr)
2011 Pre-congress Workshop: TSEs in animals and their environment 5

http://www.prion2011.ca/files/2011TSEBookletV6Final.pdf

http://www.prion2011.ca/files/PRION_2011_-_Posters_(May_5-11).pdf

http://usdavskorea.blogspot.com/

http://chronic-wasting-disease.blogspot.com/2012/06/natural-cases-of-cwd-in-eight-sika-deer.html

Friday, May 13, 2011

Chronic Wasting Disease (CWD) outbreaks and surveillance program in the Republic of Korea

http://chronic-wasting-disease.blogspot.com/2011/05/chronic-wasting-disease-cwd-outbreaks.html

USA MAD DEER ROUNDUP

Feb. 16, 2018

Durkin: Stop private deer industry from trucking CWD across state

Patrick Durkin, For USA TODAY NETWORK-Wisconsin Published 10:13 a.m. CT Feb. 16, 2018

A Waupaca County captive-deer shooting preserve that discovered its first two cases of chronic wasting disease in October found 10 more CWD cases last fall, with 11 of the deer coming from a breeding facility in Iowa County — Wisconsin's most infected county.

Hunt's End Deer Ranch near Ogdensburg is one of 376 fenced deer farms in Wisconsin, according to the Department of Agriculture, Trade and Consumer Protection. Hunt's End bought the diseased deer from Windy Ridge Whitetails, a 15-acre, 110-deer breeding facility south of Mineral Point in Iowa County. Of Wisconsin's 4,175 CWD cases in wild deer, 2,261 (54 percent) are in Iowa County.

Since CWD's discovery in three wild deer shot during the November 2001 gun season, CWD has been detected on 18 Wisconsin deer farms, of which 11 were "depopulated." DATCP has identified 242 CWD cases in captive facilities the past 16 years.

The state's worst site remains the former Buckhorn Flats Game Farm near Almond in Portage County, where 80 deer tested positive for this always-fatal disease from 2002 to 2006. When the U.S. Department of Agriculture shot out the 70-acre pen in January 2006, 60 of the remaining 76 deer carried CWD, a nearly 80 percent infection rate.

The Department of Natural Resources bought the heavily contaminated site for $465,000 in 2011 and has kept it fenced and deer-free since.

The last time DATCP exterminated a captive herd was November 2015, when it killed 228 deer at Fairchild Whitetails, a 10-acre breeding facility in Eau Claire County, and paid its owner, Richard Vojtik, $298,770 in compensation. Tests revealed 34 of those deer carried CWD (15 percent), but two bucks had escaped earlier. Those bucks roamed five months before being shot and tested. They, too, had CWD.

Both operations were outside the endemic CWD region in southern Wisconsin; Buckhorn Flats by about 60 miles and Fairchild Whitetails by about 120. Wisconsin's four most active CWD outbreaks on deer farms are north of U.S. 10, and farther away from the endemic region — basically the DNR's Southern Farmlands district — which had 584 CWD cases 2017-18 and 4,148 since 2001.

Those businesses are:

• Wilderness Whitetails, near Eland in Marathon County: 68 CWD cases, including 43 in 2017-18. DATCP first reported CWD there in December 2013 in a 5-year-old buck shot by a facility client. The operation also found three cases in 2014, nine in 2015 and 12 in 2016.

The preserve held about 310 deer in its 351-acre pen last summer. Since beginning tests in 2002, the facility tested 373 deer before finding its first case 11 years later.

• Hunt's End, Waupaca County: 12 cases, all in 2017-18. The owners, Dusty and Mandy Reid, didn't detect CWD on the 84-acre shooting facility until two 4-year-old bucks tested positive last fall. DATCP announced those cases Oct. 20, and disclosed 10 additional cases in response to my open-records request in January.

Both Oct. 20 bucks originated from Windy Ridge Whitetails. Nine other bucks from Windy Ridge, owned by Steven and Marsh Bertram, tested positive for CWD after being shot by Hunt's End clients.

Now DATCP records covering the past five years showed Hunt's End acquired 31 deer from Windy Ridge, which also sent a combined 67 whitetails to nine other Wisconsin deer farms during that period.

Paul McGraw, DATCP's state veterinarian and administrator in animal health, quarantined three Hunt's End

properties Oct. 20, but let its owners, continue selling hunts because “properly handled dead animals leaving the premises do not pose a disease risk.”

McGraw also quarantined Windy Ridge, but the specifications let the business move more deer to the Waupaca shooting facility. It made two more shipments to Hunt’s End, the last occurring Nov. 13.

• Apple Creek Whitetails, Oconto County: 11 cases. Since discovering CWD in September 2016 in an 18-month-old doe killed inside the facility near Gillett, DATCP has identified 10 more cases, including three in 2017-18. The preserve held about 1,850 deer on 1,363 acres, and tested 466 in 2016. After first testing for CWD in 2009, the business processed 1,192 deer before finding its first case 18 months ago.

• Three Lakes Trophy Ranch, Oneida County: Nine cases. Since discovering CWD in December 2015 in a 3-year-old buck at Three Lakes, DATCP has identified eight more cases, including two in 2017-18. The preserve held about 545 whitetails on 570 acres.

Although the Hunt’s End outbreak traces to Iowa County deer, Windy Ridge Whitetails sent even more deer, 42, to Vojtik’s American Adventures Ranch near Fairchild with no documented problems. DATCP reports no CWD cases there, and Vojtik, who also owned the 10-acre Fairchild Whitetails breeding facility, said he hasn’t bought Windy Ridge deer the past two years.

Vojtik said Wednesday that he and his clients shoot out his enclosure’s herd of about 200 deer each year to reduce CWD risks. And because he’s not in DATCP’s herd-status program, he must only test 50 percent of deer dying there.

Meanwhile, Wilderness Whitetails tests all of its dead deer. It leads the state with 68 CWD cases, even though it has maintained a “closed herd” since opening its Eland facility in 2004, said its owner, Greg Flees, when reached Wednesday. Flees said all deer in the 351-acre facility were born there or came from his family’s Portage County breeding pen, which began in the 1970s and has never had CWD.

Flees said the jump from 12 CWD cases in 2016 to 43 in 2017 is no mystery or surprise. “We shot more deer to lower our densities, so we found more CWD,” he said. He thinks CWD was in the facility’s soils when they enclosed it with an 8-foot-high fence 14 years ago, or it arrived in alfalfa bales brought in for feed.

Perhaps the bigger mystery is why DATCP allows any deer from Iowa County to be shipped anywhere. Windy Ridge Whitetails is one of eight captive-deer facilities in CWD-infected counties — Sauk, Dane, Iowa, Rock, Walworth and Richland — enrolled in DATCP’s herd-status program, which allows deer transfers if facilities follow specified guidelines.

That won’t change soon, either. In a letter Jan. 30 responding to my open records request, Paul Dedinsky, DATCP’s chief legal counsel, wrote, “The Department is not proposing any rule changes to prohibit movement from CWD endemic areas.”

No doubt Wisconsin’s wild deer provide a vast, mostly undocumented pool for spreading CWD, but sick deer can only carry disease as far as they walk. With DATCP’s approval, privately owned deer could spread CWD wherever they’re trucked.

Patrick Durkin is a freelance writer who covers outdoors for USA TODAY NETWORK-Wisconsin. Email him at patrickdurkin56@gmail.com.

https://www.greenbaypressgazette.com/story/sports/outdoors/2018/02/16/durkin-stop-private-deer-industry-trucking-cwd-across-state/342532002/

FRIDAY, FEBRUARY 16, 2018

Wisconsin Stop private deer industry from trucking CWD across state

https://www.greenbaypressgazette.com/story/sports/outdoors/2018/02/16/durkin-stop-private-deer-industry-trucking-cwd-across-state/342532002/

MONDAY, MARCH 26, 2018

Wisconsin Rep. Milroy Wants More Action to Combat CWD TSE Prion aka Mad Deer Disease on Wisconsin's deer farms

http://chronic-wasting-disease.blogspot.com/2018/03/wisconsin-rep-milroy-wants-more-action.html

SATURDAY, MARCH 03, 2018

WISCONSIN CHRONIC WASTING DISEASE TSE Prion DNR Study Finds CWD-Infected Deer Die At 3 Times Rate Of Healthy Animals

http://chronic-wasting-disease.blogspot.com/2018/03/wisconsin-chronic-wasting-disease-tse.html

FRIDAY, FEBRUARY 16, 2018

Wisconsin Deer from Now-Quarantined PA Lancaster County Farm Tests Positive for Chronic Wasting Disease CWD TSE Prion

http://chronic-wasting-disease.blogspot.com/2018/02/wisconsin-deer-from-now-quarantined-pa.html

FRIDAY, JANUARY 26, 2018

WISCONSIN REPORTS 588 CWD TSE PRION POSITIVE CASES FOR 2017 WITH 4170 CASES CONFIRMED TO DATE

http://chronic-wasting-disease.blogspot.com/2018/01/wisconsin-reports-588-cwd-tse-prion.html

Tuesday, December 20, 2011

CHRONIC WASTING DISEASE CWD WISCONSIN Almond Deer (Buckhorn Flats) Farm Update DECEMBER 2011

The CWD infection rate was nearly 80%, the highest ever in a North American captive herd. RECOMMENDATION: That the Board approve the purchase of 80 acres of land for $465,000 for the Statewide Wildlife Habitat Program in Portage County and approve the restrictions on public use of the site.

SUMMARY:

http://dnr.wi.gov/about/nrb/2011/december/12-11-2b2.pdf

The overall incidence of clinical CWD in white-tailed deer was 82% Species (cohort) CWD (cases/total) Incidence (%) Age at CWD death (mo)

https://cpw.state.co.us/Documents/Hunting/BigGame/CWD/PDF/ResearchArticles/JWDEpiCWD.pdf

captive deer farmers breeders entitlement program, i.e. indemnity program, why?

how many states have $465,000., and can quarantine and purchase there from, each cwd said infected farm, but how many states can afford this for all the cwd infected cervid game ranch type farms, and why do tax payers have to pay for it ???

For Immediate Release Thursday, October 2, 2014

Dustin Vande Hoef 515/281-3375 or 515/326-1616 (cell) or Dustin.VandeHoef@IowaAgriculture.gov

*** TEST RESULTS FROM CAPTIVE DEER HERD WITH CHRONIC WASTING DISEASE RELEASED 79.8 percent of the deer tested positive for the disease ***

DES MOINES – The Iowa Department of Agriculture and Land Stewardship today announced that the test results from the depopulation of a quarantined captive deer herd in north-central Iowa showed that 284 of the 356 deer, or 79.8% of the herd, tested positive for Chronic Wasting Disease (CWD).

http://www.iowaagriculture.gov/press/2014press/press10022014.asp

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CWD is a progressive, fatal, degenerative neurological disease of farmed and free-ranging deer, elk, and moose. There is no known treatment or vaccine for CWD. CWD is not a disease that affects humans.

On July 18, 2012, USDA Animal and Plant Health Inspection Service's (APHIS) National Veterinary Services Lab in Ames, IA confirmed that a male white tail deer harvested from a hunting preserve in southeast IA was positive for CWD. An investigation revealed that this animal had just been introduced into the hunting preserve from the above-referenced captive deer herd in north-central Iowa.

The captive deer herd was immediately quarantined to prevent the spread of CWD. The herd has remained in quarantine until its depopulation on August 25 to 27, 2014.

The Iowa Department of Agriculture and Land Stewardship participated in a joint operation to depopulate the infected herd with USDA Veterinary Services, which was the lead agency, and USDA Wildlife Services.

Federal indemnity funding became available in 2014. USDA APHIS appraised the captive deer herd of 376 animals at that time, which was before depopulation and testing, at $1,354,250. At that time a herd plan was developed with the owners and officials from USDA and the Iowa Department of Agriculture and Land Stewardship.

Once the depopulation was complete and the premises had been cleaned and disinfected, indemnity of $917,100.00 from the USDA has been or will be paid to the owners as compensation for the 356 captive deer depopulated.

The Iowa Department of Agriculture and Land Stewardship operates a voluntary CWD program for farms that sell live animals. Currently 145 Iowa farms participate in the voluntary program. The above-referenced captive deer facility left the voluntary CWD program prior to the discovery of the disease as they had stopped selling live animals. All deer harvested in a hunting preserve must be tested for CWD.

-30-

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INFORM: Cervid Health and States Indemnity FY 2015

USDA Animal and Plant Health Inspection Service sent this bulletin at 09/19/2014 05:22 PM EDT

Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) received a total of $3 million in appropriated funding to support cervid health activities in fiscal year (FY) 2014, and made approximately $1.0 million of this funding available for indemnity of chronic wasting disease (CWD) positive, suspect, and exposed farmed cervids. All of the available FY2014 indemnity funding was used to depopulate three CWD-infected herds. However, several States have asked about the availability of Federal indemnity funds for CWD-exposed animals in the future.

VS plans to offer Federal indemnity for CWD-exposed cervids beginning in FY2015. Briefly, we will prioritize the highest risk CWD-exposed animals for indemnity based on the availability of funding. Any newly reported CWD-positive herds will be considered for indemnity as they are identified, based first on funding availability and secondly on the risk presented by the herd.

We will reassess our fiscal year funding on a quarterly basis so that providing indemnity for exposed animals

does not exhaust available funding early in the fiscal year. By taking this fiscally cautious approach, we hope to provide indemnity for positive herds identified later in the fiscal year while removing high-risk animals from the landscape as soon as possible to minimize the risk for disease spread. Further, removal and testing of these exposed animals will provide a better understanding of the disease risk presented by these animals/herds.

VS plans to work with our State and industry stakeholders on the criteria to assess the risk and on the process through which States can request this indemnity. These will be finalized in a VS Guidance Document in the near future. We look forward to working with you to implement this process in the coming year.

***

http://content.govdelivery.com/accounts/USDAAPHIS/bulletins/d05806

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• Wilderness Whitetails, near Eland in Marathon County: 68 CWD cases, including 43 in 2017-18. DATCP first reported CWD there in December 2013 in a 5-year-old buck shot by a facility client. The operation also found three cases in 2014, nine in 2015 and 12 in 2016.

The preserve held about 310 deer in its 351-acre pen last summer. Since beginning tests in 2002, the facility tested 373 deer before finding its first case 11 years later.

• Hunt's End, Waupaca County: 12 cases, all in 2017-18. The owners, Dusty and Mandy Reid, didn't detect CWD on the 84-acre shooting facility until two 4-year-old bucks tested positive last fall. DATCP announced those cases Oct. 20, and disclosed 10 additional cases in response to my open-records request in January.

Both Oct. 20 bucks originated from Windy Ridge Whitetails. Nine other bucks from Windy Ridge, owned by Steven and Marsh Bertram, tested positive for CWD after being shot by Hunt's End clients.

Now DATCP records covering the past five years showed Hunt's End acquired 31 deer from Windy Ridge, which also sent a combined 67 whitetails to nine other Wisconsin deer farms during that period.

Paul McGraw, DATCP's state veterinarian and administrator in animal health, quarantined three Hunt's End properties Oct. 20, but let its owners, continue selling hunts because "properly handled dead animals leaving the premises do not pose a disease risk."

McGraw also quarantined Windy Ridge, but the specifications let the business move more deer to the Waupaca shooting facility. It made two more shipments to Hunt's End, the last occurring Nov. 13.

• Apple Creek Whitetails, Oconto County: 11 cases. Since discovering CWD in September 2016 in an 18-month-old doe killed inside the facility near Gillett, DATCP has identified 10 more cases, including three in 2017-18. The preserve held about 1,850 deer on 1,363 acres, and tested 466 in 2016. After first testing for CWD in 2009, the

business processed 1,192 deer before finding its first case 18 months ago.

• Three Lakes Trophy Ranch, Oneida County: Nine cases. Since discovering CWD in December 2015 in a 3-year-old buck at Three Lakes, DATCP has identified eight more cases, including two in 2017-18. The preserve held about 545 whitetails on 570 acres.

Although the Hunt's End outbreak traces to Iowa County deer, Windy Ridge Whitetails sent even more deer, 42, to Vojtik's American Adventures Ranch near Fairchild with no documented problems. DATCP reports no CWD cases there, and Vojtik, who also owned the 10-acre Fairchild Whitetails breeding facility, said he hasn't bought Windy Ridge deer the past two years.

Vojtik said Wednesday that he and his clients shoot out his enclosure's herd of about 200 deer each year to reduce CWD risks. And because he's not in DATCP's herd-status program, he must only test 50 percent of deer dying there.

Meanwhile, Wilderness Whitetails tests all of its dead deer. It leads the state with 68 CWD cases, even though it has maintained a "closed herd" since opening its Eland facility in 2004, said its owner, Greg Flees, when reached Wednesday. Flees said all deer in the 351-acre facility were born there or came from his family's Portage County breeding pen, which began in the 1970s and has never had CWD.

Flees said the jump from 12 CWD cases in 2016 to 43 in 2017 is no mystery or surprise. "We shot more deer to lower our densities, so we found more CWD," he said. He thinks CWD was in the facility's soils when they enclosed it with an 8-foot-high fence 14 years ago, or it arrived in alfalfa bales brought in for feed.

Perhaps the bigger mystery is why DATCP allows any deer from Iowa County to be shipped anywhere. Windy Ridge Whitetails is one of eight captive-deer facilities in CWD-infected counties — Sauk, Dane, Iowa, Rock, Walworth and Richland — enrolled in DATCP's herd-status program, which allows deer transfers if facilities follow specified guidelines.

That won't change soon, either. In a letter Jan. 30 responding to my open records request, Paul Dedinsky, DATCP's chief legal counsel, wrote, "The Department is not proposing any rule changes to prohibit movement from CWD endemic areas."

No doubt Wisconsin's wild deer provide a vast, mostly undocumented pool for spreading CWD, but sick deer can only carry disease as far as they walk. With DATCP's approval, privately owned deer could spread CWD wherever they're trucked.

Patrick Durkin is a freelance writer who covers outdoors for USA TODAY NETWORK-Wisconsin. Email him at patrickdurkin56@gmail.com.

https://www.greenbaypressgazette.com/story/sports/outdoors/2018/02/16/durkin-stop-private-deer-industry-trucking-cwd-across-state/342532002/

FRIDAY, FEBRUARY 16, 2018

Wisconsin Stop private deer industry from trucking CWD across state

https://www.greenbaypressgazette.com/story/sports/outdoors/2018/02/16/durkin-stop-private-deer-industry-trucking-cwd-across-state/342532002/

Tuesday, December 20, 2011

CHRONIC WASTING DISEASE CWD WISCONSIN Almond Deer (Buckhorn Flats) Farm Update DECEMBER 2011

The CWD infection rate was nearly 80%, the highest ever in a North American captive herd. RECOMMENDATION: That the Board approve the purchase of 80 acres of land for $465,000 for the Statewide Wildlife Habitat Program in Portage County and approve the restrictions on public use of the site.

SUMMARY:

http://dnr.wi.gov/about/nrb/2011/december/12-11-2b2.pdf

captive deer farmers breeders entitlement program, i.e. indemnity program, why?

how many states have $465,000., and can quarantine and purchase there from, each cwd said infected farm, but how many states can afford this for all the cwd infected cervid game ranch type farms, and why do tax payers have to pay for it ???

For Immediate Release Thursday, October 2, 2014

Dustin Vande Hoef 515/281-3375 or 515/326-1616 (cell) or Dustin.VandeHoef@IowaAgriculture.gov

*** TEST RESULTS FROM CAPTIVE DEER HERD WITH CHRONIC WASTING DISEASE RELEASED 79.8 percent of the deer tested positive for the disease ***

DES MOINES – The Iowa Department of Agriculture and Land Stewardship today announced that the test results from the depopulation of a quarantined captive deer herd in north-central Iowa showed that 284 of the 356 deer, or 79.8% of the herd, tested positive for Chronic Wasting Disease (CWD).

http://www.iowaagriculture.gov/press/2014press/press10022014.asp

For Immediate Release

Thursday, October 2, 2014

Dustin Vande Hoef 515/281-3375 or 515/326-1616 (cell) or Dustin.VandeHoef@IowaAgriculture.gov Share on facebook Share on twitter Share on email Share on print More Sharing Services 1

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CWD is a progressive, fatal, degenerative neurological disease of farmed and free-ranging deer, elk, and moose. There is no known treatment or vaccine for CWD. CWD is not a disease that affects humans.

On July 18, 2012, USDA Animal and Plant Health Inspection Service’s (APHIS) National Veterinary Services Lab in Ames, IA confirmed that a male white tail deer harvested from a hunting preserve in southeast IA was positive for CWD. An investigation revealed that this animal had just been introduced into the hunting preserve from the above-referenced captive deer herd in north-central Iowa.

The captive deer herd was immediately quarantined to prevent the spread of CWD. The herd has remained in quarantine until its depopulation on August 25 to 27, 2014.

The Iowa Department of Agriculture and Land Stewardship participated in a joint operation to depopulate the infected herd with USDA Veterinary Services, which was the lead agency, and USDA Wildlife Services.

Federal indemnity funding became available in 2014. USDA APHIS appraised the captive deer herd of 376

animals at that time, which was before depopulation and testing, at $1,354,250. At that time a herd plan was developed with the owners and officials from USDA and the Iowa Department of Agriculture and Land Stewardship.

Once the depopulation was complete and the premises had been cleaned and disinfected, indemnity of $917,100.00 from the USDA has been or will be paid to the owners as compensation for the 356 captive deer depopulated.

The Iowa Department of Agriculture and Land Stewardship operates a voluntary CWD program for farms that sell live animals. Currently 145 Iowa farms participate in the voluntary program. The above-referenced captive deer facility left the voluntary CWD program prior to the discovery of the disease as they had stopped selling live animals. All deer harvested in a hunting preserve must be tested for CWD.

-30-

http://www.iowaagriculture.gov/press/2014press/press10022014.asp

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http://www.iowaagriculture.gov/press/2014press/press10022014.asp

INFORM: Cervid Health and States Indemnity FY 2015

USDA Animal and Plant Health Inspection Service sent this bulletin at 09/19/2014 05:22 PM EDT

Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) received a total of $3 million in appropriated funding to support cervid health activities in fiscal year (FY) 2014, and made approximately $1.0 million of this funding available for indemnity of chronic wasting disease (CWD) positive, suspect, and exposed farmed cervids. All of the available FY2014 indemnity funding was used to depopulate three CWD-infected herds. However, several States have asked about the availability of Federal indemnity funds for CWD-exposed animals in the future.

VS plans to offer Federal indemnity for CWD-exposed cervids beginning in FY2015. Briefly, we will prioritize the highest risk CWD-exposed animals for indemnity based on the availability of funding. Any newly reported CWD-positive herds will be considered for indemnity as they are identified, based first on funding availability and secondly on the risk presented by the herd.

We will reassess our fiscal year funding on a quarterly basis so that providing indemnity for exposed animals does not exhaust available funding early in the fiscal year. By taking this fiscally cautious approach, we hope to provide indemnity for positive herds identified later in the fiscal year while removing high-risk animals from the landscape as soon as possible to minimize the risk for disease spread. Further, removal and testing of these exposed animals will provide a better understanding of the disease risk presented by these animals/herds.

VS plans to work with our State and industry stakeholders on the criteria to assess the risk and on the process through which States can request this indemnity. These will be finalized in a VS Guidance Document in the near future. We look forward to working with you to implement this process in the coming year.

***

http://content.govdelivery.com/accounts/USDAAPHIS/bulletins/d05806

$$$ indemnity, welfare for deer farmers, or, an entitlement program, paid for by taxpayers, paying to play, for farming cwd, on the backs of the tax payers...imo...tss

WEDNESDAY, MARCH 07, 2018

Michigan DNR CWD National Perspective: Captive Herd Certification Program - Dr. Tracy Nichols

CURRENT STATUS OF CWD IN CAPTIVE CERVID HERDS IN 16 STATES AS OF MAY 2017

43 ELK HERDS

37 WTD HERDS

1 RED DEER HERD

6 MIX SPECIES HERDS

85 CWD-POSITIVE CAPTIVE HERDS

snip...see

http://chronic-wasting-disease.blogspot.com/2018/03/michigan-dnr-cwd-national-perspective.html

THURSDAY, MARCH 22, 2018

TEXAS CWD TSE PRION JUMP TO 100 POSITIVE, NEW CASES 17 BREEDER, 1 BREEDER RELEASE, AND 1 WILD SINCE JAN 31, 2018

http://chronic-wasting-disease.blogspot.com/2018/03/texas-cwd-tse-prion-jump-to-100.html

TUESDAY, MARCH 27, 2018

Texas Chronic Wasting Disease CWD TSE Prion Mad Deer Disease TPWD EXPANDS CONTAINMENT ZONE IN PANHANDLE

http://chronic-wasting-disease.blogspot.com/2018/03/texas-chronic-wasting-disease-cwd-tse.html

SATURDAY, MARCH 03, 2018

Minnesota CWD All seven of the remaining white-tailed deer on farm Positive

http://chronic-wasting-disease.blogspot.com/2018/03/minnesota-cwd-all-seven-of-remaining.html

FRIDAY, NOVEMBER 24, 2017

Todd Robbins-Miller President of Minnesota Deer Farmers Association is oblivious to Chronic Wasting CWD TSE PRION DISEASE risk factors

http://chronic-wasting-disease.blogspot.com/2017/11/todd-robbins-miller-president-of.html

02/28/2018

NEW CWD MANAGEMENT AREA ESTABLISHED

HARRISBURG, PA - People who live and hunt deer within parts of Lancaster, Lebanon and Berks counties now need to comply with special rules intended to slow the spread of chronic wasting disease (CWD).

The Pennsylvania Game Commission today established Disease Management Area 4 (DMA 4) in response to a CWD-positive deer recently detected at a captive deer farm in Lancaster County.

DMA 4 encompasses 346 square miles in northeastern Lancaster County, southeastern Lebanon County and western Berks County. The northern part of DMA 4 runs roughly between the cities of Lebanon and Reading. The DMA includes the boroughs of Adamstown, Denver, Ephrata, Mohnton, Richland, Womelsdorf and Wyomissing. State Game Lands 46, 220, 225, 274 and 425 are included in DMA 4.

Within DMAs, special rules apply. The intentional feeding of deer is prohibited. Hunters may not use urine-based deer attractants or possess them while afield. And hunters who harvest deer within a DMA may not transport the carcass outside the DMA without first removing and properly disposing of all high-risk deer parts, including the head and backbone.

While the rules might pose an inconvenience, they are meant to slow the spread of CWD, which so far has been detected in only a few parts of the state.

‘‘CWD is an increasing problem in Pennsylvania, and as the disease emerges in new areas, more Pennsylvanians are impacted,” said Game Commission Executive Director Bryan Burhans. “To this point, however, CWD has been detected in captive or free-ranging deer only in a few, isolated areas of the state. That’s good news for all Pennsylvanians who enjoy deer and deer hunting. And we continue to focus our resources on ways to minimize CWD’s impacts statewide.”

CWD, which is always fatal to deer, elk and other cervids, first was detected in Pennsylvania in 2012 at a captive deer farm in Adams County. CWD has been detected among free-ranging deer in two areas of the state.

In addition to establishing DMA 4, the Game Commission will increase its CWD sampling there.

Within DMA 4, the agency will begin testing all known road-killed deer for CWD. Come hunting season, bins for the collection of deer heads and other high-risk deer parts will be placed in areas for the public to use. Hunters who deposit the heads of the deer they harvest in designated collection bins will be able to have their deer tested, free of charge. And DMAP permits

for use within DMA 4 will be available for purchase.

Wayne Laroche, the Game Commission's special assistant for CWD response, said increased sampling within DMA 4 is necessary to find out whether CWD exists among free-ranging deer there, and adjust the response accordingly.

‘‘We need to know the full extent of the CWD problem in any area where the disease exists," Laroche said. "We have not detected CWD among free-ranging deer in DMA 4, and maybe we won't. But if CWD is out there, we surely need to know about it to confront it head-on."

Information on CWD and Pennsylvania's DMAs, including maps of all DMAs, is available at www.pgc.pa.gov.

DMA 4 boundary

The exact boundary of DMA 4 is as follows: Beginning in the northwestern extent of the DMA in the city of Lebanon, at the intersection of state Route 897 and U.S. Route 422, proceed east on U.S. Route 422 for 12.3 miles to state Route 419. Turn left on state Route 419 and proceed north for 2.3 miles to Christmas Village Road (state Route 4010). Turn right, proceeding east on Christmas Village Road for 5.1 miles to North Heidelberg Road (state Route 3033). Turn left on North Heidelberg Road, proceeding northeast for 0.6 miles to state Route 183. Turn right on state Route 183, proceeding southeast for 7.7 miles to the U.S. 222. Turn right on U.S. 222 proceeding southwest for 3.2 miles to the interchange with U.S. Route 422 Bypass. Proceed on U.S. Route 422 Bypass for 2.4 miles to intersection with Business Route 222E (Lancaster Avenue). Proceed south on Business 222E for 0.6 miles to the intersection with state Route 625. Turn left onto state Route 625 and proceed south for 16.7 miles to the intersection with Route 23. Turn right on Route 23, proceeding westerly for 9.7 miles to intersection with state Route 772 (Glenbrook Road). Turn right on state Route 772, proceeding northwest for 9.3 miles to state Route 501 (Furnace Hills Pike). Turn right on state Route 501, proceeding northerly for 5 miles to the intersection with U.S. Route 322 (West 28th Division Highway). Turn left on U.S. Route 322, proceeding westerly for 1.3 miles to the Pennsylvania Turnpike (U.S. Route 76). Move right along U.S. Route 76, proceeding east for 0.7 miles to the western boundary of State Game Lands 46. Proceed north, then east for 1.2 miles along the game lands boundary to state Route 501 (Furnace Hills Pike). Turn left on state Route 501, proceeding north for 4.1 miles to the intersection with state Route 419. Turn left, proceeding west for 0.1 miles to state Route 897 (South 5th Street). Turn right on state Route 897, proceeding northwest for 6.2 miles to the starting point at the intersection of state Route 897 and U.S. Route 422.

CWD in Pennsylvania

In Pennsylvania, the Game Commission oversees the management and protection of all free-ranging deer, while farm-raised deer and facilities are overseen by the state Department of Agriculture. The agencies work together to monitor chronic wasting disease.

After CWD was detected in 2012 at a captive deer farm in Adams County, the Game Commission established Disease Management Area 1 (DMA 1), a nearly 600-square-mile area in Adams and York counties, in which restrictions regarding the hunting and feeding of deer applied.

CWD was detected among free-ranging deer a few months later, in three deer harvested by hunters in Bedford and Blair counties in the 2012 firearms season. The deer were detected through the Game Commission's ongoing CWD surveillance program.

Those CWD-positive deer resulted in the creation of DMA 2, which initially encompassed nearly 900 square miles in parts of Bedford, Blair, Cambria and Huntingdon counties, but since has expanded annually due to the detection of additional free-ranging and captive CWD-positive deer. DMA 2 now encompasses more than 2,845 square miles in parts of Adams, Bedford, Blair Cambria, Clearfield, Cumberland, Franklin, Fulton, Huntingdon and Somerset counties.

So far, 104 free-ranging CWD-positive deer, and 46 of CWD-positive captive deer, have been detected within DMA 2.

In 2014, CWD was detected at a captive deer farm in Jefferson County, leading to the creation of DMA 3, which encompasses about 350 square miles in parts of Clearfield, Indiana and Jefferson counties. In July 2017, a sick-looking adult buck euthanized a month earlier on state game lands in Clearfield County, within DMA 3, was confirmed as CWD-positive. An additional CWD-positive deer was detected within DMA 3 in the 2017-18 hunting season.

In 2017, the Game Commission eliminated DMA 1 after five years of monitoring, which included the testing of 4,800 wild deer; CWD never was found in the wild within DMA 1.

Hunters harvesting deer within DMAs are prohibited from transporting the high-risk parts of those deer (head and backbone) outside the DMA. If those hunters live outside the DMA, and are processing the deer themselves, they must remove and properly dispose of the high-risk parts before taking other parts of the deer home.

Deer meat may be transported outside a DMA so long as the head and backbone have been removed. Antlers may also be transported from a DMA if the skull plate is free of visible brain material.

Hunters using professional meat processors to process the meat from deer they harvest within a DMA must take the deer to processors within the DMA, or otherwise included on the list of approved processors associated with that DMA. There's also a list of approved taxidermists associated with each DMA.

The feeding of deer and the use or field possession of urine-based deer lures while hunting also are prohibited within DMAs.

MEDIA CONTACT: Travis Lau - 717-705-6541

# # #

http://www.media.pa.gov/Pages/Game-Commission-Details.aspx?newsid=196

FRIDAY, FEBRUARY 23, 2018

Pennsylvania NEW CWD MANAGEMENT AREA TO BE ANNOUNCED

http://chronic-wasting-disease.blogspot.com/2018/02/pennsylvania-new-cwd-management-area-to.html

MONDAY, FEBRUARY 12, 2018

Pennsylvania CWD TSE Prion has been found in captive deer in Huntingdon and Lancaster counties

http://chronic-wasting-disease.blogspot.com/2018/02/pennsylvania-cwd-tse-prion-has-been.html

ATURDAY, JANUARY 20, 2018

Pennsylvania CWD TSE Prion Cases Explodes 51 deer from the 2017-18 hunting seasons have tested positive for CWD majority of samples collected still are being analyzed

http://chronic-wasting-disease.blogspot.com/2018/01/pennsylvania-cwd-tse-prion-cases.html

FRIDAY, DECEMBER 15, 2017

Pennsylvania Four Deer Test Positive for Chronic Wasting Disease on Franklin, Fulton County Quarantined Hunting Preserves

http://chronic-wasting-disease.blogspot.com/2017/12/pennsylvania-four-deer-test-positive.html

THURSDAY, SEPTEMBER 28, 2017

Pennsylvania GAME COMMISSION OFFERS FREE CWD TESTS FOR DMA-HARVESTED DEER

http://chronic-wasting-disease.blogspot.com/2017/09/pennsylvania-game-commission-offers.html

THURSDAY, SEPTEMBER 21, 2017

Pennsylvania Game Commission has scheduled a series of public meetings to ensure Pennsylvanians remain informed about chronic wasting disease CWD TSE Prion

http://chronic-wasting-disease.blogspot.com/2017/09/pennsylvania-game-commission-has.html

SATURDAY, AUGUST 12, 2017

*** Pennsylvania 27 deer from Bedford County farm test positive for chronic wasting disease ***

http://chronic-wasting-disease.blogspot.com/2017/08/pennsylvania-27-deer-from-bedford.html

WEDNESDAY, JULY 12, 2017

PENNSYLVANIA CWD FOUND IN THE WILD IN CLEARFIELD COUNTY

http://chronic-wasting-disease.blogspot.com/2017/07/pennsylvania-cwd-found-in-wild-in.html

THURSDAY, JUNE 01, 2017

PENNSYLVANIA Third Case of CWD Discovered in a Captive Deer Farm in Four Months

http://chronic-wasting-disease.blogspot.com/2017/06/pennsylvania-third-case-of-cwd.html

Chronic wasting disease research becomes more crucial as cases grow in Pa. deer With fatal deer disease on the rise, Penn State researchers hunt for answers to help limit CWD's spread Jeff Mulhollem May 23, 2017 UNIVERSITY PARK, Pa, — The recent announcement by the Pennsylvania Game Commission that it found 25 more wild deer with chronic wasting disease last year underlines the importance of studies being conducted by a team of researchers in Penn State's College of Agricultural Sciences.

With the overarching goal of determining how the always-fatal-to-cervids disease will disburse through the state's free-ranging white-tailed deer herd, the research is aimed at informing the commission's efforts to slow or limit the spread of the disease, according to David Walter, adjunct assistant professor of wildlife ecology.

Often referred to as CWD, chronic wasting disease infects the brain and nervous system of cervids. The illness, which belongs to a group of diseases known as transmissible spongiform encephalopathies, or prion diseases, eventually produces enough damage to the brains of affected animals to result in death. While CWD is similar to so-called mad cow disease in cattle and scrapie in sheep, there is no known relationship between them.

There is no strong evidence, either, that humans can contract CWD, according to the U.S. Centers for Disease Control and Prevention, although the disease is similar to Creutzfeldt-Jakob disease, a rare, fatal syndrome that afflicts people.

Walter, who is assistant unit leader of the Pennsylvania Cooperative Fish and Wildlife Research Unit at Penn State, conducted research from 2007 to 2011 on the spread of the disease in Colorado and Nebraska in free-ranging mule deer and white-tailed deer. Since coming to Penn State in 2012, he has concentrated on the CWD outbreak spreading through deer herds in Virginia, West Virginia, Maryland and Pennsylvania.

Working under Walter's guidance in 2013-14, master's degree student Tyler Evans, now a wildlife biologist with the West Virginia Department of Natural Resources, investigated the geographic coordinates where deer testing positive for CWD were found, and he modeled the likely future spread of the disease in Pennsylvania.

Miller and a deer head Chronic wasting disease infects the brain and nervous system of cervids, and animals cannot be tested while they are alive. Here, researcher Will Miller (left) samples a deer head for the disease.

Image: Penn State "That research looked at what environmental variables were associated with the presence or absence of chronic wasting disease in the Northeast," Walter said. "We obtained the geographic coordinates of hunter-killed deer that tested positive for CWD and overlaid them on a map showing a variety of habitat and landscape features. The analysis showed a high prevalence of CWD in deer sampled from low-lying open and developed landscapes."

Now, Walter's advisee Will Miller, a doctoral degree candidate in the Intercollege Graduate Degree Program in Ecology, is continuing to study the spread of CWD in Pennsylvania. But he is focusing on whether some deer might be susceptible to the disease because of their genes, and how genetic variation in deer might influence where and how fast the disease spreads.

"It appears that deer in Pennsylvania's Northern Tier are less related to those in Maryland and in southern Pennsylvania," Walter said. "That may well have implications for how CWD spreads."

Walter and Miller are slated to travel to Edinburgh, Scotland, in late May to attend an international conference focused on prions and diseases the mysterious proteins cause. At the conference, Miller will present findings of his research focusing on genetic susceptibility of some deer in Pennsylvania to chronic wasting disease.

Detected in captive and free-ranging deer and elk in 23 states and two Canadian provinces, CWD was found last year in reindeer in Norway, Walter pointed out. "The Europeans are eager to learn what we know about the disease, based on our experience in North America," he said. "But despite all that we are learning about the disease, there is much we still don't know."

In the case of the outbreak in Pennsylvania's wild deer, that includes how the disease infected free-ranging deer in Pennsylvania. Among the possible sources, two include captive deer and wild deer moving from Maryland. Although researchers have seen evidence that deer may carry the disease over the border with Maryland, the Pennsylvania counties of Blair and Bedford, where CWD originally was found in 2012, also had the highest inventories of captive cervids in Pennsylvania.

map showing CWD outbreaks Genetics research focusing on "microsatellite markers" in white-tailed deer in Pennsylvania and surrounding states has indicated four clusters within deer herds with animal movement more likely within a cluster than between clusters.

Image: Penn State The location of the original outbreak, which was more than 40 miles from the Maryland border, makes it difficult to confirm the actual source of infection.

"In southern Fulton and Bedford counties, we have seen more CWD-positive deer along the border," Walter said. "We have seen over time that it is likely the disease is moving into this area from the West Virginia-Maryland outbreak."

The Game Commission tests both hunter-killed deer and animals killed on highways in parts of the state for CWD to assess the dimensions of the outbreak, Walter noted. The dual approach addresses sampling bias built into testing hunter harvests.

Because hunters are restricted by antler regulations from killing young male deer, and they mostly pass on taking young females and button bucks, some reached the mistaken conclusion that the disease primarily infects older deer. But road kills show that is not the case, Walter explained.

"It is a chronic disease, so it takes a while for the animal to succumb, but there is a fallacy out there that young deer can't get it — but they do, and we are detecting it now. Wisconsin has found CWD in fawns," he said.

"Most of the road kills with CWD are yearling males and females. We don't see that in hunter harvests, so our data from across the country has been skewed. Collecting and testing road kills has been a great investment of resources,

and it has proved to be very valuable in finding this disease in areas we wouldn't find it otherwise."

Chronic wasting disease is not established in Pennsylvania yet, the way it is in Wisconsin and West Virginia, Walter believes, and he would like to see the Game Commission and state Department of Agriculture take steps, such as targeted culling of deer in CWD hotspots, to keep it at bay.

MEDIA CONTACTS: Jeff Muhollem jjm29@psu.edu Work Phone: 814-863-2719

http://news.psu.edu/story/469493/2017/05/23/research/chronic-wasting-disease-research-becomes-more-crucial-cases-grow-pa

MONDAY, MAY 15, 2017

Pennsylvania 25 more deer test positive for CWD TSE PRION in the wild

http://chronic-wasting-disease.blogspot.com/2017/05/pennsylvania-25-more-deer-test-positive.html

WEDNESDAY, MARCH 01, 2017

South central Pennsylvania Captive Deer Tests Positive for Chronic Wasting Disease

http://chronic-wasting-disease.blogspot.com/2017/03/south-central-pennsylvania-captive-deer.html

FRIDAY, JANUARY 13, 2017

Pennsylvania Deer Tests Positive for Chronic Wasting Disease four-year-old white-tailed deer Franklin County Hunting Preserve

http://chronic-wasting-disease.blogspot.com/2017/01/pennsylvania-deer-tests-positive-for.html

Wednesday, May 11, 2016

PENNSYLVANIA TWELVE MORE CASES OF CWD FOUND: STATE GEARS UP FOR ADDITIONAL CONTROL MEASURES

http://chronic-wasting-disease.blogspot.com/2016/05/pennsylvania-twelve-more-cases-of-cwd.html

Sunday, October 18, 2015

*** Pennsylvania Game Commission Law and Law Makers CWD TSE PRION Bans Singeltary 2002 from speaking A smelly situation UPDATED 2015

http://chronic-wasting-disease.blogspot.com/2015/10/pennsylvania-game-commission-law-and.html

Saturday, November 07, 2015

PENNSYLVANIA CHRONIC WASTING DISEASE CWD TSE PRION RULES EXPAND

http://chronic-wasting-disease.blogspot.com/2015/11/pennsylvania-chronic-wasting-disease.html

Saturday, November 07, 2015

Pennsylvania 2015 September Minutes CWD Urine Scents

http://chronic-wasting-disease.blogspot.com/2015/11/pennsylvania-2015-september-minutes-cwd.html

Tuesday, May 05, 2015

Pennsylvania CWD DETECTED IN SIX MORE FREE-RANGING DEER Disease Management Area 2 again expanded due to new cases Release #030-15

http://chronic-wasting-disease.blogspot.com/2015/05/pennsylvania-cwd-detected-in-six-more.html

Sunday, July 13, 2014

Louisiana deer mystery unleashes litigation 6 does still missing from CWD index herd in Pennsylvania Great Escape

http://chronic-wasting-disease.blogspot.com/2014/07/louisiana-deer-mystery-unleashes.html

Saturday, June 29, 2013

PENNSYLVANIA CAPTIVE CWD INDEX HERD MATE YELLOW *47 STILL RUNNING LOOSE IN INDIANA, YELLOW NUMBER 2 STILL MISSING, AND OTHERS ON THE RUN STILL IN LOUISIANA

http://chronic-wasting-disease.blogspot.com/2013/06/pennsylvania-captive-cwd-index-herd.html

Tuesday, June 11, 2013

*** CWD GONE WILD, More cervid escapees from more shooting pens on the loose in Pennsylvania

http://chronic-wasting-disease.blogspot.com/2013/06/cwd-gone-wild-more-cervid-escapees-from.html

Tuesday, May 28, 2013

Chronic Wasting Disease CWD quarantine Louisiana via CWD index herd Pennsylvania Update May 28, 2013

*** 6 doe from Pennsylvania CWD index herd still on the loose in Louisiana, quarantine began on October 18, 2012, still ongoing, Lake Charles premises.

http://chronic-wasting-disease.blogspot.com/2013/05/chronic-wasting-disease-cwd-quarantine.html

Sunday, January 06, 2013

USDA TO PGC ONCE CAPTIVES ESCAPE

*** "it‘s no longer its business.”

http://chronic-wasting-disease.blogspot.com/2013/01/usda-to-pgc-once-captives-escape-its-no.html

Wednesday, November 14, 2012

PENNSYLVANIA 2012 THE GREAT ESCAPE OF CWD INVESTIGATION MOVES INTO LOUISIANA and INDIANA

http://chronic-wasting-disease.blogspot.com/2012/11/pennsylvania-2012-great-escape-of-cwd_14.html

Tuesday, October 23, 2012

PA Captive deer from CWD-positive farm roaming free

http://chronic-wasting-disease.blogspot.com/2012/10/pa-captive-deer-from-cwd-positive-farm.html

Thursday, October 11, 2012

Pennsylvania Confirms First Case CWD Adams County Captive Deer Tests Positive

http://chronic-wasting-disease.blogspot.com/2012/10/pennsylvania-confirms-first-case-cwd.html

"The occurrence of CWD must be viewed against the contest of the locations in which it occurred. It was an incidental and unwelcome complication of the respective wildlife research programmes. Despite it's subsequent recognition as a new disease of cervids, therefore justifying direct investigation, no specific research funding was forthcoming. The USDA veiwed it as a wildlife problem and consequently not their province!" page 26.

https://web.archive.org/web/20060307063531/http://www.bseinquiry.gov.uk/files/mb/m11b/tab01.pdf

FRIDAY, FEBRUARY 03, 2012

Wisconsin Farm-Raised Deer Farms and CWD there from 2012 report Singeltary et al

http://chronic-wasting-disease.blogspot.com/2012/02/wisconsin-farm-raised-deer-farms-and.html

Monday, January 16, 2012

9 GAME FARMS IN WISCONSIN TEST POSITIVE FOR CWD

http://chronic-wasting-disease.blogspot.com/2012/01/9-game-farms-in-wisconsin-test-positive.html

see full text and more here ;

http://chronic-wasting-disease.blogspot.com/2011/12/chronic-wasting-disease-cwd-wisconsin.html

Thursday, February 09, 2012

50 GAME FARMS IN USA INFECTED WITH CHRONIC WASTING DISEASE

http://chronic-wasting-disease.blogspot.com/2012/02/50-game-farms-to-date-in-usa-infected.html

early days and game farms

http://www.mad-cow.org/99feb_cwd_special.html#fff

http://www.mad-cow.org/99feb_cwd_special.html

https://www.hcn.org/issues/171/5518

https://www.hcn.org/issues/189/10031

MONDAY, MARCH 05, 2018

TRUCKING AROUND AND SPREADING CHRONIC WASTING DISEASE CWD TSE PRION VIA MOVEMENT OF CERVID AND TRANSPORTATION VEHICLES

http://chronic-wasting-disease.blogspot.com/2018/03/trucking-around-and-spreading-chronic.html

MONDAY, MARCH 05, 2018

Chronic Wasting Disease: Status, Science, and Management EXPLANATION U.S. Department of the Interior U.S. Geological Survey Open-File Report 2017–1138 March 2018

http://chronic-wasting-disease.blogspot.com/2018/03/chronic-wasting-disease-status-science.html

Sunday, February 25, 2018

PRION ROUND TABLE CONFERENCE 2018 MAY, 22-25 A REVIEW

http://prionconference.blogspot.com/2018/02/prion-round-table-conference-2018-may.html

WEDNESDAY, MARCH 21, 2018

World Animal Organization (OIE) Appoints Veterinary Institute as first European reference laboratory for land animal health field of CWD or skrantesjuke scratch disease

http://chronic-wasting-disease.blogspot.com/2018/03/world-animal-organization-oie-appoints.html

TUESDAY, MARCH 27, 2018

Scientific opinion on chronic wasting disease (II) EFSA Panel on Biological Hazards (BIOHAZ) ZOONOSIS

"IN PARTICULAR THE US DATA DO NOT CLEARLY EXCLUDE THE POSSIBILITY OF HUMAN (SPORADIC OR FAMILIAL) TSE DEVELOPMENT DUE TO CONSUMPTION OF VENISON. THE WORKING GROUP THUS RECOGNIZES A POTENTIAL RISK TO CONSUMERS IF A TSE WOULD BE PRESENT IN EUROPEAN CERVIDS."

SCIENTIFIC OPINION ON CHRONIC WASTING DISEASE (II)

EFSA Panel on Biological Hazards (BIOHAZ) Antonia Ricci Ana Allende Declan Bolton Marianne Chemaly Robert Davies Pablo Salvador Fernández Escámez ... See all authors

First published: 17 January 2018 https://doi.org/10.2903/j.efsa.2018.5132

http://chronic-wasting-disease.blogspot.com/2018/03/scientific-opinion-on-chronic-wasting.html

WEDNESDAY, MARCH 28, 2018

The executioner in Nordfjella and Chronic Wasting Disease CWD TSE Prion Skrantesjuke

http://chronic-wasting-disease.blogspot.com/2018/03/the-executioner-in-nordfjella-and.html

O.05: Transmission of prions to primates after extended silent incubation periods: Implications for BSE and scrapie risk assessment in human populations Emmanuel Comoy, Jacqueline Mikol, Valerie Durand, Sophie Luccantoni,

Evelyne Correia, Nathalie Lescoutra, Capucine Dehen, and Jean-Philippe Deslys Atomic Energy Commission; Fontenay-aux-Roses, France Prion diseases (PD) are the unique neurodegenerative proteinopathies reputed to be transmissible under field conditions since decades. The transmission of Bovine Spongiform Encephalopathy (BSE) to humans evidenced that an animal PD might be zoonotic under appropriate conditions. Contrarily, in the absence of obvious (epidemiological or experimental) elements supporting a transmission or genetic predispositions, PD, like the other proteinopathies, are reputed to occur spontaneously (atpical animal prion strains, sporadic CJD summing 80% of human prion cases). Non-human primate models provided the first evidences supporting the transmissibiity of human prion strains and the zoonotic potential of BSE. Among them, cynomolgus macaques brought major information for BSE risk assessment for human health (Chen, 2014), according to their phylogenetic proximity to humans and extended lifetime. We used this model to assess the zoonotic potential of other animal PD from bovine, ovine and cervid origins even after very long silent incubation periods.

*** We recently observed the direct transmission of a natural classical scrapie isolate to macaque after a 10-year silent incubation period,

***with features similar to some reported for human cases of sporadic CJD, albeit requiring fourfold long incubation than BSE. Scrapie, as recently evoked in humanized mice (Cassard, 2014),

***is the third potentially zoonotic PD (with BSE and L-type BSE),

***thus questioning the origin of human sporadic cases.

We will present an updated panorama of our different transmission studies and discuss the implications of such extended incubation periods on risk assessment of animal PD for human health.

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thus questioning the origin of human sporadic cases

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***our findings suggest that possible transmission risk of H-type BSE to sheep and human. Bioassay will be required to determine whether the PMCA products are infectious to these animals.

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https://prion2015.files.wordpress.com/2015/05/prion2015abstracts.pdf

***Transmission data also revealed that several scrapie prions propagate in HuPrP-Tg mice with efficiency comparable to that of cattle BSE. While the efficiency of transmission at primary passage was low, subsequent passages resulted in a highly virulent prion disease in both Met129 and Val129 mice.

***Transmission of the different scrapie isolates in these mice leads to the emergence of prion strain phenotypes that showed similar characteristics to those displayed by MM1 or VV2 sCJD prion.

***These results demonstrate that scrapie prions have a zoonotic potential and raise new questions about the possible link between animal and human prions.

http://www.tandfonline.com/doi/abs/10.1080/19336896.2016.1163048?journalCode=kprn20

PRION 2016 TOKYO

Saturday, April 23, 2016

SCRAPIE WS-01: Prion diseases in animals and zoonotic potential 2016

Prion. 10:S15-S21. 2016 ISSN: 1933-6896 printl 1933-690X online

Taylor & Francis

Prion 2016 Animal Prion Disease Workshop Abstracts

WS-01: Prion diseases in animals and zoonotic potential

Juan Maria Torres a, Olivier Andreoletti b, J uan-Carlos Espinosa a. Vincent Beringue c. Patricia Aguilar a,

Natalia Fernandez-Borges a. and Alba Marin-Moreno a

"Centro de Investigacion en Sanidad Animal (CISA-INIA). Valdeolmos, Madrid. Spain; b UMR INRA -ENVT 1225 Interactions Holes Agents Pathogenes. ENVT. Toulouse. France: "UR892. Virologie Immunologie Moléculaires, Jouy-en-Josas. France

Dietary exposure to bovine spongiform encephalopathy (BSE) contaminated bovine tissues is considered as the origin of variant Creutzfeldt Jakob (vCJD) disease in human. To date, BSE agent is the only recognized zoonotic prion. Despite the variety of Transmissible Spongiform Encephalopathy (TSE) agents that have been circulating for centuries in farmed ruminants there is no apparent epidemiological link between exposure to ruminant products and the occurrence of other form of TSE in human like sporadic Creutzfeldt Jakob Disease (sCJD). However, the zoonotic potential of the diversity of circulating TSE agents has never been systematically assessed. The major issue in experimental assessment of TSEs zoonotic potential lies in the modeling of the ‘species barrier‘, the biological phenomenon that limits TSE agents’ propagation from a species to another. In the last decade, mice genetically engineered to express normal forms of the human prion protein has proved essential in studying human prions pathogenesis and modeling the capacity of TSEs to cross the human species barrier.

To assess the zoonotic potential of prions circulating in farmed ruminants, we study their transmission ability in transgenic mice expressing human PrPC (HuPrP-Tg). Two lines of mice expressing different forms of the human PrPC (129Met or 129Val) are used to determine the role of the Met129Val dimorphism in susceptibility/resistance to the different agents.

These transmission experiments confirm the ability of BSE prions to propagate in 129M- HuPrP-Tg mice and demonstrate that Met129 homozygotes may be susceptible to BSE in sheep or goat to a greater degree than the BSE agent in cattle and that these agents can convey molecular properties and neuropathological indistinguishable from vCJD. However homozygous 129V mice are resistant to all tested BSE derived prions independently of the originating species suggesting a higher transmission barrier for 129V-PrP variant.

Transmission data also revealed that several scrapie prions propagate in HuPrP-Tg mice with efficiency comparable to that of cattle BSE. While the efficiency of transmission at primary passage was low, subsequent passages resulted in a highly virulent prion disease in both Met129 and Val129 mice.

Transmission of the different scrapie isolates in these mice leads to the emergence of prion strain phenotypes that showed similar characteristics to those displayed by MM1 or VV2 sCJD prion.

These results demonstrate that scrapie prions have a zoonotic potential and raise new questions about the possible link between animal and human prions.

http://www.tandfonline.com/doi/abs/10.1080/19336896.2016.1163048?journalCode=kprn20

why do we not want to do TSE transmission studies on chimpanzees $

5. A positive result from a chimpanzee challenged severly would likely create alarm in some circles even if the result could not be interpreted for man. I have a view that all these agents could be transmitted provided a large enough dose by appropriate routes was given and the animals kept long enough. Until the mechanisms of the species barrier are more clearly understood it might be best to retain that hypothesis.

snip...

R. BRADLEY

https://web.archive.org/web/20170126051158/http://collections.europarchive.org/tna/20080102222950/http://www.bseinquiry.gov.uk/files/yb/1990/09/23001001.pdf

Title: Transmission of scrapie prions to primate after an extended silent incubation period)

*** In complement to the recent demonstration that humanized mice are susceptible to scrapie, we report here the first observation of direct transmission of a natural classical scrapie isolate to a macaque after a 10-year incubation period. Neuropathologic examination revealed all of the features of a prion disease: spongiform change, neuronal loss, and accumulation of PrPres throughout the CNS.

*** This observation strengthens the questioning of the harmlessness of scrapie to humans, at a time when protective measures for human and animal health are being dismantled and reduced as c-BSE is considered controlled and being eradicated.

*** Our results underscore the importance of precautionary and protective measures and the necessity for long-term experimental transmission studies to assess the zoonotic potential of other animal prion strains.

http://www.ars.usda.gov/research/publications/publications.htm?SEQ_NO_115=313160

SUNDAY, FEBRUARY 11, 2018

Experimental sheep BSE prions generate the vCJD phenotype when serially passaged in transgenic mice expressing human prion protein

http://transmissiblespongiformencephalopathy.blogspot.com/2018/02/experimental-sheep-bse-prions-generate.html

http://vcjd.blogspot.com/2018/02/experimental-sheep-bse-prions-generate.html

FRIDAY, DECEMBER 22, 2017

Detection of PrPBSE and prion infectivity in the ileal Peyer's patch of young calves as early as 2 months after oral challenge with classical bovine spongiform encephalopathy

http://bovineprp.blogspot.com/2017/12/detection-of-prpbse-and-prion.html

Diagnosis and Reporting of Creutzfeldt-Jakob Disease

Singeltary, Sr et al. JAMA.2001; 285: 733-734. Vol. 285 No. 6, February 14, 2001 JAMA Diagnosis and Reporting of Creutzfeldt-Jakob Disease

To the Editor:

In their Research Letter, Dr Gibbons and colleagues1 reported that the annual US death rate due to Creutzfeldt-Jakob disease (CJD) has been stable since 1985. These estimates, however, are based only on reported cases, and do not include misdiagnosed or preclinical cases. It seems to me that misdiagnosis alone would drastically change these figures. An unknown number of persons with a diagnosis of Alzheimer disease in fact may have CJD, although only a small number of these patients receive the postmortem examination necessary to make this diagnosis. Furthermore, only a few states have made CJD reportable. Human and animal transmissible spongiform encephalopathies should be reportable nationwide and internationally.

Terry S. Singeltary, Sr Bacliff, Tex

1. Gibbons RV, Holman RC, Belay ED, Schonberger LB. Creutzfeldt-Jakob disease in the United States: 1979-1998. JAMA. 2000;284:2322-2323.

http://jama.jamanetwork.com/article.aspx?articleid=1031186

Tracking spongiform encephalopathies in North America

Xavier Bosch

Published: August 2003

DOI: http://dx.doi.org/10.1016/S1473-3099(03)00715-1

Summary;

‘‘My name is Terry S Singeltary Sr, and I live in Bacliff, Texas. I lost my mom to hvCJD (Heidenhain variant CJD) and have been searching for answers ever since. What I have found is that we have not been told the truth. CWD in deer and elk is a small portion of a much bigger problem.”

49-year-old Singeltary is one of a number of people who have remained largely unsatisfied after being told that a close relative died from a rapidly progressive dementia compatible with spontaneous Creutzfeldt-Jakob disease (CJD). So he decided to gather hundreds of documents on transmissible spongiform encephalopathies (TSE) and realised that if Britons could get variant CJD from bovine spongiform encephalopathy (BSE), Americans might get a similar disorder from chronic wasting disease (CWD) the relative of mad cow disease seen among deer and elk in the USA. Although his feverish search did not lead him to the smoking gun linking CWD to a similar disease in North American people, it did uncover a largely disappointing situation.

Singeltary was greatly demoralised at the few attempts to monitor the occurrence of CJD and CWD in the USA. Only a few states have made CJD reportable. Human and animal TSEs should be reportable nationwide and internationally, he complained in a letter to the Journal of the American Medical Association (JAMA 2003; 285: 733). "I hope that the CDC does not continue to expect us to still believe that the 85% plus of all CJD cases which are sporadic are all spontaneous, without route or source."

Until recently, CWD was thought to be confined to the wild in a small region in Colorado. But since early 2002, it has been reported in other areas, including Wisconsin, South Dakota, and the Canadian province of Saskatchewan. Indeed, the occurrence of CWD in states that were not endemic previously increased concern about a widespread outbreak and possible transmission to people and cattle.

To date, experimental studies have proven that the CWD agent can be transmitted to cattle by intracerebral inoculation and that it can cross the mucous membranes of the digestive tract to initiate infection in lymphoid tissue before invasion of the central nervous system. Yet the plausibility of CWD spreading to people has remained elusive.

Part of the problem seems to stem from the US surveillance system. CJD is only reported in those areas known to be endemic foci of CWD. Moreover, US authorities have been criticised for not having performed enough prionic tests in farm deer and elk.

Although in November last year the US Food and Drug Administration issued a directive to state public-health and agriculture officials prohibiting material from CWD-positive animals from being used as an ingredient in feed for any animal species, epidemiological control and research in the USA has been quite different from the situation in the UK and Europe regarding BSE.

"Getting data on TSEs in the USA from the government is like pulling teeth", Singeltary argues. "You get it when they want you to have it, and only what they want you to have."

Norman Foster, director of the Cognitive Disorders Clinic at the University of Michigan (Ann Arbor, MI, USA), says that "current surveillance of prion disease in people in the USA is inadequate to detect whether CWD is occurring in human beings"; adding that, "the cases that we know about are reassuring, because they do not suggest the appearance of a new variant of CJD in the USA or atypical features in patients that might be exposed to CWD. However, until we establish a system that identifies and analyses a high proportion of suspected prion disease cases we will not know for sure". The USA should develop a system modelled on that established in the UK, he points out.

Ali Samii, a neurologist at Seattle VA Medical Center who recently reported the cases of three hunters "two of whom were friends" who died from pathologically confirmed CJD, says that "at present there are insufficient data to claim transmission of CWD into humans"; adding that "[only] by asking [the questions of venison consumption

and deer/elk hunting] in every case can we collect suspect cases and look into the plausibility of transmission further". Samii argues that by making both doctors and hunters more aware of the possibility of prions spreading through eating venison, doctors treating hunters with dementia can consider a possible prion disease, and doctors treating CJD patients will know to ask whether they ate venison.

CDC spokesman Ermias Belay says that the CDC "will not be investigating the [Samii] cases because there is no evidence that the men ate CWD-infected meat". He notes that although "the likelihood of CWD jumping the species barrier to infect humans cannot be ruled out 100%" and that "[we] cannot be 100% sure that CWD does not exist in humans& the data seeking evidence of CWD transmission to humans have been very limited".

http://infection.thelancet.com/

http://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099(03)00715-1.pdf

26 March 2003

Terry S. Singeltary, retired (medically) CJD WATCH

I lost my mother to hvCJD (Heidenhain Variant CJD). I would like to comment on the CDC's attempts to monitor the occurrence of emerging forms of CJD. Asante, Collinge et al [1] have reported that BSE transmission to the 129-methionine genotype can lead to an alternate phenotype that is indistinguishable from type 2 PrPSc, the commonest sporadic CJD. However, CJD and all human TSEs are not reportable nationally. CJD and all human TSEs must be made reportable in every state and internationally. I hope that the CDC does not continue to expect us to still believe that the 85%+ of all CJD cases which are sporadic are all spontaneous, without route/source. We have many TSEs in the USA in both animal and man. CWD in deer/elk is spreading rapidly and CWD does transmit to mink, ferret, cattle, and squirrel monkey by intracerebral inoculation. With the known incubation periods in other TSEs, oral transmission studies of CWD may take much longer. Every victim/family of CJD/TSEs should be asked about route and source of this agent. To prolong this will only spread the agent and needlessly expose others. In light of the findings of Asante and Collinge et al, there should be drastic measures to safeguard the medical and surgical arena from sporadic CJDs and all human TSEs. I only ponder how many sporadic CJDs in the USA are type 2 PrPSc?

http://www.neurology.org/content/60/2/176/reply#neurology_el_535

2001 FDA CJD TSE Prion Singeltary Submission

http://www.fda.gov/ohrms/dockets/ac/01/slides/3681s2_09.pdf

*** U.S.A. 50 STATE BSE MAD COW CONFERENCE CALL Jan. 9, 2001

http://tseac.blogspot.com/2011/02/usa-50-state-bse-mad-cow-conference.html

2 January 2000 British Medical Journal U.S.

Scientist should be concerned with a CJD epidemic in the U.S., as well

http://www.bmj.com/rapid-response/2011/10/28/us-scientist-should-be-concerned-cjd-epidemic-us-well

15 November 1999 British Medical Journal hvCJD in the USA * BSE in U.S.

http://www.bmj.com/rapid-response/2011/10/28/re-vcjd-usa-bse-us

Sunday, February 25, 2018

PRION ROUND TABLE CONFERENCE 2018 MAY, 22-25 A REVIEW

http://prionconference.blogspot.com/2018/02/prion-round-table-conference-2018-may.html

Moreover, sporadic disease has never been observed in breeding colonies or primate research laboratories, most notably among hundreds of animals over several decades of study at the National Institutes of Health25, and in nearly twenty older animals continuously housed in our own facility.

http://www.nature.com/articles/srep11573

Tuesday, March 20, 2018

Variably protease-sensitive prionopathy (VPSPr), sporadic creutzfeldt jakob disease sCJD, the same disease, what if?

http://vpspr.blogspot.com/2018/03/variably-protease-sensitive-prionopathy.html

WEDNESDAY, MARCH 28, 2018

USDA APHIS NOTICE: APHIS Revises Chronic Wasting Disease Program Standards March 28, 2018

Scientific opinion on chronic wasting disease (II) EFSA Panel on Biological Hazards (BIOHAZ) ZOONOSIS

http://chronic-wasting-disease.blogspot.com/2018/03/usda-aphis-notice-aphis-revises-chronic.html

Terry S. Singeltary Sr., Bacliff, Texas USA 77518 flounder9@verizon.net