



Post Velveting/ Post Xylazine Stag Death

Farmer Name:.....

Address.....

Phone.....

ID.....

Data Collection Booklet



Contents

1. Contact Details

2. Information about the study

3. Form A (white page) General Information

- » Please fill out this form only once
- » General information about the farm, facilities and practice
- » Contact details.

4. Form B (yellow) Velveting Session Report

- » Please fill out one copy of this form (2 sides) for every velveting session during which a stag death occurs and at least 3 other episodes (when deaths do not occur) throughout the season. The more sessions we can get information for the better.

Velveting session is a velveting occasion where any number of stags were velveted in one shift. For instance, on one single day, if you velveted stags once in the morning and another lot in the evening, it is considered as two episodes.

5. Form C (pink) Stag death case details

- » Please fill out one of these forms for every stag that dies.

6. Form D (blue) Post Mortem

- » Please call your veterinarian or take the carcass in to the clinic for a post-mortem examination. If this will not be possible, an on-farm post mortem instruction sheet is included at the back of this booklet.

» It is critical that the post mortem be performed as soon as possible after death and that samples are submitted to the laboratory immediately. A payment of \$100 will be made to your veterinarian to cover the cost of post mortem. If the cost is likely to be higher than this, we request that the veterinarian contact the research team.

7. Form E (green) Laboratory submission form

- » Please ask your veterinarian to complete the laboratory submission form and send the samples to the address at the front of this booklet. If a veterinarian is not available, you may fill in and send these yourself. Compensation will be paid for the cost of freight.

Contact Details

Send forms to

POST Pania Flint
Farm Services Clinic
Massey University
PB 11 222
Palmerston North

PHONE 0800 0800 70 (answer phone)
(06) 3569099 ex 7757

FAX (06) 350 5616

EMAIL: p.flint@massey.ac.nz

WEB SITE: <http://>

Send Laboratory Samples to:

Pania Flint
Room 1.41, Vet Tower
Massey University
Tennant Drive
Palmerston North

Please feel free to contact any of the persons below if you have any questions regarding this project

Pania Flint

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Information about the study

Post Xylazine stag deaths have been recognised as wastage to the deer industry since 1988 when Walker and Middelberg reported an incidence of 1.7 deaths per 1000 adult stags velveting from 11 veterinary practices surveyed in the Hawkes Bay area. All of these animals had been sedated with xylazine and died within 48 hours of velveting. Post mortems and laboratory analysis showed severe lung abnormalities and signs of an allergic type reaction. The following year, there were only two stag deaths recorded out of 15,000 velveting for the season.

The National Velveting Standards Body has recorded a limited amount of data over the 2002/2003 and 2003/2004 seasons regarding stag deaths reported to the NVSB. Massey University's Deer Research Group has carried on with this data collection process over the past two seasons and will continue to collect data for at least this season.

In 2005, 10 deaths were reported and last year only 7 deaths were reported to the study. This is an under-representation of the actual number of deaths that occurred as evidenced by feedback from vets and farmers at four separate meetings around the country during 2006. Over the next two years, we aim to get as many deaths reported as possible. This has been made easier by increasing the ways that farmers and vets can access information and report to the researcher.

The significant findings so far have included severe lung changes and animals with difficulty breathing prior to death. There appears to be changes occurring to the cellular make up of the lung tissue as well, although there have not been sufficient good lung samples sent in to confirm this.

Of particular note is the unpredictable nature of stag deaths. Some years seem better than others and some properties appear to be affected more than others. There have been several incidents where more than one stag has died at the same velveting occasion.

Drug formulation and sterility and the amount of xylazine given does not appear to be a major contributing factor. This findings suggest an underlying predisposing factor that causes some stags to be more over-reactive to the effects of xylazine.

This subject still presents more questions than answers. The present research aims to gather a large amount of data from as many stag death cases as possible as well as data from properties where deaths do not occur in order to identify factors that may increase or decrease the risk of death. In addition, post mortem and histological examinations will be undertaken in order to further understand the processes going on within the animal that lead to death. It is hoped that the answers provided by this research will help prevent losses of potentially valuable animals in the future. However, this survey only provides some of the information and detailed studies of animals under sedation will need to be conducted in conjunction with this survey in order to better understand the mechanism of the problem and whether anything can be done to prevent it.

Form A. Complete once only

Farm contact details

Owner			
Manager			
Address			
Phone		Mobile	
Fax		E-mail	

Operation: (Circle) Venison Stud Velvet Breeding Other

Breed (number) Red Wapiti Wap-Red Fallow Others

Stags velveted/sedated (number)

Spikers velveted 2yo velveted Adult velveted

Spikers sedated 2yo sedated Adult sedated

Sedate for? (circle) Transport Liver biopsy Breeding Tb testing
Other

Management(circle) Intensive Semi-intensive Extensive

Land type Flat Rolling Hilly Steep

Pasture, supplements and treatments given to velveting stags

Month	pasture	hay	silage	baylage	crop	grain	fert	drench	vaccine	other
Aug										
Sept										
Oct										
Nov										
Dec										
Jan										

Post sedation deaths

Number last season Total ever Over _____ years

How many stags have you had die for any other reason? Please describe

FORM - B: Velvetting Session

Fill this form each time you velvet regardless of whether a death occurred
Complete Both Sides

Farmer Name _____ Date of velveting:

Age range of the mob	Start time(mustering)
No. of stags in the mob	Finish time (return to paddock)
No. of stags velveted	Weather condition (sunny/cloudy/rainy)
First Cut/Regrowth?	Temperature during the velvetting episode (in °C)
Number. deaths	Wind (light breeze/ strong gusty wind/ calm)

What feed did the stags come off immediately before velvetting	
When was this sown?	
When was fert last applied to these paddocks (circle)	Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec 12months ago 2years never
What was included in the fert?	P N K S Cu Zn Se Co Urea Other
What was the weather like the last few days	
How did the stags look when they came in?	

During yarding and penning, how many stags demonstrated the following

Panting		difficult to move		aggressive	
Jumping up walls		broken velvet		injuries	

Comments regarding stress or injury	
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How many persons were involved in restraining and removal of antler?	
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Who velveted Farmer Vet Other

Where were stags velveted	
What was the flooring made of	

Drugs Used for Sedation and Analgesia

	Sedation	Top-up	Reversal	Local
Brand name	(a)			
	(b)			
Concentration				
Dose				
Batch number				
Expiry				

How many stags were

Standing		recumbent, head up		recumbent head down	
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How many stags were sedated at any one time?	
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How many pens had sedated stags at any one time	
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How long did stags remain sedated?	
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List other drugs/treatments/vaccination, etc given in the last week?

Product	Dose	When given

After antler removal, where did you release the stags

Original mob		Another mob already velveted	
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When were the stags checked after velveting (please state times)?

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Please mention if anything different or unusual (interruption or problems) happened during this episode.

END

FORM-C : Stag Death -Case Details

Please complete for every stag that dies

Name of farmer: Date (stag death):

Has a velveting episode form been completed for this case? Please ensure a velveting episode form (Form B) is completed	Yes		No	
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Stag details

Tag no.	
Species & bloodline (NZ/ English/European etc)	
Parentage/ Lineage (Please list as many as known)	
1st cut / Re-growth	
No. stags in pen	

Age	
Est. bodyweight	
Body condition score	
Est. Time of death	
How long after velveting	

Drug details

	Sedation	Top-up	Reversal	Local
Brand name: (a)Xylazine alone	(a)			
(b) Other drug combination	(b)			
Xylazine concen- tration (%)				
Dose (mL)				
Xylazine Top-up given (ml)				

How long after sedation was velvet removed?		minutes
How long after sedation was reversal given?		minutes
How long after velvet removal was stag released?		minutes

Was the stag away from other stags at any point?	Yes		No	
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Stag Temperament - Normal temperament of this stag

quiet		moderate		nervous		aggressive	
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Tick the following behaviours seen in this stag

None		panting		jumping up walls	
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Aggressive to stags		aggressive to handler		injury or death	
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Stag position during sedation:

Standing		Sternal recumbent		Lateral recumbent	
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Any evidence of stomach bloat during and post-velveting?	Yes		No	
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Any evidence of stomach content in the mouth?	Yes		No	
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Any signs of breathing difficulty?	Yes		No	
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Describe any abnormal signs or behaviour seen during or immediately after velveting

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Condition of the stag upon release to paddock?

Fully recovered		In drowsy state	
-----------------	--	-----------------	--

Was the stag examined prior to death?	Yes		No	
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Time of examination	
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Findings/ Treatments / Actions

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Other stags affected at this occasion

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Problems, illness or injury encountered with this stag previously	Yes		No	
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Please describe

Temperature and weather between velveting and the time stag was found dead?

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In your opinion what was the likely cause of death?

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END

FORM - D: POST-MORTEM REPORT

Please ask your veterinarian to complete one post mortem report for every stag that dies

Has a VELVETING EPISODE form been completed for this case? Please ensure a velveting episode form (Form B) is completed	Yes	
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No	
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Has a STAG DEATH form been completed for this case? Please ensure a Stag Death form (Form C) is completed	Yes	
--	-----	--

No	
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Date of post mortem:..... Time of post mortem:.....

Examined by

Farmer's name..... Stag ID.....

Please record abnormalities or tick the column if the organ was normal or not examined.
 Continue on a separate piece of paper if required.
 Refer overleaf for suggestions.

	Abnormalities	Normal	Not examined
External examination			
Abdominal cavity			
Liver			
Kidneys			
Adrenal glands			
Rumen			
Abomasum			
Intestines			
Thoracic cavity			
Lungs			
Heart			
Other			

Please report any abnormal findings on the following

External Examination

- » Position and location of the stag (eg left or right side down, head down hill, under trees, in puddle)
- » Bloat, external haemorrhage or signs of trauma
- » Please describe any discharge from nostrils, anus, eyes, mouth
- » Colour of visible mucous membranes (conjunctiva, gums)
- » Any other abnormalities

Abdominal cavity

- » Nature and amount of fluid.
- » Abnormal position of abdominal contents

Intestines, reticulorumen and abomasum

- » Fluidity, colour and nature of the contents. (Eg. Bloody, runny, firm, smelly, empty any unusual contents, parasites)
- » Colour and consistency of the intestinal wall both inside and outside

Liver

- » Colour and consistency. Firm, crumbly, fatty, tan, brown, red etc)
- » Presence of abscess or fluke

Kidney

- » Please check both kidneys
- » Colour, size and consistency.
- » Presence of infarcts, abscess, red spots on the surface,
- » Spaces within the kidney parenchyma or pelvis
- » Colour of urine if seen

Adrenal Glands

- » Size, colour and consistency

Thoracic Cavity

- » Nature and amount of fluid
- » Adhesions, haemorrhages, other abnormalities

Lungs

- » Colour and consistency. (pink, red, white, brown; all over, or in patches, please state size of abnormal areas)
- » Did the lungs deflate on opening of the chest cavity
- » Lungworms, abscess or adhesions
- » Colour, nature and amount of froth or food material in the trachea or lower airways

Heart

- » Size, colour, obvious abnormalities such as red spots, pale spots or defects
- » Presence and nature of blood in the chambers
- » Amount and nature of fluid in the heart sac

Any other abnormalities

Please submit samples of as many tissues as possible along with the laboratory submission form (Form E) to Massey University for histopathology along with an invoice for veterinarian's professional time in performing this post mortem examination.

FORM-E : Laboratory Submission

Date.....

Farmer's name.....

Stag ID.....

Submitter.....

Please take samples from the following sites and any other sites that appear abnormal.

Tick the tissues that have been submitted

ORGAN	Sample	Left	Right
Lung			
Heart			
Liver			
Kidney			
Adrenal gland			
Brain			
Abomasum			
Intestine			
Other			

Instructions

- 1) Using a clean, sharp knife or scalpel blade cut pieces approximately 2cm x 0.5cm
- 2) If the tissue appears abnormal, ensure that a normal section is also included
- 3) Take multiple sections of lung and liver (looking for focal lesions)
- 4) Include pieces from each lobe and left and right organs where possible
- 5) Multiple pieces of brain or the whole brain sectioned in half
- 6) Kidney: cut in half lengthways and take a wedge from the depth of the kidney
- 7) The adrenal gland is a small pea shaped organ located at the cranial pole of the kidney.
- 8) Place the tissues gently into 10% formalin solution without washing, ensuring that the volume of formalin is at least 10 times the volume of tissues.
- 9) Send tissues along with this form to:
 - » Pania Flint, Room 1.41
 - » Vet Tower IVABS
 - » Massey University
 - » Tennent Drive
 - » Palmerston North