27/1 /2010

The Hon. Senators
c/- Ms Trish Carling
The Secretary
Rural and Regional Affairs and Transport References Committee
The Senate
Parliament House
Canberra A.C.T.

Dear Trish,

Please find enclosed a submission to the 5th February 2010 Sub-Committee Hearing on the new policy on trading with the 32 countries defined as "controlled risk assessment" for BSE by the OIE.

I apologise for not sending a written submission to the previous Hearing on the 14th December 2009 for it's consideration, before the actual hearing date.

Thank you for the opportunity to come to the Hearing of the 5 TH February 2010.

Kind Regards

Bob Steel

Bob Steel

A SUBMISSION TO THE 5th FEBRUARY 2010 SENATE SUB-COMMITTEE HEARING ON THE PROPOSED NEW BSE POLICY. (1) NEW ZEALAND'S TSEs.(2) DAFF's RAPID TESTING FOR TSEs WITH DAFF 'S ACCOUNTABILITY , (3) ANIMAL FOODS SAFETY IN AUSTRALIA. (4) FSANZ AND DAFF ROLES IN THE NEW BSE POLICY (5) EMERGING INFORMATION ON TSEs WITH EMERGING DANGER TO SHEEP INDUSTRIES ,ANIMAL AND HUMAN HEALTH. (6)THE TSEs REVIEW BY PROFESSOR JOHN MATHEWS.(7)THE NEED FOR MORE EXPERT OPINIONS ON THE NEW BSE POLICY(8) SUMMARY AND SUGGESTIONS.

(1) New Zealand's Government has announced the presence of TSE in sheep, Atypical Scrapie, with officially declared cases regarded as spontaneous in origin.

Subsequent rapid testing results are unannounced but unconfirmed reports suggest more cases of TSEs than anticipated. European Atypical Scrapie cases involve sheep with PrP genotypes known to confer natural resistance to conventional Scrapie. This suggests infective transmissions of Atypical Scrapie may have occurred in N.Z. flocks.

Atypical Scrapie is described (National Academy of Science,USA Proceedings 2005) as a truly infectious TSE in sheep and goats which " may have important implications in terms of control and public health."

The NZ Government had approved a new policy on BSE for beef imports from the 32 countries defined by the OIE as "controlled risk assessment" for BSE, after the Government detected the Atypical Scrapie cases so far revealed.

This is serious for N.Z. and Australian sheep industries and public health.

The Hearing should know which TSE rapid testing method,has and is being used in Australia, with the full details, the extent of and results of these tests in herds and flocks, including in all ruminants imported into Australia since 1990, including buffalo imported from Italy in 1996.

Particularly those results of rapid testing on sheep in Australia are requested since the New Zealand announcement of their Scrapie detection.

The Hearing is referred to the European Commission's Community Reference Laboratory, December 2009, when the first ever comparative scientific analytical report on rapid tests available, was announced. Some tests "cannot be recommended for the monitoring of BSE in cattle and the TSEs in small ruminants".

PrionicsR-WB Check Western SR and Prionics R Check LIA SR "cannot be recommended for use for TSE monitoring in small ruminants".

DAFF would not have been aware of these results on Prionic's test systems until Decenber 2009. The Dec 2009 OIE register of approved tests is disappointingly meagre and anachronistic.

The Hearing needs to know where Australia's present test system--Prionics-Immunoblot stands, (suggestions of excellence have been made) with the resultant significance of DAFF's tests results for BSE, Scrapie and Aypical Scrapie.

Strains of BSE (L –type) are changed and acquire features similar to classical BSE when passaged in mice expressing SHEEP prions.
A carrier role for sheep in this transmutation of BSE is thus noted in variant strains of BSE. NATURALLY occurring inter-species transmissions involve sheep, goats, cattle and humans, as in the latter, vCJD.

(a) Please refer to the statements of Dr.Andy Carroll, DAFF ,the Chief Veterinary Surgeon of Australia,14th December Senate Hearing, RRA&T Page 93 when he stated that **" CWD OF DEER HAS BEEN AROUND FOR AN EXTREMELY LONG TIME."**

This is incorrect.

His incorrect statement could be seen as an attempt to suggest that if CWD has been around for an extremely long time and so why worry about it really?

The Hearing is referred to the journal "Emerging Infectious Diseases, Vol 10, No.6 June 2004 "Chronic Wasting Disease and Potential Transmission to Humans". Abstracts are attached with this article as **ATTACHMENT ONE** including that of the Nobel Laureate, Stanley B.Prusiner, of September 2009.

Elizabeth S.Williams,Dept.of Veterinary Sciences,University of Wyoming, and Dr.Prusiner's group, University of California are the world's leading prion and CWD researchers.

CWD was in fact first identified in the late 1960s in research facilities, in 1978 was recognised as a TSE but only in 1981 was it first detected in the wild .

CWD is now a TSE epidemic.

(b) on Page 94, Dr. Carroll continues to re-present a role for the OIE which it does not have, in a less obvious way to the previous Australian Representative at the OIE and Chief Veterinary Officer of Australia, Dr.Gardner Murray .You are referred to his evidence at the Hearing February 2005 .

Dr.Carrol conveniently deflects DAFF responsibilities in the future, under the new policy framework,even in animal health, to the FSANZ categorisation scheme. FRANZ does not disclose the scientific basis on which these animal health issues are based, other than by Professor Matthews Review of TSEs.

The General Manager FSANZ and the recommended Dept of Health and Ageing contact are on holidays or interstate -27th January 2010 and are unavailable.

The FSANZ questionnaires for countries which wish to import beef into Australia "have not been drafted yet but ring back at the end of February 2010." This may suggest a lack of accountability to come from FSANZ in the manner revealed by DAFF and particularly Bio-Security Animals (BA) in past years.

BA were the policy determiners for the Brazilian Beef imports in 2004, for the 2007 equine influenza policies and for the 2007 New Caledonian cattle tick fever scandal which is now costing Australia millions.

You are referred to the attached letter to the Hon. Tony Burke M.P. of the 22nd January2010 and to the attached EIA Inquiry's Counsel Assisting ,Outline of Submissions as **"ATTACHMENT TWO"**, in which he is asked to explain Bio-Security Australia's science on vaccines in it's relationship to the other measures which were supposedly supporting the vaccine policies .

He has been asked to explain why the Chief Executive of Bio-Security Australia Mr. John Cahill, , was asked to withdraw from the Inquiry on the 21st February 2007,Pages 4014-4017—**"ATTACHMENT THREE"**.

This attachment is directly related to unresolved attempts by BA to justify it's policies on vaccines by additional measures at quarantine stations which are not revealed.

It is hoped that the Hon.Tony Burke will address the questions asked of him.

The expected response is complete silence. This would confirm DAFF culture of lack of accountability but it is at least better than the dishonesty shown by some DAFF executives at the Senate Hearings in 2005.

This EIA negligence by BA's policies cost Australia over 1billion dollars. AQIS as usual had to accept the blame for BA.

The Hearing should appreciate the limited Callinan Inquiry's terms of reference. The Beale examination has not revealed it's findings on this issue.

(c) Mr Morris's statement at 14th December 2009 Senate Hearing, page 97, **"IF AUSTRALIA HAD A SINGLE CASE OF BSE ANYWHERE THEN INTERNATIONAL CONSISTENCY AND NATIONAL TREATMENT UNDER THE WTO WOULD REQUIRE US TO REMOVE BEEF FROM THE SHELVES"**

This statement requires legal opinion from ANU's expert in international law Professor Rothwell to examine Australia's position in law for this Senate Hearing.

(d) on page 99, Dr Carroll states in discussing BSE that "this is not a disease that passes from animal to animal..."and we would be importing from controlled risk countries only **MUSCLE (tissue) MEAT** and when...".and in a later statement, " implementation of the current policy (he means the old policy} would make the negotiation process easier." if Australia has a single case of BSE."

This last statement needs explanation.

The first statement is scientifically wrong, the second is irrelevant to any scientifically based risk strategy to avoid introducing TSE"s into Australia.

TSEs in muscle tissues and fat tissues are now recognised in animals.

BSE in cattle, sheep and goats has been shown to be transferable from animal to animal in milk to suckling offspring and to others via drinking milk.

Humans are infected by contact, with BSE prion containing products, such as cosmetics and leather goods.

It will be surprising if direct animal infection is not further confirmed in the future. Farmers are aware of the intimate contacts by licking etc, in herds .Tonsillar lymphoid crypts are favoured areas for BSE prions (PrP bse) so salivary secretions may be the first to be found to contain PrPbse.

(3) Animal food safety in Australia is a national disgrace. The Hearing is referred to the EU standards, in place for many years, as an example for Australia's animal food safety in the future.
DAFF and the States Agriculture Departments have been unable to address these issues mainly because of DIRECT industry pressures on combined Government-Industry Committee decisions taken since 1990.
DAFF is only responsible in export areas for Australian animal food safety.
Australia is the world's largest exporter of pet meats.
It has been revealed to DAFF that some exported pet meats have contained preservatives at levels that are life threatening to pet animals.
DAFF has refused to acknowledge that some frozen pet foods even contain these preservatives when notified of this.
Even the long awaited, 2004, "**Australian Standard for the Hygienic Production of Pet Food"** does not limit the amount of preservatives added but only states that labelling of preservative contained, must occur.
The veterinary profession has been calling for help to address these serious life-threatening animal food safety issues since 1989 without any help.
There IS NOT EVEN A VOLUNTARY GOVERNMENTAL BAN ON FEEDING KNACKERY OR FALLEN CATTLE OR CATTLE MBMs FROM ANY SOURCE, IN PET, POULTRY OR PIG FOODS IN AUSTRALIA.
The new policy for BSE starts on the 1st March 2010 but the Government assures that imported beef and beef products will not be fed to ruminants.
Does this exclude or include bans on it for pig, pet and poultry processed foods?
Feline TSEs are recognised worldwide.
The States have been held hostage by the pet food industries. Consumers have forfeited animal food safety to their agendas in exactly the same way as is occurring now by the beef processing and importing industries leaning on the Government to approve the new BSE policy.
Will the Government again fail the public in the human health issue, in the same way it has failed the Australian public in the animal safe food issue since 1989? The Governments, Federal, States and Territories must resist the direct pressures from powerful market entrepreneurs in both areas of food safety.

(4) FSANZ 's Chief Executive, Mr. Steve McCutcheon has advised the Hearing, 14TH December 2009 that he envisages a "dedicated team of about 4 people" with one person from DAFF will undertake the risk assessments and in-country inspections "if they are necessary".

FSANZ's categorical risk assessments of importing countries will be supported by independent experts, input from the QIE (this is really internet reading of OIE recommendations. OIE guides by recommendation) and by "THE **DEVELOPMENT OF THE ACTUAL METHODOLOGY**." for these risk assessments.

DAFF has not even undertaken ANY risk assessment analysis on this new Australian BSE as of mid January according to information received from within DAFF.

The Hearing should be aware of concerns about the FSANZ framework, it's relationship to DAFF and about the most vital need to have people of the highest quality involved in these category risk assessment processes.

I express thanks to Professor Jim Bishop, for his letter of 20th January 2010, **ATTACHMENT FOUR** in response to my letter to him asking for his advice.

He has inspired my wife and myself for many years by his TV appearances, missed over last few years since he left for Melbourne. He inspires confidence.

With great respect, his Department of Health and Ageing is advised that tissues, such as TSE uncontaminated muscle meats and fats should no longer to be regarded as tissues free of TSE prions, however scrupulous the slaughter processes may be.

They can no longer be regarded as Category C (tissues of no detectable infectivity).

TSEs from the highly infectious and rapidly spreading TSE, CWD, have been found in both these tissues.

It must be now incorrect to state that these tissues may not contain rogue prions,PrP TSEs, and that they " do not inherently contain infectivity" as per his letter.

(5) **TSEs have now been detected in skeletal muscle tissues and in fat in animals, in deer with chronic wasting disease (CWD) ,the rapidly spreading TSE of USA and Canada** and in mice.

The Australian Government can no longer suggest that there is no danger from the importation into Australia from uncontaminated skeletal muscle tissues such as " meat" and " meat products" (what ever this means—is this sausage meats and minces?), from TSEs rogue prions, from the 32 countries described as "conditional risk assessment" by the OIE for TSEs,such as B.S.E.

This detection of rogue prions of CWD in skeletal meats and fats in sub-clinically affected CWD deer, is an important first ever detection in these tissues for TSEs.

Furthermore, faecal excretion of CWD rogue prions has been identified from sub-clinically affected CWD deer and this finding has further explained the incredible infectivity of this TSE and it's rapid spread within the North American Continent.

Bovine Spongiform Encephalopathy (B.S.E.) multiple strains have now been identified to have all 3 ecological properties of other TSEs --- ie to have spontaneous, heritable and infective transmissions.

These modes of transmission are varied between the variant and multiple BSE strains recently identified.

Within the cattle genome, molecular differences are now identified to explain genetic sensitivities to BSE in cattle.

This technology is more advanced in sheep where the largest genetic selection ever undertaken in the world is using PrP genetics to find those sheep which have the greatest resistance to Scrapie.

It is possible that the same approach for BSE in all ruminants will be necessary.

BSE infection occurs naturally in cattle, sheep and goats. Research in equines is very limited.

New variant strains of BSE in cattle have been identified in most European countries, the United States and Japan in the last 3 years.

Some of these BSE strains are more virulent with varying incubation periods, both in natural infections and when induced experimentally in other animals.

Natural BSE infection occurs through ingestion of milk in BSE cattle and in other animals with BSE such as sheep and goats.

Similarly, Scrapie is found in milk of sub-clinical diseased sheep and goats with Scrapie.

Milk products from sub-clinical and normal looking BSE infected cattle,sheep and goats must therefore present an unquantified public health risk.

Direct BSE infection by direct contact, as per licking each other has not been identified as yet.

Sub-clinical BSE disease in apparently normal BSE cattle has been identified by the TSE "rapid" diagnostic testing in MOST European countries.

These "rapid" TSE diagnostic tests are approved (by the European Commission,the Panel on Biological Hazards), only for post-mortem testing and are for BSE ,Scrapie and Atypical Scrapie strains and CWD but not for TSEs such as in mink.

Rapid tests take a minimum of 24 hours for completion.

There are no approved "rapid" tests for live animals.

7000 new cases of BSE in cattle were detected by these"rapid"test after the screening of 50 million cattle in Europe.

These new 7000 cases of BSE in cattle had not been anticipated nor detected by clinical examination, either by Governmental veterinary surgeons or by owners of these diseased BSE cattle in Europe.

This suggests the very minor role of importance for clinical surveillance in BSE, in any FSANZ risk assessment process in cattle prior to slaughter.

If they are clinically healthy,can stand and not wobble all over the yard, they will be passed by this procedure.

Next- one- up- the- race- quickly-" buddy" procedure that exists at abattoirs is not funny at all!!!

In December 2009, the Community Reference Laboratory of the European Commission released a vital first report--- "Scientific Opinion on Analytical Sensitivity of Approved TSEs Rapid Tests".
As a result of this first time ever comparative analysis, some approved rapid tests "cannot be recommended for the monitoring of BSE in cattle and the TSE in small ruminants in the EU".

Thus there is a possible under reporting, from the above finding, and that the number of sub-clinical apparently normal cattle with BSE may be unreported in the EU because of faulty testing. It may be insignificant!!!

BSE cases in cattle with the BSE variant strains have prolonged incubation periods before clinical expression occurs and this is important in dogmatic time scheduling of BSE forcasting.

OF MAJOR CONCERNS TO AUSTRALIAN AGRICULTURE ARE THE FOLLOWING FACTS.

Atypical cattle isolates of BSE— for example the BSE (L-type), in transmission experiments were changed and acquired strain features similar to the classical BSE agent when propagated in mice expressing SHEEP prions.

Furthermore, in 2009, chronic wasting disease (CWD) prions in elk and deer of Northern America and Canada have been found to transmit directly to SHEEP in transgenic mice. Ref. J.Gen.Virol. 2009 Ap 90(Pt4) :1035-47.
THIS IS ABSENT FROM TABLE I, PAGE 27 of Professor Mathews Review, under the heading –"Experimental Transmission to"

This is considered unsatisfactory as this finding is of great epidemiological significance and very significant for animal and human health.

Furthermore prions from BSE cattle did not transmit directly in transgenic mice expressing the elk (Tg Elk PrP) gene but DID IN FACT transmit after being passaged through SHEEP.

Professor Mathews DOES MENTION, PAGE22, the following:-
Prions of BSE in cattle, PrPbse, did transmit directly in mice expressing pig PrP rogue prions but were MORE SUSCEPTIBLE(shorter incubation period) after passage through SHEEP.

He mentions that there is NO Australian voluntary or enforced ban on feeding knackery or ruminant MBM to pigs but assumes remote risk to human health with the new policy!

Australia has a voluntary ban on feeding ruminant MBM to ruminants but illicit feeding of ruminant MBM to dairy cattle has been seen with pig food supplements!

Surely these facts are warning signs of the possible dangers at least to our sheep industries in the future 50 years from inter –species transmissions!!

Australian sheep industries are TSEs free ,the only country now in the world. Australia is blessed and this blessing is due to the great work by DAFF in the past.

The conversion of human prion protein by CWD associated rogue prions has been demonstrated in in-vitro cell free experiment.

The conversion of human PrPC by Scapie and BSE PrP-res have been shown to be similar to the conversion of human prion protein by Cervid PrPcwd associated prions.

These are incredibly important findings in themselves and bring these 3 TSEs together as very real increasing dangers to human health in the future.

These are very important findings in TSE inter-species transmission experiments and demonstrate the serious dangers to Australia from trading with countries affected by TSEs such as Scrapie, CWD and BSE with all their newly discovered variant forms, which Professor Mathews fails to detail in his Review.

Attempts to eradicate CWD have failed and it is spreading rapidly in 14 States of the USA and 2 provinces of Canada despite expensive and exhaustive programs.
3 of 13 cattle have been infected with CWD, following intra-cerebral inoculation but these experiments are not completed.

In England there are an estimated 5000-10000 new cases of Scrapie each year despite the huge amount of money spent each year by the British Government.
Scrapie like CWD is highly infectious with almost eternal survival in the environment.

For example Scrapie containing material when rubbed on broken skin of mice, has the same efficiency in inoculation as if it had been injected by intravenous or subcutaneous injections.

Please note that there is an available rapid tests of the TSE, CWD, for beef and beef products coming from the USA or Canada.

Many of the 32 countries have NOT undertaken any "rapid"testing of any clinically normal but sub-clinical diseased BSE cases in bovines from either the classical strain BSE cases or the newly discovered BSE variant strains.

(6) **Please refer to Professor John Mathew's submission for the Australian Government .**

"Review of Scientific Evidence to Inform Australian Policy on Transmissible Spongiform Encephalopathies".

This review is the scientific basis for the new policy to allow importation of meat and meat products(?) from the 32 countries classified by OIE as "controlled risk assessment".

The review has been examined and approved of by the National Medical and Research Council of Australia and it's TSE Council, the Department of Health and Ageing, the Therapeutic Goods Administration, FSANZ ,DAFF and the BSE Advisory Council.

This document is disturbing and inaccurate in details of great importance, Many of the conclusions presented need to examined for their validity in the light of present knowledge and with better considerations of emerging knowledge. Disparate facts on inter-species transmissions experiments are coming each month from primary researchers on TSE diseases. Reference Sept 2009 Dr.S. Prusiner.

Surely new confirmed findings with their suspicions must be included in considerations and be anticipated but acknowledged as possible facts-to-be.

Please find attached as ATTACHMENT FIVE, an extract from Lisa Waddell's seminal article.

The Methodological Soundness of Literature Reviews Addressing Three Zoonotic Public Health Issues.

Please note that most reviews of TSEs failed to validate the conclusions drawn by the reviewer of TSE scientific literature.

"a" The "active surveillance" group in Professor Mathews Review Page 34, Fig.1, chart 85 is presented in red, and graphs those cases detected in normal animals with BSE ,only after rapid TSE testing in the EU from mid 1999 onwards to only mid 2006.

This is surely an indication for Australian Authorities, by analogy, of the real extent and level of BSE infection in those countries which have (1) never tested for BSE and TSEs or (2) have just started testing or (3)have not competed testing of their herds .

Thus there is the implicit suspicion that the number of BSE cases notified by these 32 countries to the OIE may not in any way represent the number of BSE cases actually present in these countries, which do not test or have just commenced testing.

The number of unrecognised BSE cases in these other countries which have not progressed as far as Europe in their testing would be grossly unreported and may be comparable (ie they may be proportionately comparable, relative to their number of clinically recognised cases of Mad Cow Disease declared to the OIE), to the number disclosed by these tests in the EU in Chart 85.

Please refer to Fig 3, "Bovine Infective Units(ID50) Entering the UK Chain by Year" where it is disclosed that infective BSE material coming into the food chain from 1997 to 2005 from animals under 30 months follows exactly the total unit line because only cattle <30 months were allowed to enter the food chain.

Please advise Professor Mathews's source of reference for that proportion of units added for this <30 months group from 1983 to 1997.

What value will an > 30 months slaughter ban policy have in any of the 32 countries who are planning to import?

Surely this should be explained country by country, after FSANZ has supplied the details on levels of rapid testing numbers completed with the total herd numbers in these OIE 32 controlled risk countries.

What is the position in France particularly and Europe generally, re Bovine ID50 units entering their food?

15,141 U.K. cases of bovine BSE were recorded in the U.K.from 1997 until 2009 with 7000 odd in Europe.

The Hearing should be aware that there is not even a voluntary ban in Australia, let alone a mandatory one, on feeding ruminant MBM to other animals (pets) including domestic animals(poultry and poultry),the latter DO ENTER the human food chain in poultry and pig tissues. Imagine the industry pressure resistance and how Government acceded to industry pressures in animal food safety in the past!

Professor Mathews's Review Page22 describes as " hypothetical" the nature of risk of BSE amplification cycles in pigs(they are more BSE sensitive after passage through SHEEP!!!) . Mice expressing Pig PrP are resistant to classical Scrapie but may be sensitive to Atypical Scrapie .There is no mention of BSE L type transmutation to classical BSE in mice expressing SHEEP prions.

Evolutionary molecular biologists depend on precedents but in prions diseases there are few. Exquisite prion sensitive animal models are necessary- as in mice.

Science depends on inter-species transmission experimentation and recognition of animal husbandry practices.

Please note after oral infection by PrP BSE prions in vCJD., the average incubation period is 16-17 years ,so it is only after 2014 that the main danger period will pass for vCJD in the UK if no further Bovine infective units had entered the food chain after 1997.

With heritable transmission recognised in BSE, additional units will be added,

However infective units are stated in Fig 3 continue to be added to the food chain until at least 2004, so the main danger period for v CJD will pass later than 2020.

(b) Many facts of science which imply great risks to Australia, particularly in the area of risks to animal health are not mentioned at all, let alone quantified by Professor Mathews..

For example, it is beyond belief that this Review wrongly states on, page 27 Table I under the heading

"**SUPPORTING INFORMATION & RISK ASSESSMENT**"which does suggests matters of importance.

Table1 **" IMPORTANT TSEs and THEIR CHARACTERISTICS**".

Scrapie –usual transmission— ""Spontaneous" possibly by milk"

CWD (deer and elk)---usual transmission "Spontaneous".

This indicates to a reader that Professor Mathews believes that in Scrapie and CWD, the usual mode of transmission is spontaneous.

THIS IS INCORRECT.

Please also refer to Page 9,**BACKGROUND AND HISTORY**,section 28, in which he states that " Scrapie has been transmitted to mice and other experimental animals in the laboratory."

Professor Mathews omits Scrapie experimental infection to cattle, a domestic animal and the cause of vCJD in humans.

Scrapie and CWD are highly infectious TSEs with almost eternal survival properties in the environment outside the host animals.

These TSEs, and BSE itself, have all three transmission pathways ie spontaneous, heritable and infective transmission.

Spontaneous or sporadic cases of Scrapie and CWD are of unknown origin but may be expected particularly in the genetically susceptible .
Inherited cases of BSE, CWD and Scrapie do occur.

Scrapie and CWD transmission is incredibly infective.
Pastures remain infective for Scrapie and CWD for many years to grazing sheep and deer species.
Direct animal to animal transmission occurs in Scrapie and CWD via body fluids such as saliva and milk.

In Table I BSE's "Experiment transmission to"heading, are listed "mice ,sheep and goats" but Professor Mathews makes no mention in the Review of the following important "back -cross" information from sheep to BSE in cattle.

This information is about the changes that occur when Atypical cattle isolates of BSE acquire strain features similar to the classical BSE agent when propagated in mice expressing SHEEP prions.

Professor Mathews does not mention The **EXPERIMENTAL TRANSMISSION OF SCRAPIE TO CATTLE** in Table I under "Experimental transmission to".
It is not mentioned at all and not mentioned even in the Review.
All of a group of nine cattle infected intra-cerebrally with Scrapie prions succumbed easily to Scrapie.

Surely this is evidence of great importance for Australian animal and human health and **IS MISSING UNDER THE APPROPRIATE HEADING** in Table I and in the Review.

In the enigmatic aetiology of BSE in the U.K, increasing evidence suggests that BSE may have originated in sheep from Atypical Scrapie .This is still theory.

There is no mention in the Review that cattle BSE prions did not transmit directly in transgenic mice expressing the Elk gene (Tg Elk PrP) but did transmit after being passaged through SHEEP.

Why was this vital epidemilogical information missing on this sheep carrier role in BSE with CWD programmed mice?

Table I for CWD, under heading "Experimental transmission to" the CWD TRANSMISSION TO CATTLE IS MISSING FROM THE APPROPRIATE HEADING AND IS MISSING FROM THE REVIEW, with the implications for animal –human health again missing from the Review itself.

Table I for CWD again, under heading "Experimental Transmissions to" , lists only ferrets ,monkeys and goats.

In fact predators are found to be naturally infected as well as in experimental transmission experiments.

Raccoons are being used to experimentally differentiate TSEs by the varied incubation periods in this animal.

There is no mention at all of the vital finding that Prp BSE ie Bovine Spongiform Encephalopathy itself, did not transmit directly in transgenic mice expressing the elk gene (Tg Elk Prp) but **DID IN FACT TRANSMIT AFTER BEING PASSAGED THROUGH SHEEP.**

There is no mention of the conversion of human prions by CWD rogue prions in cell free experiments.

Professor Mathews considers carefully the BSE- v CJD - s CJD complex. Inter-species transmissions, both experimental and naturally occurring, are important to human –animal health and may hopefully anticipate and try to explain past, present and future evolutionary molecular changes in nature with the past and future animal husbandry practices of man.

. Professor Mathews fails to mention the enormous significance to human health of the experimental CWD transmission to primates-monkeys in his Review but it is at least it is stated in Table I as "Experimental transmission to" .

(7) **It is felt that Professor Mathews Review should be referred.**

It is suggested that reference be sought from the 1997 Nobel Laureate (for his pioneering work on prions), Dr. Stanley B .Prusiner,MD, or from his associates at the Prusiner Lab.The Institute of Neurodegenerative Diseases The University of California San Francisco CA 94 143, USA tel---(415) 476 -9000.

Dr. Prusiser is actually working on CWD now and the Hearing is referred to Jennifer O'Brien who was the internet source to him. jobrien@pubaff.ucef.edu 415 476 2557.

An Australian world expert on TSE diseases is Professor Simon Hawke at the Brain and Mind Research Institute, Prince Alfred Hospital, Sydney 02 93510730.

SUMMARY:

(8) Any errors in Australia's decision on the new policy on BSE may not be noticed for many years (10-70years!), quite unlike the immediacy of F&M disease outbreak.

Every month, new information becomes available which seems to increase the risks to animal health in Australia ,from this new policy

This new policy ignores the advances in science and is not supported by the Review which needs expert appraisal to examine it's validity and the validity of it's conclusions.

The new policy will cost Australia it's unique position of freedom from all TSEs and increases our risks of introducing Foot and Mouth Disease.

Trading with the 32 countries which are contiguous to, are not free in every way from this disease, particularly from Foot and Mouth vaccinating countries, or have OIE zonings purporting to be enforced even with supposed strict border control for domestic and wild animals, should not be considered by DAFF and later by FSANZ.

Skeletal muscle tissues and fat tissues from domestic animals should no longer be regarded as inherently TSE safe tissues Category C tissues.

Skeletal muscle tissues and fat tissues from sheep from New Zealand should no longer be classified as Category C tissues following the Atypical Scrapie detection in New Zealand.

Skeletal muscle tissues and fat tissues from cattle from any country with an OIE classification of "controlled risk assessment"(they have declared BSE in the past) should no longer be classified as Category C tissues.

Australia needs legal advice from an expert in international law, such as Professor Rothwell at the ANU, to examine statements made by FSANZ which suggest penalty and exclusion under WHO trade accords.

Australia should only depend on it's own staff, stationed permanently at overseas abattoirs to supervise ante-mortem **IDENTIFICATIONS BY N.L.I.S. FROM BIRTH**, their clinical examinations, the slaughtering and processing to avoid TSE contamination of meat and finally it's quarantining to avoid substitution.

AUSTRALIAN AUTHORITIES MUST REQUIRE ALL CATTLE WHOSE MEAT IS FOR IMPORTATION INTO AUSTRALIA, TO BE "RAPID" TESTED FOR TSEs, BSE AND SMALL RUMINANT TSEs AT THE TIME OF SLAUGHTER AND BEFORE THEIR MEAT IS IMPORTED INTO AUSTRALIA USING ONLY AN APPROVED RAPID TEST WHICH MEETS THE FUTURE LEGISLATIVE 2010 EU CRITERIONS FOR SENSITIVITY FOR DETECTION OF BSE AND SMALL RUMINANT TSEs . THESE TESTS SHOULD BE PERFORMED BY AUSTRALIAN AUTHORITIES ON SITE THEMSELVES.

The serious immediate threat to Australian sheep industries with the more distant implications for human health, as described here-in, is revealed by the disclosure of Atypical Scrapie in N.Z.

Atypical Scrapie is more infectious than the conventional Scrapie and thus much more difficult to control.

Due to the vigilance of DAFF and State Departments of Agriculture, over an extremely long time, Australia is now unique in the world, being free of all animal TSEs.

This new policy threatens this freedom from animal prion diseases in the future.

Aypical Scrapie immediately threatens our sheep and cattle industries in 2010.

Dr. Stanley Prusiner,9th Sept.2009, describing the significance of his work on CWD:-

"OUR WORK(on CWD) MAY ALSO EXPLAIN THE TRANSMISSION OF SCRAPIE PRIONS AMOUNG SHEEP AND GOATS"—Attachment one.

Using evolutionary molecular biology on CWD and it's new strains,he is working back to the beginning of prion disease –Scrapie.

Robert Steel

Robert Steel B.V.Sc. M.R.C.V.S.
Hononary Veterinary Surgeon N.S.W.