Allison Waddington

From: Robert Holderness-Roddam <robert.holdernessroddam@utas.edu.au>
Sent: Monday, 13 June 2016 4:27 PM
To: DEER
Subject: Submission: Wild Fallow Deer Population in Tasmania
Attachments: Fallow deer - June 2016.docx; TFGA_Submission_DPIPWE_Dama_Dama_111213.pdf; Deer initiative UK.pdf; The potential role of wild and feral animals as reservoirs of foot.docx; Foot and mouth virus spreads to wild deer - Guardian 2001.docx

Dear Ms Mannering

I attach my submission re Wild Fallow Deer Population in Tasmania. I also attach four additional items:

1. TGFA Submission to Biosecurity Communications, 2013. (PDF)
2. Deer Initiative England and Wales, 2009. (PDF)
3. Foot and mouth virus spreads to wild deer, 2001 (Word)
4. Ward, M.P., Laffan, S.W. and Highfield, L.D. (June 2007) The potential role of wild and feral animals as reservoirs of foot-and-mouth disease, *Preventive Veterinary Medicine* **80**:1, 9-23

Bob Holderness-Roddam
Associate
School of Land and Food
University of Tasmania
Email: Robert.holdernessroddam@utas.edu.au

155 Main Road, Austins Ferry, Tasmania, Australia, 7011

'Phone: (03) 6249 1579 - Email: bobhroddam@yahoo.co.uk

13 June 2016

Ms Jenny Mannering
Inquiry Secretary
Legislative Council
Parliament House
HOBART TAS. 7000
deer@parliament.tas.gov.au

Dear Ms Mannering

Submission: Wild Fallow Deer Population in Tasmania

I don't intend to cover ground which I would expect many other submissions will deal with.

My background is a Northumbrian (NE England) sheep farm. There was a group of Roe deer (*Capreolus capreolus*) which resided on the property. The main issue with these deer was that they would raid the turnip clamps where we stored the supplementary feed for the sheep during winter.

Potts *et al.* (2014) in their paper Predicting the future range and abundance of fallow deer in Tasmania, *Wildlife Research*, **41**: 633-640 more than adequately canvass the issues surrounding fallow deer in Tasmania.

However, there is one issue which they only briefly touch upon. This is disease. They reference Cousins *et al* 2002 and Jesser 2005. Cousins *et al* deal with Johne's Disease, with no reference to deer; whilst I have been unable Jesser's paper Deer: Family Cervidae in Queensland. Pest Status Review series – Land Protection. (Queensland Government Natural Resources and Mines: Brisbane).

The elephant in the room (to mix the metaphors) is **Foot and Mouth**. I'm sure I don't have to explain the consequences for Tasmanian agriculture if foot and mouth ever infected our livestock! Whilst we are relatively isolated, it would only take a careless tourist returning from S.E. Asia to introduce the disease to Australia, or – God forbid – an act of eco-terrorism. [Note Indonesia is considered to be foot and mouth free - http://www.fao.org/ag/againfo/commissions/eufmd/commissions/eufmd-home/reports/archive/33rd-general-session/the-global-status-of-foot-and-mouth-disease-and-its-relevance-to-control-and-eradication-in-east-asia/en/]

I attach a couple of papers, or abstracts, which indicate that deer can catch foot and mouth disease. Fallow deer, apparently, are less likely to die – but this means they can move around and spread the disease to livestock. Whilst the UK study downplays the risks of livestock contracting foot and mouth, I suggest that the risks in Tasmania may be enhanced. This is because of the possibly greater opportunities for deer to intermingle with livestock on the bush runs used by Tasmanian farmers.

I suggest the risk is real, and would urge the committee to consider this in their deliberations.

Bob Holderness-Roddam

Dip Agr., M. Env. Mgmt.

Honorary Research Associate, School of Land and Food, University of Tasmania.

Additional material attached to email:

1. TGFA Submission to Biosecurity Communications, 2013. (PDF)
2. Deer Initiative England and Wales, 2009. (PDF)
3. Foot and mouth virus spreads to wild deer, 2001 (Word)
4. Ward, M.P., Laffan, S.W. and Highfield, L.D. (June 2007) The potential role of wild and feral animals as reservoirs of foot-and-mouth disease, *Preventive Veterinary Medicine* **80**:1, 9-23

TASMANIAN FARMERS & GRAZIERS ASSOCIATION

Biosecurity Communications
Department of Primary Industries, Parks, Water and Environment (DPIPWE)
Box 44
HOBART TAS 7001
Email: Barry.Calderbank@dpipwe.tas.gov.au

Dear Mr Calderbank

Re: Species Profile – Dama Dama (Fallow Deer)

The Tasmanian Farmers and Graziers Association (TFGA) is the leading representative body for Tasmanian primary producers.

The total Tasmania gross state product (GSP) was $23.9 billion for the 2012 year. The GVP of agriculture, forestry and fishing collectively amounted to almost 9% of this total, which is well above that for the nation as a whole.

In 2010/11, the farm gate value of production (GVP) of agriculture, forestry and fishing was $1.98 billion. This comprised:

- agriculture - $1.150 billion;
- forestry - $235million; and
- fishing - $597 million.

This is before considering input supply services and value-adding. Taking into account basic multiplier factors, this means the farm-dependent economy contributes more than $5.0 billion to the gross state economy - in spite of adverse pressures on the forestry industry.

TFGA members are responsible for generating approximately 80% of the value created by the Tasmanian agricultural sector.

Farmers are also significant land managers in the state, with almost a third of Tasmania's land area of 68,300 sq km committed to agriculture.

These figures clearly confirm the importance of the sector as an economic driver for the state's economy – and also demonstrate that agriculture is a more significant contributor to the Tasmanian economy than in any other state.

With this in mind, it is clear that Tasmania needs to ensure that the agricultural base of the state remains competitive and profitable. On that basis, we appreciate the opportunity to comment on the species profile assessment prepared by Latitude 42 Consultants Pty Ltd with respect to a proposal to permit import of fallow deer into Tasmania.

ACN 009 477 810
ABN 51 009 477 810

P: (03) 6332 1800
F: (03) 6331 4344
W: www.tfga.com.au

A: TFGA House, PO Box 193
Cnr Cimitiere & Charles Streets
Launceston TAS 7250

Fallow deer are not native to Tasmania but, paradoxically, currently enjoy the status of a partially protected species within the state.

There was strong interest in deer farming in the state in the 1990s, but the lack of viable commercial markets led to the eventual collapse of many ventures. In a number of cases, gates were simply left open and deer were allowed to escape into the wild. Tasmanian conditions suit this species and the numbers have proliferated spectacularly. As a result, the feral deer population in the state is now reported to be in the order of 20,000 to 30,000 animals. Not only are numbers increasing, but the range of the feral deer population is also expanding rapidly.

We appreciate there is an interest in maintaining the feral deer population by the hunting and recreational sectors.

However, there is a strong view by farmers in many areas of the state that they are considered to be an invasive pest species which should be eradicated. This view is reinforced by readily available evidence – including the expert report on this proposal, which supports this contention and further highlights the extreme threat classification of the Vertebrate Pests Committee.

These animals cause significant damage to crops and farm infrastructure, particlaurly fencng. As a result, they impose enormous costs on farmers trying to control and/or mitigate damage. This impacts detrimentally on farm incomes and has a flow-on effect across the community.

Further, and perhaps less obviously, little consideration is given to the damage feral deer can cause to native vegetation and potentially threatened species.

We note that the importation of fallow deer is prohibited under the *Nature Conservation Act 2002*. Given the clear intent of this Act, coupled with the available evidence showing fallow deer are a feral pest, we are of the view that consideration of such a proposal would be in direct contravention of the Act and associated evidence; and that it should be dismissed without further discussion.

There is no reason that new genetic material, if so required for a farmed herd, could not be obtained from the extensive feral population. If the proponent does not consider this to be a practical approach, an alternative would be to consider use of imported artificial insemination materials.

TFGA is therefore strongly opposed to any lifting of the ban on importing fallow deer into Tasmania. Not only do we believe that the importation of fallow deer should remain prohibited, we would also contend that there are grounds for review of the current classification of deer as a partially protected species.

Yours sincerely

Jan Davis
Chief Executive Officer
11 December 2013

DISEASES
FOOT & MOUTH

ENGLAND & WALES
BEST PRACTICE GUIDES

the deer initiative

Introduction

The purpose of this guide is to describe Foot and Mouth disease(FMD) in deer, the restrictions that are put in place during an outbreak and the appropriate bio-security measures that should be followed. This guide links to Deer Legislation and Carcass Inspection guides.

Description and Legislation

FMD is highly infectious viral disease which can be carried in soil/water or become airborne. It affects all cloven hoofed animals including deer. FMD is a notifiable disease in the UK, the legislative procedures for dealing with an outbreak are found in the Foot and Mouth Disease(England/Wales) Orders 2006. For the purposes of the Orders, deer are "susceptible animals" and, since one of the main means of controlling the disease is to prevent the movement of live animals, carcasses and by-products during an outbreak, restrictions may be placed on the culling of deer and the movement of carcasses and by-products.

FMD in deer

All deer are susceptible to FMD. In Roe and Muntjac the disease may be severe and sometimes fatal. There has not been a confirmed case of FMD in wild deer in the UK and deer are not thought to have been important in it's transmission in the outbreaks in this country in the last 50 years. Deer have, however, been shown to catch FMD in experimental situations in the past, these experiments are the source of the photographs in this guide.

Symptoms

In deer, symptoms may be apparent only for a period of 2-20 days. Deer may not show many of the outward signs of disease such as lameness or salivation (dribbling) which are seen in domestic livestock. Deer may be encountered that are obviously lethargic and unwell, or may simply be found dead. Roe and Muntjac especially may be disinclined to move when approached closely. Close examination of a carcass is necessary to see clinical signs, the most common being small vesicles(blisters or raised or discoloured areas of skin) or ulcers (sores) in the following places:

Fig 1. Fallow deer - Small un-ruptured vesicles on tongue

- Mouth - tongue, gums, upper dental pad, inside lips
- Feet - skin between hooves, boundary of skin and hooves especially between and behind hooves and the bulb of the heel. Both front and rear hooves should be inspected. The single most common sign is the presence of red ulcers or blisters at the junction of the horn and skin around the heels.

The photographs below show experimentally induced symptoms in four species of deer, other species will be similar:

Fig 2. Fallow deer - un-ruptured vesicle between hooves

Fig 3. Fallow deer - Healing lesions affecting the bulbs of the heel

Fig 4. Roe deer - Ruptured vesicles above dental pad and below incisors

Fig 5. Roe deer - Un-ruptured inter-digital vesicle

Fig 6. Roe deer - Healing lesion with under run of hoof

Fig 7. Muntjac deer - Extensive vesication of tongue

Fig 8. Sika deer - Un-ruptured vesicles on lateral surface of tongue

Fig 9. Sika deer - Ulcerated area on buccal mucosa

During an outbreak

Restrictions

The restrictions resulting from a FMD outbreak are based on zones drawn around outbreaks.
If FMD is confirmed at a site a "protection zone"(usually 3km radius) and a "surveillance zone"(usually 10km radius) will be placed around the site. The rest of England, Wales and Scotland will usually become a "restricted area". At this stage the simplest initial assumption is that all deer stalking should stop, as should all movements of live deer, carcasses and by products (including trophies), either locally or for export.
The extent of restrictions will be reported widely on Defra, Deer Initiative and other websites, in the press and sometimes by telephone.

Reporting

If you suspect FMD in deer you should report your details, the species and location of the deer to the duty vet at your local Animal Health Office, contact details can be found at http://www.defra.gov.uk/animalhealth/about-us/contact-us/search. They will advise on subsequent action. Unless advised otherwise, suspect carcasses should not be moved from where they fell. If they have been moved they should be isolated, if possible in a secure area, away from other carcasses, or any live, susceptible animals.

Bio-security

Go to http://www.defra.gov.uk/animalh/diseases/pdf/biosecurity_guidance.pdf for advice on FMD bio-security.

Take note of the movement restrictions prevailing at the time and in general do not make unnecessary visits to livestock areas. FMD approved disinfectants are available at all agricultural stores and should be used as appropriate.
It is extremely rare for FMD to affect people but when handling carcasses maintain protective measures such as gloves, disinfection of equipment, hand washing and so on. These measures will also help to prevent the spread of the disease. Vehicles and footwear need to be kept clean and if necessary disinfected, be prepared to use wheel and boot washes.

Further Info

Advice on Foot and mouth Disease -http://www.defra.gov.uk/animalh/diseases/fmd/default.htm

The Deer Initiative - http://www.thedeerinitiative.co.uk

Foot and Mouth Disease(England) Order 2006 - http://www.opsi.gov.uk/si/si2006/20060182.htm

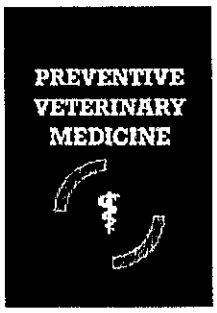
Foot and Mouth Disease (Wales) Order 2006 - http://www.opsi.gov.uk/legislation/wales/wsi2006/20060179e.htm

Local Animal Health Offices - http://www.defra.gov.uk/animalhealth/about-us/contact-us/search

The potential role of wild and feral animals as reservoirs of foot-and-mouth disease

Preventive Veterinary Medicine

Volume 80, Issue 1, 15 June 2007, Pages 9–23



Michael P. Ward[a,*], Shawn W. Laffan[b], Linda D. Highfield[a]

- [a] Department of Veterinary Integrative Biosciences, Texas A&M University College of Veterinary Medicine & Biomedical Sciences, College Station, TX 77845-4458, USA
- [b] School of Biological, Earth and Environmental Sciences, University of New South Wales, Sydney, NSW 2052, Australia

doi:10.1016/j.prevetmed.2007.01.009

Abstract

We investigated the potential role of feral pigs and wild deer as FMD reservoirs with a susceptible–latent–infected–recovered geographic-automata model, using spatially referenced data from southern Texas, USA. An uncontrolled FMD outbreak initiated in feral pigs and in wild deer might infect up to 698 (90% prediction interval 181, 1387) and 1557 (823, 2118) cattle and affect an area of 166 km^2 (53, 306) and 455 km^2 (301, 588), respectively. The predicted spread of FMD virus infection was influenced by assumptions we made regarding the number of incursion sites and the number of neighborhood interactions between herds. Our approach explicitly incorporates the spatial relationships between domesticated and non-domesticated animal populations, providing a new framework to explore the impacts, costs, and strategies for the control of foreign animal diseases with a potential wildlife reservoir.

Foot and mouth virus spreads to wild deer

(22 April 2001)

The foot and mouth virus has passed into Britain's wild deer population, making the Government's policy of mass slaughter of farmyard livestock futile.

There have been several cases of vets clinically identifying the disease in wild deer, some of which have died from it. There have also been many reports from Devon, Cumbria and Northumberland of deer limping and exhibiting other unusual behaviour linked to the disease.

Veterinary experts say it is impossible to vaccinate or cull wild deer and once infected they will act as a reservoir for the virus, repeatedly re-infecting livestock. It will make it almost imposs-ible for Britain to rid itself of the virus, until it dies out naturally in wild deer, which could take years.

Last week a roe deer was found dead at Kirk House Farm near Penrith, which had already been confirmed as having foot and mouth in livestock. Local vet Matt Coulston, of Frame Swift and Partners, identified lesions on all four feet and in its mouth. 'It had signs consistent with foot and mouth disease,' he told The Observer. 'There have been loads of people round here reporting dead deer and sick deer. People suspect that Maff [the Ministry of Agriculture, Fisheries and Food] are ignoring it because it is difficult to deal with.'

The British Deer Society has been flooded with reports from deer experts reporting the animals limping and being covered with lumps. Mike Squire, secretary of the society, said: 'We find it difficult to believe that deer exposed to the same pastures as infected cattle and sheep have not been exposed to foot and mouth disease.'

A Maff spokesman said yesterday that government vets had tested nine deer for foot and mouth and none had been found positive: 'So far there have been no confirmed cases of foot and mouth in deer.'

However, the Maff vets use the Elisa test, which was developed on cattle and sheep and is not thought to be so effective on deer. Research from Russia also suggests it is very difficult to test whether deer have been infected with foot and mouth from blood samples.

In 1974 the government Animal Health Institute in Pirbright kept a number of deer in proximity to sheep with foot and mouth for two hours in a controlled experiment. The scientists found all six native species of deer contracted the disease, and several died.

In an outbreak of foot and mouth in California in 1924, the outbreak spread rapidly to deer. Slaughtermen culled 22,000 deer in the Stanislav National Park and found that, of those, 2,279 were infected.

Dr John Fletcher, past president of the Veterinary Deer Society, said: 'It's highly likely the virus has entered the wild deer population - the deer are in abundance and graze in close contact with sheep and cattle. Nothing has been confirmed, but there is an abundance of anecdotal evidence, and it would be quite surprising if it hasn't entered the population.'

Simon Booth, director of the Deer Inititiative, the government advisory body on deer in England, said: 'There have been unconfirmed cases of it appearing in deer.'

Deer experts have been calling on Maff for weeks to conduct a selective deer cull to ascertain the extent of the disease and to draw up contingency plans. However, Maff ignored their warnings until it called an emergency meeting on Friday. It is now considering lifting the ban on deer-stalking to provide the carcasses for tests.

The existence of the disease in Britain's 1.5 million wild deer population means the policy of mass slaughter of more than a million farm animals and the closure of most of the British countryside has been pointless. Wild deer are so evasive and diffi cult to track down that it is impossible to vaccinate or cull them. Shooting at herds of deer will simply cause them to run, spreading the disease further.

The deer population will harbour the disease before building up resistance and it eventually dies out. This could take years. Until then the deer will repeatedly re-infect livestock and, with the disease endemic in Britain, meat exports will continue to be banned.

Squire said: 'We're looking at a huge slaughter and cost to the taxpayer for no purpose. How do you think the public will react when they know that?'

Booth said: 'If it's in the deer population, it will mean the mass slaughter policy will not work.' Confirm-ation of foot and mouth among deer will force the Government to abandon the mass slaughter programme, a move that has been steadfastly resisted by the National Union of Farmers. 'It will force their hand into vaccination,' said Fletcher.

www.bds.org.uk British Deer Society

Accessed at: http://www.theguardian.com/uk/2001/apr/22/politics.footandmouth

Date: 17 January 2016