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# **Australian Deer Industry**

## **Velvet Antler and Venison Co-products Language and Specifications Guide**



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# Foreword

The Australian meat industry is a world leader in the preparation of domestic and export meat products to stringent specifications. This reputation has principally been built on the established beef and sheep meat industries which began in the 19th century. The farming of deer has only occurred over the past few decades with a rapid expansion of numbers from the tropical to the temperate zones.

The deer industry linked with the Rural Industries Research and Development Corporation (through the Corporation's Deer Research and Development Advisory Committee) to develop the Australian Deer Industry Venison Language and Specifications manual.

A secondary step in the joint commitment to the development of a mature market driven industry was the development of a standard language and specifications for the Industry's other major products, Velvet Antler and Venison Co-products.

This manual is a benefit of that linkage using Industry levies and Commonwealth government funds.

This Velvet Antler and Venison Co-products Language and Specifications manual is available to all sections of the industry to provide a common language for accurately described velvet antler grades and a core range of venison co-products.

This manual should be regarded as a 'living' document that will progressively meet changing requirements. It was developed with input and cooperation from a wide range of Industry personnel, all of whom we thank sincerely. In particular a special note of thanks is given to the New Zealand Game Industry Board for its consent to include information from their Velvet Grading Charts for Red deer and Wapiti in this manual.

We urge processors and purchasers of Velvet Antler and Venison Co-products to use the manual and make recommendations for amendments to further the aims of excellence within our deer industry.

This project was funded from industry revenue which is matched by funds provided by the Federal Government.

This manual, a new addition to RIRDC's diverse range of over 800 research publications, forms part of our Deer R&D program, which aims to foster an Australian deer industry as a profitable and efficient mainstream agricultural enterprise.

Most of our publications are available for viewing, downloading or purchasing online through our website:

- downloads at [www.rirdc.gov.au/reports/Index.htm](http://www.rirdc.gov.au/reports/Index.htm)
- purchases at [www.rirdc.gov.au/eshop](http://www.rirdc.gov.au/eshop)

## **Simon Hearn**

Managing Director  
Rural Industries Research and Development Corporation

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# **Velvet Grading Charts**





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# **Acknowledgements**

All information on red deer and Elk/Wapiti velvet grading included in this manual is taken directly from the 'New Zealand Velvet Grading Guidelines' produced by the New Zealand Game Industry Board. The New Zealand Game Industry Board owns the copyright for all information on Red deer and Elk & Wapiti velvet grading included in this manual

Information on fallow deer velvet grading included in this manual is taken directly from the 'Fallow Velvet Guideline Chart' produced by the Deer Industry Association of Australia and Australian Deer Horn and Co-Products. A special note of thanks is given to the Deer Industry Association of Australia and Australian Deer Horn and Co. Products for their consent to include Velvet Grading Charts for Fallow deer in this manual. The Deer Industry Association of Australia and Australian Deer Horn and Co. Products owns the copyright for all information on Fallow deer velvet grading included in this manual.

Others who have contributed to the development of this manual include Mr Murray Hamer from the Alpine Deer Group in New Zealand, Dr Zhong Chen from Tong Ren Tang Australia and Mr Alan Chapman from Bilby International in Australia.

## **Hygiene**

Velvet is a health food and should be handled and stored in an approved hygienic manner and as described in Australia by the National Velvet Accreditation Scheme (NVAS)

## **Animal Welfare**

In Australia velvet harvesting must be undertaken accordance with the NVAS and in New Zealand in accordance with the AWAC Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers. Failure to comply with appropriate codes may result in prosecution.

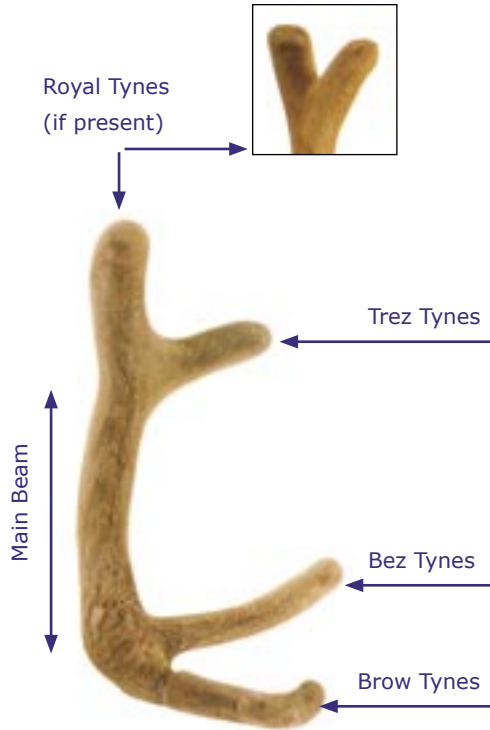
Aims of the Australian NVAS and the New Zealand Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers are to:

- (a) Ensure acceptable standards of animal welfare are maintained.
- (b) Support product traceability requirements of the Deer Industry QA Programs.
- (c) Ensure Occupational Health & Safety requirements for personnel involved in velvet removal are maintained.
- (d) Meet QA, residue and animal welfare expectations of international and domestic communities and clients

# Velvet Grading Charts

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## Velvet Stick Terminology

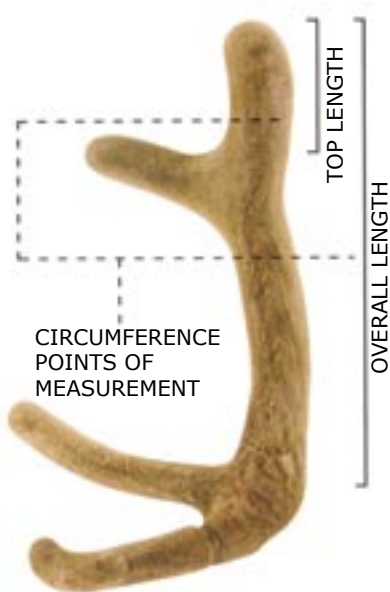


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# Red Deer



## Measurements



## NOTES ON MEASUREMENT

*Circumference*

Circumference is taken as the lesser measurement of the circumference of the beam measured on the clear beam:

Immediately above the trez tyne

Midway between the top of the stick and the top of the inside cut

'Clear' means that the measurement is not to be taken where webbing from a tyne or other antler growth on the antler would interfere with the measurement. The objective is to get a measurement representative of the average circumference of the beam.

*Top Length*

Top length is measured between the top of the stick and the bottom of the fork where the trez meets the beam

*Overall Length*

Overall length is measured from the top of the stick to the top of the inside cut

## NOTES ON GRADING

### *Antler In SA, A, B, C, D And E Grades:*

- (a) must be of good conformation, ie. With a trez tyne and with all tynes and the beam in proportion
- (b) without a trez tyne is to be reduced one grade (eg from C to D)
- (c) may be downgraded for poor conformation including excessive overall length regardless of the time of cutting
- (d) is subject to grader discretion based on the principal of separating late and well cut velvet

### *Super A*

- Note – Maximum top length for Super A velvet is equivalent to circumference

### *Overgrown*

#### Overgrown 1

- SA and A grade velvet which exceeds maximum top length
- SALT and ALT grades which are indented
- SA, AS and AM grades which indent within the maximum top length may not necessarily be graded OG

#### Overgrown 2

- B and C grade velvet which exceeds maximum top length or is indented

#### Overgrown 3

- D and E grade velvet which exceeds maximum top length or is indented

## SPECIFICATIONS



Specifications

	Minimum weight	Circumference	Bottom tynes
<b>SA1</b>	1.8 kg	>18 cm	1
<b>SA2</b>	1.8 kg	>18 cm	2
<b>A1</b>		16-18 cm	1
<b>A2</b>		16-18 cm	2
<b>B1</b>		14.5-16 cm	1
<b>B2</b>		14.5-16 cm	2
<b>C1</b>		13-14.5 cm	1
<b>C2</b>		13-14.5 cm	2
<b>D1</b>		11.5-13 cm	1
<b>D2</b>		11.5-13 cm	2
<b>E</b>		<11.5 cm	N/A

## SHORT



Short

	Top length		Overall length max
	preferred	max	
<b>SA1</b>	<16 cm	18 cm	N/A
<b>SA2</b>	<16 cm	18 cm	N/A
<b>A1S</b>	<13 cm	16 cm	45 cm
<b>A2S</b>	<13 cm	16 cm	45 cm
<b>B1S</b>	<11 cm	13 cm	40 cm
<b>B2S</b>	<11 cm	13 cm	40 cm
<b>C1S</b>	<8 cm	10 cm	35 cm
<b>C2S</b>	<8 cm	10 cm	35 cm
<b>D1S</b>	<7 cm	8 cm	30 cm
<b>D2S</b>	<7 cm	8 cm	30 cm
<b>ES</b>	N/A	5 cm	30 cm





MEDIUM



Medium

	Top length		Overall length min
	preferred	max	
<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>A1M</i>	<13 cm	16 cm	45 cm
<i>A2M</i>	<13 cm	16 cm	45 cm
<i>B1M</i>	<11 cm	13 cm	40 cm
<i>B2M</i>	<11 cm	13 cm	40 cm
<i>C1M</i>	<8 cm	10 cm	35 cm
<i>C2M</i>	<8 cm	10 cm	35 cm
<i>D1M</i>	<7 cm	8 cm	30 cm
<i>D2M</i>	<7 cm	8 cm	30 cm
<i>EM</i>	<i>N/A</i>	5 cm	30 cm

LONG TOP



Long top

	Top Length
<i>SA1LT</i>	18-28 cm*
<i>SA2LT</i>	18-28 cm*
<i>A1LT</i>	16-26 cm
<i>A2LT</i>	16-26 cm
<i>B1LT</i>	13-23 cm
<i>B2LT</i>	13-23 cm
<i>C1LT</i>	10-20 cm
<i>C2LT</i>	10-20 cm
<i>D1LT</i>	8-18 cm
<i>D2LT</i>	8-18 cm
<i>ELT</i>	5-15 cm

OVERGROWN



Overgrown

	Top Length minimum
<i>OG1</i>	28 cm
<i>OG2</i>	28 cm
<i>OG1</i>	26 cm
<i>OG1</i>	26 cm
<i>OG2</i>	23 cm
<i>OG3</i>	23 cm
<i>OG2</i>	20 cm
<i>OG2</i>	20 cm
<i>OG3</i>	18 cm
<i>OG3</i>	18 cm
<i>OG3</i>	15 cm

\* Maximum top length for Super A velvet is equivalent to circumference



## REGROWTH

RG1



RG2



RG3



RG4



Regrowth

Regrowth	Circumference	Length	Tynes
RG1	>13 cm	10-25 cm	0 or 1
RG2	>13 cm	10-25 cm	1 or 2

Regrowth	Circumference	Length	Tynes
RG3	>9 cm	5-25 cm	1 or more
RG4	N/A	N/A	N/A

- RG1 - must be rounded and straight stick or one tyne regrowth
- RG2 - must be rounded and Korean style with a maximum of 2 tynes
- RG3 - is thinner RG1-type regrowth
  - new guidelines are that RG3 can have single or multiple tynes (not shown in grading pictures above)

Other Regrowth that is not pointing or stripping is graded as RG4. Any heavily calcified Regrowth (regrowth that is pointing or stripping) is to be graded as HH3.



## HARD HORN



### **Hard Horn 1 (HH1)**

Fully developed antler with royals and velvet still attached

### **Hard Horn 2 (HH2)**

Spiker Hard Horn; heavily calcified velvet

### **Hard Horn 3 (HH3)**

Regrowth Hard Horn; heavily calcified regrowth and fully developed antlers with royals and velvet that is starting to shed

## HARD ANTLER



### **Hard Antler 1 (HA1)**

Fully developed Hard Antler without velvet that is not bleached

### **Hard Antler 2 (HA2)**

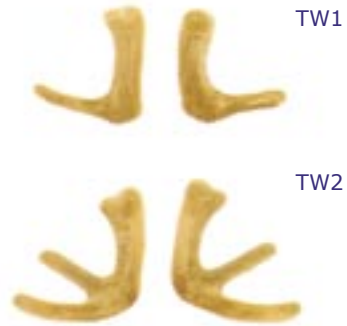
All other Hard Antler



## SPIKER



## TAIWAN



## Spiker

Spiker	Circumference	Length
SP1	>9 cm	10-25 cm
SP2	<9 cm	10-25 cm
SP3	N/A	>25 cm

Spiker velvet must not be calcified and must be rounded on top. At grader discretion, Spiker velvet with SP1 circumference but with a brow and or trez tyne may be graded SP2. Otherwise SP1 & SP2 velvet must have no tynes. Longer uncalcified Spiker velvet and other Spiker velvet with tynes is graded SP3. Any calcified Spiker velvet is graded HH2. Any Spiker velvet less than 10 mm long is graded Manufacturing 1 (Man 1) or Manufacturing 2 (Man 2).

## Taiwan

Taiwan	Circumference	Length	Tynes
TW1	>13 cm	12-25 cm	1
TW2	>13 cm	12-25 cm	2
TW3	>11 cm	12-25 cm	1
TW4	>11 cm	12-25 cm	2

Taiwan grades are for very early cut velvet. If a trez tyne is present it must not be prominent





## DAMAGED

<b>GRADE</b>	<b>Repairable Skin damage</b>	<b>Broken Bottom tynes</b>	<b>Non repairable skin damage</b>	<b>Broken beam or trez tyne</b>
<b>SA</b>	Dam 1	Dam 1	Dam 2	Dam 3
<b>A</b>	Dam 1	Dam 1	Dam 2	Dam 3
<b>B</b>	Dam 1	Dam 1	Dam 2	Dam 3
<b>C</b>	Dam 2	Dam 2	Dam 3	Dam 3
<b>D</b>	Dam 2	Dam 2	Dam 3	Man 1
<b>E</b>	Dam 3	Dam 3	Dam 3	Man 1

## MANUFACTURING

*Manufacturing 1 (Man 1)*

- D and E grade velvet with broken beam or trez tyne
- Any severely damaged velvet which is 'recoverable'
- Spiker and Regrowth and any other velvet which is not hard (ie still rounded on top) between 3 and 10 cm long

*Manufacturing 2 (Man 2)*

- Any severely damaged velvet which is not 'recoverable'
- Spiker and Regrowth and any other velvet which is not hard (ie still rounded on top) which is less than 3 cm long
- Cut-off bottom tynes

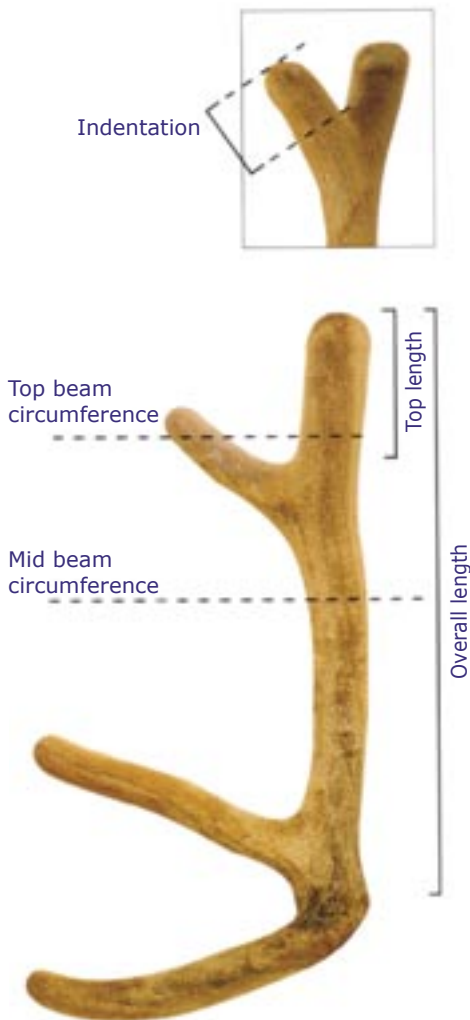


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# **Elk and Wapiti**



## NOTES ON MEASUREMENT

*Circumference*

Circumference is taken as the lesser measurement of the circumference of the beam measured on the clear beam:

Immediately above the trez tyne

Midway between the top of the stick and the top of the inside cut

'Clear' means that the measurement is not to be taken where webbing from a tyne or other antler growth on the antler would interfere with the measurement. The objective is to get a measurement representative of the average circumference of the beam.

*Top Length*

Top length is measured between the top of the stick and the bottom of the fork where the trez meets the beam

*Overall Length*

Overall length is measured from the top of the stick to the top of the inside cut

*Indentation*

Indentation is measured along the length of the longest royal to the bottom of the fork where the royal begins

## NOTES ON GRADING

EW velvet may be downgraded for poor conformation including excessive overall length regardless of time of cutting

1. Required Minimum Weight
2. Indentation is measured along the length of the royal tyne to the bottom of the fork
3. Recommended Minimum Weight only
4. Top Length for EW1 increases in proportion with circumference. Examples:

Circumference of 19.0 cms = Top Length of 21.0 cms

Circumference of 19.5 cms = Top Length of 21.5 cms

5. EW Short and Medium indenting with a maximum top length may not necessarily be downgraded
6. Elk/Wapiti Overgrown contains E/W grade velvet which exceeds permitted indentation or maximum top lengths. This grade may be divided when offered for sale to account for different styles of EWOG velvet within the grade.



Note: ELK SUPREME™ is a trademark owned by the Elk and Wapiti Society of New Zealand

ELK / WAPITI SUPREME



Elk / Wapiti Supreme

<b>Minimum weight</b>	4 kg (note 1)
<b>Circumference</b>	>20 cm
<b>Allowable indentation</b>	<10 cm (note 2)

Refer to notes on page 28





## SPECIFICATIONS



## SHORT



### Specifications

	Minimum weight	Circumference minimum
<b>EW1</b>	3 kg (note 3)	19 cm
<b>EW2</b>	2.5 kg (note 3)	18 cm
<b>EW3</b>	2 kg (note 3)	16 cm
<b>EW4</b>	1.5 kg (note 1)	14.5 cm

### Short (note 5)

	Top length maximum	Overall length maximum	Indentation
<b>EW1S</b>	21 cm (note 4)	65 cm	none
<b>EW2S</b>	21 cm	60 cm	none
<b>EW3S</b>	19 cm	55 cm	none
<b>EW4S</b>	16 cm	50 cm	none

Refer to notes on page 28



## MEDIUM



## LONG TOP



## OVERGROWN



### Medium (note 5)

	Top length	Overall length minimum	Indentation
<b>EW1M</b>	21 cm (note 4)	65 cm	none
<b>EW2M</b>	21 cm	60cm	none
<b>EW3M</b>	19 cm	55 cm	none
<b>EW4M</b>	16 cm	50 cm	none

### Long top

	Top length	Indentation
<b>EW1LT</b>	21-31 cm (note 4)	2.5 cm (note 2)
<b>EW2LT</b>	21-31 cm	none
<b>EW3LT</b>	19-29 cm	none
<b>EW4LT</b>	16-26 cm	none

### Overgrown (note 6)

Top length		Indentation
>31 cm (note 4)	or	>2.5 cm EW1LT (note 5)
>31 cm	or	any (note 5)
>29 cm	or	any (note 5)
>26 cm	or	any (note 5)

Refer to notes on page 28



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# Fallow Deer



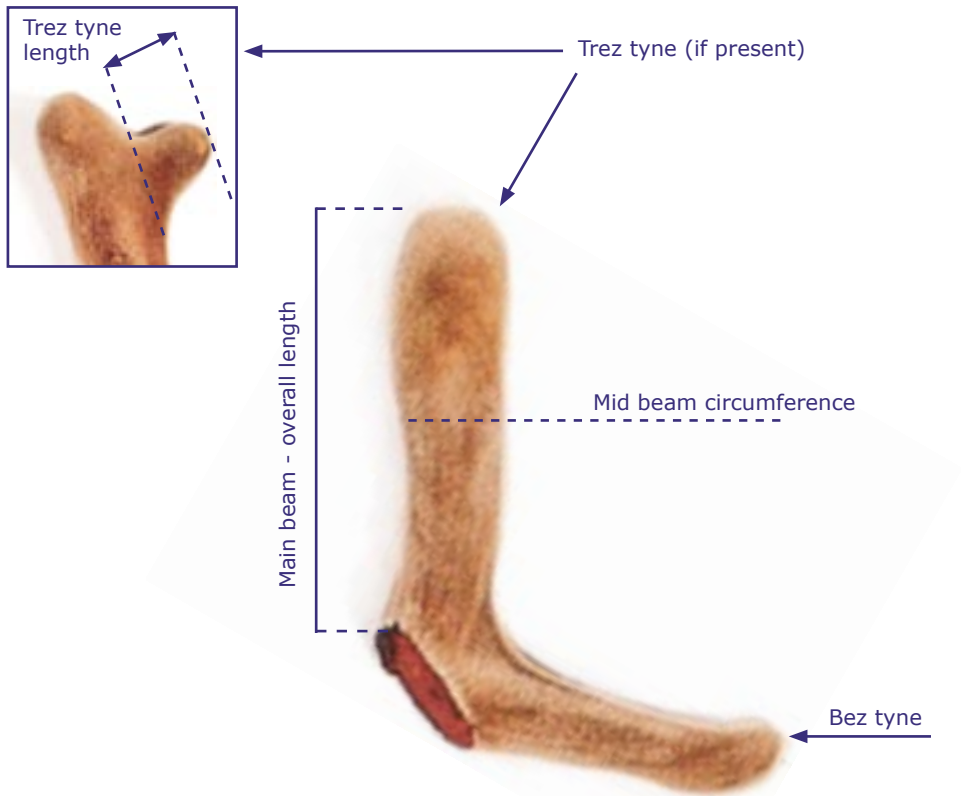
## TERMINOLOGY and MEASUREMENT

*Circumference*

Circumference is taken as the mid beam measurement of the circumference of the beam, measured on the clear beam midway between the top of the stick and the top of the inside cut

*Overall Length*

Overall length is measured from the top of the stick to the top of the inside cut









FA1

Fallow	Circumference	Tyne
<i>FA1</i>	12 cm & over	1

Early cut velvet. Trez tyne must not be showing.

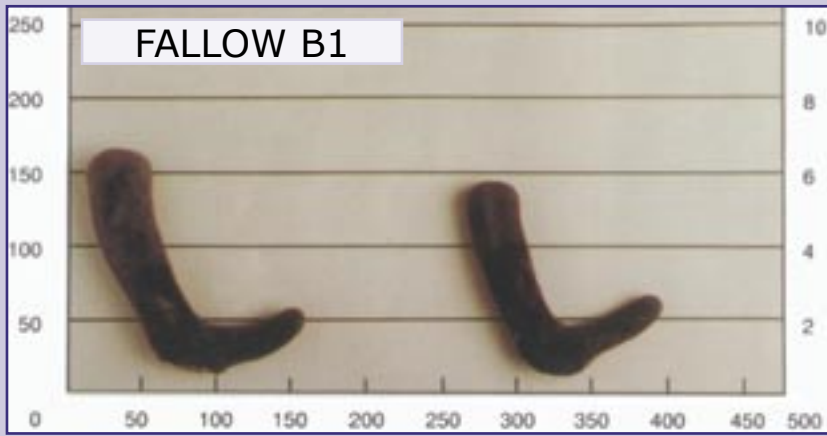
FA2

Fallow	Circumference	Tyne
<i>FA2</i>	12 cm & over	2

Antler of good confirmation. Trez tyne must be under 10mm but not overgrown. Trez tyne must be rounded.







**FB1**

Fallow	Circumference	Tyne
<b>FB1</b>	10-12 cm	1

Early cut velvet. Trez tyne must not be showing.

**FB2**

Fallow	Circumference	Tyne
<b>FB2</b>	10-12 cm	2

Antler of good confirmation. Trez tyne must be under 10mm but not overgrown. Trez tyne must be rounded.







FC1

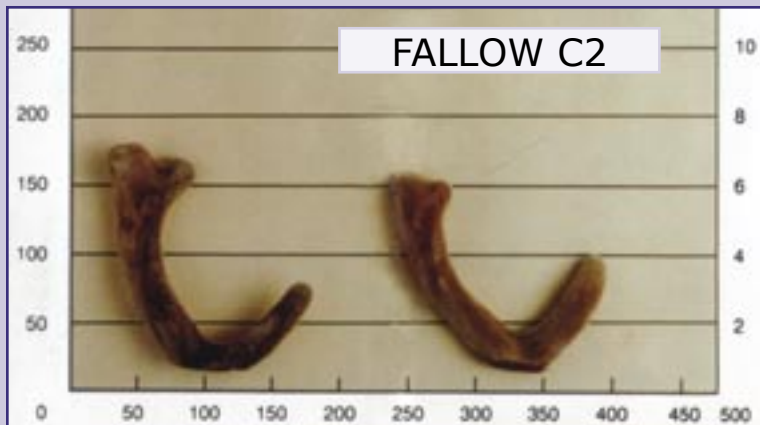
Fallow	Circumference	Tyne
FC1	under 10 cm	1

Early cut velvet. Trez tyne must not be showing.

FC2

Fallow	Circumference	Tyne
FC2	under 10 cm	2

Antler of good confirmation. Trez tyne must be under 10mm but not overgrown. Trez tyne must be rounded.





## *FALLOW DAMAGED*

**FD1** Damaged FA, FB, and FC fallow velvet but with a significant recoverable proportion

## *FALLOW MANUFACTURING*

**FMG** Badly damaged fallow velvet and short pieces of other velvet suitable for processing

## *FALLOW OVERGROWN*

**FOG** Overgrown FA, FB and FC velvet that is not yet heavily calcified

## *FALLOW HARD HORN*

**FHH** Fully developed, palmated antler that has not yet stripped and heavily calcified overgrown velvet

## *FALLOW HARD ANTLER*

**FHA** Fully developed antler that is calcified and stripped but not excessively bleached

## *FALLOW SPIKER*

**FSP** Fallow spiker velvet without excessive calcification

1. Maximum length 12 cm
2. Must be rounded on top

## *FALLOW REGROWTH*

**FRG** Fallow regrowth

1. Maximum length 12 cm
2. Circumference 10-12 cm

## *MESOPOTAMIAN and MESO/HYBRID*

### ***To be sold as FA1***

1. Must not show any trez tyne
2. Must not exceed 20 cm in length

### ***To be sold as FA2***

1. Trez tyne must be under 10 mm
2. Length between 20-25 cm

### ***To be sold as FMG***

1. Any sign of palmation





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**Processed velvet**

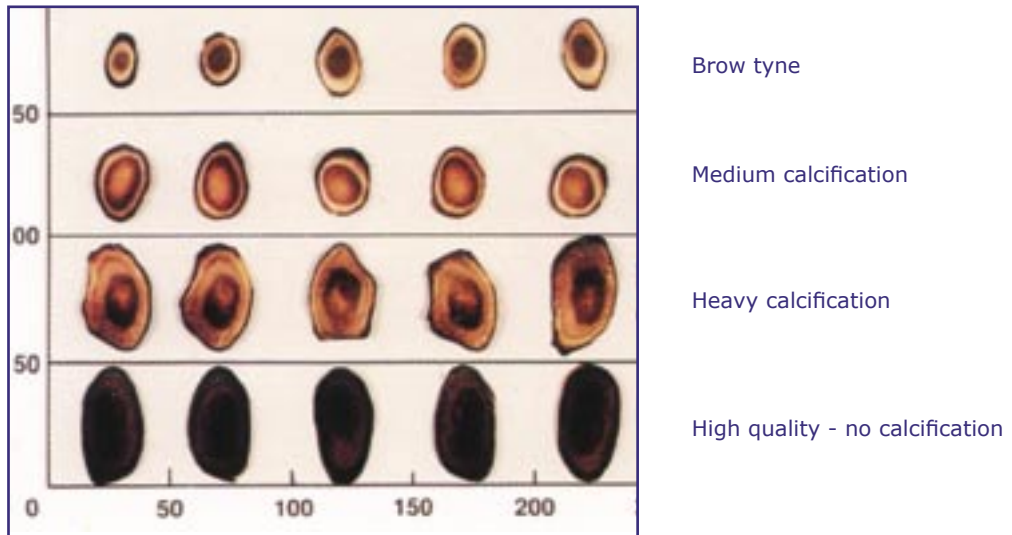


Some velvet is sold directly from farms but most is offered for sale through a system of pools. Pool operators accumulate frozen velvet, inspect and grade it and then offer it for sale by confidential tender or private sale

Grading of velvet in pools is undertaken by trained graders who grade all velvet according to a grading system developed by the Australian Deer Industry Association in Australia and the New Zealand Game Industry Board in New Zealand (see the grading specifications for velvet in this publication).

## *Fallow Velvet*

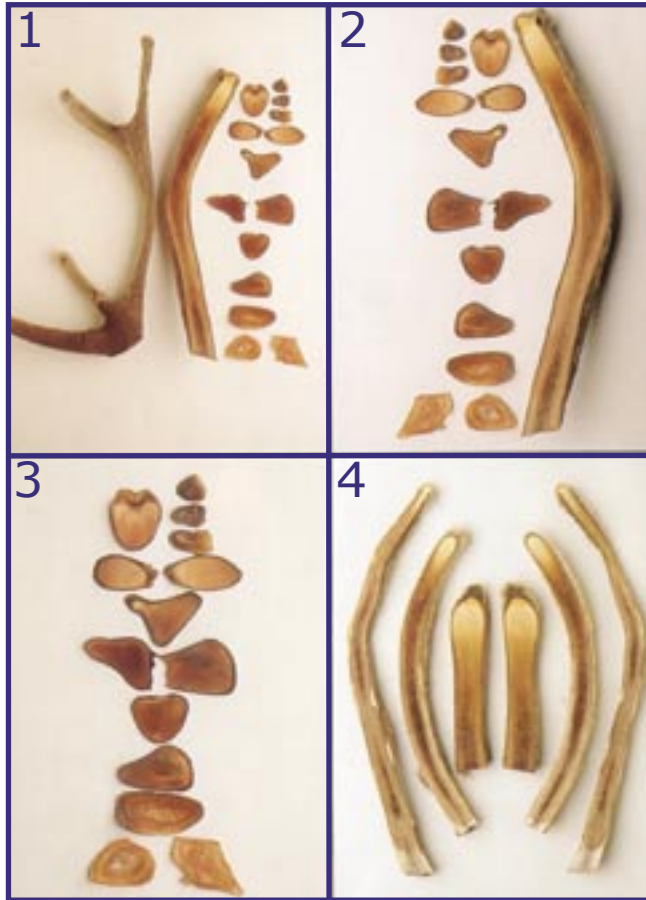
The cross-sectional slices show the variation in the porosity and colour in different parts of the stick. The pictures show the different appearance of un-calcified and calcified velvet.



# Processed Velvet

## *Red and Elk Velvet*

The stick sliced lengthwise (1) illustrates an absence of calcification. The cross-sectional slices (2 & 3) show the variation in the porosity and colour in different parts of the stick. The inner two halves of the dried spiker (4) show the velvet cut at the correct stage. The outer sticks show increasing calcification as the velvet becomes progressively overgrown.



## Guide to Basic Mineral Composition of Velvet

[Reprinted with permission of the New Zealand Game Industry Board]

Comparison of basic mineral composition between New Zealand, Russian and Chinese Velvet

	<b>New Zealand Red</b>	<b>Russian Maral</b>	<b>Chinese Meihua!u</b>	<b>Chinese Malu</b>
<b>Number of antlers</b>	<b>17</b>	<b>6</b>	<b>3</b>	<b>3</b>
<b>Components (as % of DM +/- SE or range)</b>				
<b>Ash</b>	34.0 +/- 0.48	35.5 +/- 0.69	35.7 (35.0-36.9)	34.1 (31.3-37.7)
<b>Lipid</b>	2.50 +/- 0.14	1.48 +/- 0.11	2.46 (2.00-2.71)	1.39 (1.17-1.64)
<b>Nitrogen (N)</b>	8.40 +/- 0.12	9.0 +/- 0.16	8.8 (8.4-9.2)	9.2 (8.3-9.8)
<b>Calcium (Ca)</b>	12.1 +/- 0.27	12.9 +/- 0.39	13 (12.0-14.3)	11.9 (10.6-13.6)
<b>Phosphorus (P)</b>	5.80 +/- 0.08	6.3 +/- 0.23	6.32 (6.82-5.69)	5.87 (5.24-6.94)
<b>Sulphur (S)</b>	0.43 +/- 0.01	0.36 +/- 0.01	0.36 (0.35-0.38)	0.41 (0.38-0.46)
<b>Magnesium (Mg)</b>	0.25 +/- 0.01	0.25 +/- 0.01	0.27 (0.23-0.31)	0.25 (0.24-0.27)
<b>Sodium (Na)</b>	0.83 +/- 0.01	0.69 +/- 0.02	2.28 (0.73-0.78)	0.75 (0.69-0.80)
<b>Potassium (K)</b>	0.42 +/- 0.10	0.33 +/- 0.01	0.32 (0.28-0.36)	0.35 (0.33-0.38)
<b>Trace mineral components (as mg per kg of OM +/- SE or range)</b>				
<b>Manganese (Mn)</b>	3.4 +/- 0.1	2.5 +/- 0.2	2.63 (2.2-3.0)	3.0 (2.8-3.3)
<b>Zinc (Zn)</b>	69 +/- 2.2	66 +/- 4.6	67.3 (64-76)	61.3 (56-68)
<b>Copper (Cu)</b>	5.3 +/- 0.1	4.0 +/- 0.1	3.73 (3.2-4.0)	4.26 (4.0-4.4)
<b>Iron (Fe)</b>	319 +/- 17	366 +/- 39	186 (168-216)	317 (215-420)
<b>Selenium (Se)</b>	0.18 +/- 0.02	0.15 +/- 0.02	0.11 (0.09-0.14)	0.21 (0.18-0.24)

*These data have been extracted from the Research Report "Evaluation of Velvet Antler, Stage 2 – Comparative Composition" (Final report, February 1992 by P.F. Fennessy and S.J. Duncan. MAF Technology, Invermay Agricultural Centre, Mosgiel, New Zealand. Data on the analysis of the velvet antler samples are based on the antlers presented for analysis. The information supplied in the table above is based on the best data available at the time of preparation and due care was exercised in its preparation. MAF shall not be liable for any losses damages arising out of the use of this information or in respect of any action taken in reliance upon the validity of the information contained herein.*

Australia's Elk and Red deer populations have a similar genetic base and so velvet quality (composition) could be considered similar.

## Saleable Forms of Velvet

Velvet antler is made available to clients in both unprocessed and processed forms. A range of alternate product forms is described below.

### *Frozen, Unprocessed Whole Velvet Antler Stick*

Farmers harvest and freeze velvet according to strict quality assurance guidelines. After harvesting, velvet sticks are individually tagged and hygienically frozen. It is stored frozen until it is sold.



Frozen, Unprocessed Whole Velvet Antler Stick



Dried Whole Velvet Antler Stick

### *Dried Whole Velvet Antler Stick*

Whole velvet sticks are dried according to strictly controlled processes that combine traditional and modern technologies developed to meet requirements of individual buyers.

Sticks can be sold whole, sliced or in powder form.

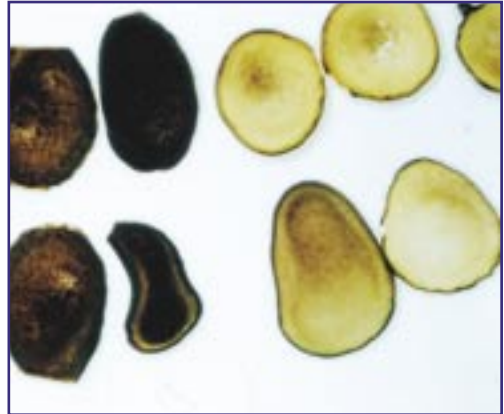
## *Velvet Antler Slices*

Velvet is available in traditional sliced form.

Quality and price varies according to the grade of slices and the grade of slices is relative to:

- The quality of the stick from which the slice originates
- The portion of the stick used for the slice
- The quality of the drying and slicing process

Grading systems vary between processors so a representative sample should always be sought before purchase.



Velvet Antler Slices



Velvet Antler Powder

## *Velvet Antler Powder*

Dried velvet can be milled to buyer specifications. Quality relates to that portion of the stick that is ground to produce the powder.

It is generally sold according to results of chemical analysis and Ash content is generally regarded as an indicator of the quality of velvet processed to produce the powder.

### *Deer Velvet Capsules*

High quality deer velvet is dried, ground and encapsulated for easy use in growing western markets as well as traditional markets.



Deer Velvet Capsules



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# **Venison Co-products**



### ***General***

All co-products should be collected from the slaughter floor, processed and placed into a freezer within two (2) hours of slaughter.

Inspection of individual pizzles, tendons and tails items is generally not required and products are eligible for collection if they have been derived from animals that have been passed as fit for human consumption.

The abattoir licensee is responsible for ensuring that the items are collected from eligible animals, that a quality check is made to exclude defective items, and that procedures for hygienic collection, handling and preparation are in place

## Tails

Cut through bone joint roughly halfway, into the heart shape where the black gland begins  
The gland must not be damaged

### *Points requiring specification:*

- Species of deer

### *Critical points:*

- Must be trimmed (bone and fat removed but leaving skin) back to the joint just before contact with the gland
- Skin and the back and front of the tail must be equal length and long enough to ensure the gland is covered when the skin is sewn together and the tail hangs level during drying
- No holes in any area of the skin
- Gland must be intact

### *Grading and packaging:*

- Uniform size (weight)
- Average weight must be correct
- Gland must not be exposed on a dried tail
- Must be hairless
- Size, colour and shape of dried tails are important determinants of value (generally thick, black, shiny complete tails are more valuable)
- Grading specifications for processed tails usually include average weight and weight range of all pieces in container



Unprocessed red deer tails



Processed red deer tail

## Pizzles

Ideally pizzles should be skinned leaving a small piece of skin around the testes and a small piece of skin attached to tazzle end

### Points requiring specification:

- H-bone attached
- Size of H-bone attached
- Species of deer

### Critical points:

- Two testicles attached
- Skin and hair present on tazzle
- No cuts on stem of pizzle
- Excess fat and hair removed
- Hairs on foreskin present
- Must not be stretched
- If H-bone is present:
  - H bone should be no more than a sliver of bone about 20 mm long and 2 to 3cm thick
  - All meat and fat under the H-bone to be removed

### Grading and packaging:

- Length grading measurement taken from bottom end of the H-bone
- Consistent and uniform size for each grade
- Specifications often vary for specific markets
- Size, colour and shape of dried pizzles are important determinants of value
- Grading specifications for processed pizzles usually includes average weight and weight range of all pieces in a container



Unprocessed pizzle and testicles



Unprocessed pizzle and testicles (foreskin retracted)



Processed (dried) pizzle (section of H-bone attached)



Processed (dried) pizzle

## Sinews

When removing from an animal, the sinew must be removed right through to the knuckle leaving the small bones 'feelers' on the end

Remove the strip of skin from the sinew through to between the hoof nails

### *Points requiring specification:*

- Species of deer

### *Critical points:*

- Must retain natural shape
- To retain natural shape they must be removed through to the first knuckle and ensure the 'feelers' remain attached - not cut off above the knuckle (straight cut)
- Skin must be removed from the sinew
- No knife cuts along the length of the sinew

### *Grading and packaging:*

- Uniform size (length)
- Any sinews with knife cuts must be labelled as damaged
- Size, colour and shape of dried sinews are important determinants of value



Unprocessed sinews  
(note 'feeler' bones)



Processed (dried) sinews



Close-up of  
knuckle end  
(unprocessed)  
showing 'feeler'  
bones



Close-up of  
knuckle end  
(processed)  
showing 'feeler'  
bones

## ***Foetus***

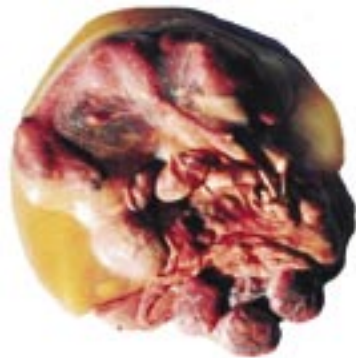
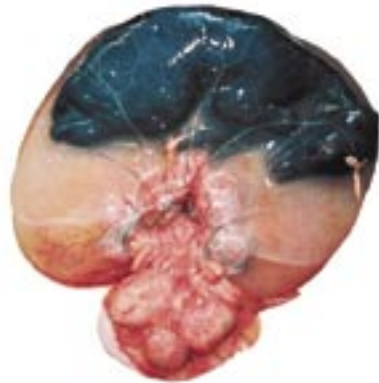
All must be individually bagged and frozen

### ***Points requiring specification:***

- Species of deer
- Age of foetus
- Size (weight) of foetus

### ***Critical points***

- Hair present



Red deer foetuses

## **Blood**

Blood is usually collected using a 'Vampire Knife' and blood from each animal is sealed in a separate, sterile bladder. It can be used for human consumption if:

- It is derived from animals intended for human consumption which have passed ante and post mortem inspection
- It is collected in a hygienic manner approved by the Technical Supervisor
- Positive identification can be maintained between the blood collected and donor animal(s) until such time as the donor animal(s) has passed inspection.
- There is no contamination with hair
- It is frozen within two (2) hours of collection

Note: Batch collection is acceptable. All donors contributing to the batch must meet the criteria otherwise all product in the batch will be condemned.

No blood can be collected for human consumption if it has:

- Been collected from animals condemned for disease conditions
- Been collected from a reactor to a diagnostic test
- Come into contact with the outer surface of any slaughtered animal
- Become contaminated in any way.

All equipment used for the collection of blood must be of food standard and sterilised after each batch. Any equipment directly coming into contact with the animal must be sterilised after each animal has been bled.



Dried blood powder and capsules of dried blood powder



## ***Deer Skins***

When removing from animal it is important to ensure there is no knife cuts in the skin

### ***Points requiring specification:***

- Species of deer

### ***Critical points:***

- No knife cuts in the skin
- Must retain natural shape
- Minimal fat and tissue remaining on the skin
- Absence of tick and buffalo fly damage (QLD)
- Absence of scarring (fence damage, fighting wounds)
- Should be drum salted within two hours of removal
- Important to remove heat from skins before salting by opening the skin and laying it flat rather than leaving it in a folded ball

### ***Grading and packaging:***

- Uniform size
- Any skins with knife cuts must be labelled as damaged
- Size of tanned skins is an important determinant of value