



NZ Farm Data Standards

Stock Reconciliation Standard

Version 1.0



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1 Document Management

1.1 Referenced Documents

[Animal Data Standard](#), Section 3, Identification of Animals, Enterprises and Locations

[Animal Data Standard](#), Appendix A.1, Animal Characteristics

[Date Accuracy Indicator](#), Australian Institute of Health and Welfare

1.2 Related Documents

Related standards documents to be published in 2014 on the [Farm Data Standards website](#) include:

- Animal Data Standard;
- Financial Data Standard.

1.3 Latest Revisions

The users of this standard should ensure that their copies of the above-mentioned documents are the latest revisions. The latest version of this Standard will always be published at www.farmdatastandards.org.nz.

1.4 Review of Standards

Suggestions for improvement of this document will be welcomed. Submit your comments using the feedback mechanisms at www.farmdatastandards.org.nz.

2 Introduction

2.1 Overview

Pastoral farming is becoming a data rich activity. Most biophysical processes from soil nutrient management to cow performance have both paper based and more organised data bases recording status, productivity and intentions. There are a significant number of tools covering livestock, nutrition and financial management. Most of these require the user to re-enter data from other sources and they overlap in functionality. It is probable that if data had been more accessible their design would have better focussed on the service they undertook to provide. Farmers will benefit from a highly innovative technology sector that delivers applications that are simple to use and access, which source the information they need without impedance and deliver value.

This document is part of a work stream focusing on Data Standards for interchanging Livestock (Animal) data. Work on this project commenced in late 2012, funded by DairyNZ and with contributions from FarmIQ Systems and Rezare Systems.

2.2 Outcome Statement

Broad adoption of a common vocabulary and data dictionary for exchange of farm information will result in farmers and other industry parties entering data only once and having that data readily accessible for populating multiple decision –making systems. As a result, industry and individual farm businesses will be better placed to undertake systems analysis to inform management practice. More accurate and structured interchange of farm data will also support industry breeding objectives and other information system targets.

2.3 Scope and Application

This standard addresses terminologies applied by industry to livestock reconciliations and any other change of stock numbers data. The purpose of this document is to standardise terminology and representations of data in order to ease future interchange of this and other data.

2.4 Interpretation

For the purposes of this standard, the word ‘shall’ refers to requirements that are essential for compliance with the standard, while the word ‘should’ refers to practices that are advised or recommended.

The terms ‘Normative’ and ‘Informative’ have been used in this standard to define the application of the Appendix to which they apply. A ‘Normative’ Appendix is an integral part of a standard while an ‘Informative’ Appendix is only for information and guidance.

2.5 Definitions and Abbreviations

For the purposes of this standard, the following definitions shall apply:

Term	Definition
2th	Two-tooth
4th	Four-tooth
MA	Mixed age
R1	Rising 1 year old
R2	Rising 2 year old
R3	Rising 3 year old
YMD	Year-Month-Day

3 Interchanging Stock Reconciliation Data

This standard defines names and data types for the fields that are used to interchange stock numbers information. This includes the use of period or balance dates to delineate a reporting period in a stock reconciliation, numbers of animals, and stock class names.

3.1 Stock Class Names and Attributes

In the past classes of livestock have been identified by name, and the names used have varied by region or business enterprise.

This standard requires identification of each stock class through a unique combination of attributes that describe that stock class. Interchange of a stock class name is still supported, but organisations should expect to match data using the stock class attributes and only utilise the name if required for their application.

The attributes used to describe a stock class are those that would apply to animals in the stock class. Therefore the categorical definition of those attributes may be found in the Animal Data Standard¹. Informative appendices C through F in this Standard list commonly used stock class names and show how they would be represented using the attributes of the animals in the stock class.

¹ [Animal Data Standard](#), Section 3, Identification of Animals, Enterprises and Locations

3.2 Transaction Types

This Standard requires that each transaction (including a simple representation of animals on hand) shall be identified with a transaction category and transaction type. The use of a transaction category allows systems receiving data to quickly differentiate between animals on-hand, arriving, and departing. The transaction type then describes more detail of the transaction (for instance, sent back from grazing). (See Appendix B.4.)

Appendix A Stock Reconciliation Data Dictionary (Normative)

Section Name	Notes and other names	Attributes or Fields	Data Types and Notes
Enterprise	This item describes the attributes of an enterprise	Type	Enumeration: Describes the type of enterprise the animals belong to; Own Stock, Finishing, Contract Grazing
		Date	Date: ISO 8601 Date;
		Use	Enumeration: Describes the use of the enterprise the animals belong to; Stud, Commercial
		Owner	String: Describes the person who owns the animals and/or the enterprise.
Class Attributes	This item describes the attributes expected of animals in this stock class. Each of the elements are optional, with Species, Sex, and Birth Date most commonly used.	Date	Date: ISO 8601 Date;
		Species Binomial Name	String: <i>see Appendix B.1</i>
		Species Simple Name	Enumeration: Describes the species in common terms; <i>see Appendix B.1</i>
		Breed Assessed	String: Description of a genetic package
		Breed Class	Enumeration: Describes the purpose for the identified species; Dual Purpose, Fine Wool, Meat/Terminal.
		Birth Date	Date: Describes the date on which an animal was born; ISO 8601 Date
		Birth Date Confidence	String: As birth date may not be known with absolute precision, this indicator specifies the confidence with which the date is known. This standard uses a variation on the Date Accuracy Indicator used by the Australian Institute of Health and Welfare ² , adjusted to match the format of ISO dates (YMD); 3 character string with positional characters representing Year, Month, and Day (YMD). Character values = A (accurate), E (estimated), U (unknown) (e.g. "AEU")
Sex	Enumeration: Describes the gender or sex of the animal; Male, Female		

² Date Accuracy Indicator – Australian Institute of Health and Welfare, <http://meteor.aihw.gov.au/content/index.phtml/itemId/294429>

Section Name	Notes and other names	Attributes or Fields	Data Types and Notes
		Reproductive Status	Enumeration: Describes whether an animal is pregnant at the time of stock reconciliation; <i>see Appendix B.2</i>
		Fertility Status	Enumeration: Describes whether an animal is known to be fertile or not, or whether it has been partly or fully neutered; <i>see Appendix B.3</i>
Transaction	This section describes the types of transactions related to stock reconciliation and the details of those transactions	Transaction Category	Enumeration: Describes the category of stock reconciliation transaction; <i>see Appendix B.4</i>
		Transaction Type	Enumeration: Describes the sub-type of stock reconciliation transaction; <i>see Appendix B.4</i>
		Date of transaction	Date: ISO 8601 Date; Transaction date, Balance date or Opening date of the transaction period depending on Transaction Category
		Closing Date	Date: ISO 8601 Date; Closing Date of the transaction period (if relevant)
		Quantity	Integer: Describes the number of stock units in a transaction.
		Value	Float: Describes the monetary value of stock. \$/unit, \$/head, total \$
Identifiers	This section describes the identifiers for transactions and stock classes. It identifies the other stock class when stock are transferred to or from a class.	Transaction Id	Holding place for an identifier for the transaction
		Stock Class Id	Holding place for an application-specific stock class identifier
		Stock Class Name	Application-specific stock class name
		Other Stock Class Id	Stock class identifier for the stock class transferred to/from (e.g. for use in ageing)
		Other Stock Class Name	Stock class name for the stock class transferred to/from

Appendix B Lists of Valid Values (Normative)

B.1 Species

Species Binomial Name is used in the **Animal** item combining Genus and Species. Valid values for **Species Binomial Name** are:

<i>Bos taurus</i>	cattle
<i>Ovis aries</i>	sheep
<i>Cervus elaphus</i>	red deer
<i>Cervus canadensis</i>	elk or wapiti
<i>Capra aegagrus</i>	goats

Species Simple Name is used in the **Animal** item. Valid values for **Species Simple Name** are:

Cattle
Deer
Goats
Sheep

B.2 Reproductive Status

Reproductive Status is used in the **Animal** item. Valid values for **Reproductive Status** are:

Cycling	Involuting
Not Cycling	Unknown
Pregnant	

B.3 Fertility Status

Fertility Status is used in the **Animal** item. Valid values for **Fertility Status** are:

Fertile	Cryptorchid
Infertile	Unknown
Neutered	



B.4 Transaction Category and Transaction Type

Transaction Category and Transaction Type are used in the **Transaction** item. **Transaction Types** are a sub-type of **Transaction Category**. Valid values are:

	Transaction Category	Transaction Type
Transactions related to animals entering the system	Animals Entering System	Births Tailing Tagging
Transactions related to animals leaving the system as a loss	Animals Leaving System - Losses	Deaths Missing Stolen
Transactions related to animals leaving the system as consumption	Animals Leaving System – Consumed	Own Use Killed For Use
Transactions related to animals arriving at a location	Animals Arriving	Purchased Transferred In/On Received On For Grazing Returned From Grazing Imported Received On Under Lease
Transactions related to animals departing a location	Animals Departing	Sold Transferred Out/Off Sent Back From Grazing Sent Off For Grazing



	Transaction Category	Transaction Type
		Exported Sent Off For Lease
Transactions related to animals changing stock class due to ageing	Animals Ageing	Animals Ageing
Animals currently in the system (or stock on hand)	Current Balance	Current Balance



Appendix C – Stock Class Definitions for Cattle (Informative)

Stock Class	Birth Date	Sex	Reproductive/ Fertility Status	Other Names
Heifer Calf		Female		
Bull Calf		Male		
Steer Calf		Male	Neutered	
Feeder Calf	Up to 12 weeks	Any		
Bobby Calf	Up to 7 days	Any		
Weaner Calf	12 weeks to 6 months	Any		
Rising 1 Year Heifer	Up to 1 Year	Female		Yearling Heifer, R1 Heifer
Rising 1 Year Bull	Up to 1 Year	Male		Yearling Bull, R1 Bull
Rising 1 Breeding Bull	Up to 1 Year	Male	Fertile	Yearling Breeding Bull, R1 Breeding Bull
Rising 1 Year Steer	Up to 1 Year	Male	Neutered	Yearling Steer, R1 Steer
Bulls Over 1 Year	1 Year +	Male	Unknown, Infertile, Fertile	
Rising 2 Year Heifer	1-2 Years	Female	Unknown, Infertile, Fertile	R2 Heifer
Rising 2 Heifer In Calf	1-2 Years	Female	Pregnant	R2 Heifer In Calf
Rising 2 Heifer Dry	1-2 Years	Female	Cycling, Not Cycling, Involuting, Unknown	R2 Heifer Dry
Rising 2 Year Bull	1-2 Years	Male	Unknown, Infertile, Fertile	R2 Bull
Rising 2 Breeding Bull	1-2 Years	Male	Fertile	R2 Breeding Bull
Rising 2 Year Steer	1-2 Years	Male	Neutered	R2 Steer
2+ Year Steers	2 Years +	Male	Neutered	
2+ Year Heifers	2 Years +	Female	Unknown	



Stock Class	Birth Date	Sex	Reproductive/ Fertility Status	Other Names
Dry 2 and 3 Year Heifers	2 or 3 Years	Female	Infertile	
Rising 3 Year Heifer	2-3 Years	Female		R3 Heifer
Rising 3 Year Steer	2-3 Years	Male	Neutered	R3 Steer
Mixed Age Cow	Over 2 Years	Female	Unknown, Infertile, Fertile	MA Cow
Mixed Age Bull	Over 2 Years	Male	Unknown, Infertile, Fertile	MA Bull
Mixed Age Cow Empty	Over 2 Years	Female	Infertile, Cycling, Not Cycling, Involuting, Unknown	MA Cow Empty
Mixed Age Cow In Calf	Over 2 Years	Female	Pregnant	MA Cow In Calf
Cow to 8 Years	2 - 8 Years	Female	Unknown, Infertile, Fertile	
Dry Cow	Over 2 Years	Female	Infertile, Unknown	
Older Cow	Over 5 Years	Female	Unknown, Infertile, Fertile	
Heifer	Over 2 Years	Female	Unknown, Infertile, Fertile	
Cow	Over 2 Years	Female	Unknown, Infertile, Fertile	
Bull	Over 2 Years	Male	Unknown, Infertile, Fertile	
Steer	Over 2 Years	Male	Neutered	
Beef Cow	Over 2 Years	Female	Unknown, Infertile, Fertile	
Breeding Cow	Over 2 Years	Female	Fertile	
Breeding Bull	Over 2 Years	Male	Fertile	
Non Mated Cow	Over 2 Years	Female	Unknown, Infertile, Fertile	
Bullock	Over 2 Years	Male	Neutered	
Other	Any	Any	Unknown, Infertile, Fertile	



Appendix D – Stock Class Definitions for Sheep (Informative)

Stock Class	Birth Date	Sex	Fertility Status	Other Names
Ewe Lamb	Under 12 months	Female	Unknown, Infertile, Fertile	
Ram Lamb	Under 12 months	Male	Unknown, Infertile, Fertile	
Wether Lamb	Under 12 months	Male	Neutered	
Lamb	Under 12 months	Any	Unknown, Infertile, Fertile	
Ewe Hogget	1 Year	Female	Unknown, Infertile, Fertile	
Ram Hogget	1 Year	Male	Unknown, Infertile, Fertile	
Wether Hogget	1 Year	Male	Neutered	
Breeding Ram Hogget	1 Year	Male	Fertile	
Ewe Hogget Mated	1 Year	Female	Fertile	
Ewe Hogget Not Mated	1 Year	Female	Unknown, Infertile, Fertile	
Two-Tooth Ewe	1 - 2 Years	Female	Unknown, Infertile, Fertile	2th Ewe
Two-Tooth Ewe Mated	1 - 2 Years	Female	Fertile	2th Ewe Mated
Two-Tooth Ewe Not Mated	1 - 2 Years	Female	Unknown, Infertile, Fertile	2th Ewe Not Mated
Two-Tooth Ram	1 - 2 Years	Male	Unknown, Infertile, Fertile	2th Ram
Two-Tooth Wether	1 - 2 Years	Male	Neutered	2th Wether
Four-Tooth Ewe	2 - 3 Years	Female	Unknown, Infertile, Fertile	4th Ewe
Four-Tooth Ram	2 - 3 Years	Male	Unknown, Infertile, Fertile	4th Ram
Four-Tooth Wether	2 - 3 Years	Male	Neutered	4th Wether
Mixed Age Ewes	2 Years +	Female	Unknown, Infertile, Fertile	MA Ewes
Mixed Age Rams	2 Years +	Male	Unknown, Infertile, Fertile	MA Rams
Mixed Age Wethers	2 Years +	Male	Neutered	MA Wethers
Mixed Age Ewes Mated	2 Years +	Female	Fertile	MA Ewes Mated



Stock Class	Birth Date	Sex	Fertility Status	Other Names
Mixed Age Ewes Not Mated	2 Years +	Female	Unknown, Infertile, Fertile	MA Ewes Not Mated
5 and 6 Year Ewe	5 or 6 Years	Female	Unknown, Infertile, Fertile	
6 Year & Over Ewe	6 Years or Older	Female	Unknown, Infertile, Fertile	
Dry Ewe	2 Years +	Female	Infertile	
Breeding Ram	1 Year +	Male	Fertile	
Romney Ram	1 Year +	Male	Unknown, Infertile, Fertile	
Other Crossbred Ram	1 Year +	Male	Unknown, Infertile, Fertile	
Fine Wool Ram	1 Year +	Male	Unknown, Infertile, Fertile	
Terminal Ram	1 Year +	Male	Unknown, Infertile, Fertile	
Spare	1 Year +	Any	Unknown, Infertile, Fertile	
Killer	Any	Any	Unknown, Infertile, Fertile	



Appendix E – Stock Class Definitions for Deer (Informative)

Stock Class	Birth Date	Sex	Fertility Status	Other Names
Weaner Hind	Under 12 months	Female		
Weaner Stag	Under 12 months	Male		
Breeding Weaner Stag	Under 12 months	Male		
6-15 Month Hind	6-15 Months	Female		
6-15 Month Stag	6-15 Months	Male		
Yearling Hind	Up to 1 Year	Female	Unknown, Infertile, Fertile	
Yearling Stag	Up to 1 Year	Male	Unknown, Infertile, Fertile	
Breeding Yearling Stag	Up to 1 Year	Male	Fertile	
Rising 1 Year Hind	Up to 1 Year	Female	Unknown, Infertile, Fertile	
Rising 1 Year Stag	Up to 1 Year	Male	Unknown, Infertile, Fertile	
15-27 Month Hind	15-27 Months	Female	Unknown, Infertile, Fertile	
15-27 Month Stag	15-27 Months	Male	Unknown, Infertile, Fertile	
Rising 2 Year Hind	1 - 2 Years	Female	Unknown, Infertile, Fertile	
Rising 2 Year Stag	1 - 2 Years	Male	Unknown, Infertile, Fertile	
Rising 2 Hind Not Mated	1 - 2 Years	Female	Unknown, Infertile, Fertile	
Rising 2 Hind Mated	1 - 2 Years	Female	Fertile	
Rising 3 Year Stag	2 - 3 Years	Male	Unknown, Infertile, Fertile	
Rising 4 Year Stag	3 - 4 Years	Male	Unknown, Infertile, Fertile	
Mixed Age Hind	2 Years +	Female	Unknown, Infertile, Fertile	MA Hind
Mixed Age Stag	2 Years +	Male	Unknown, Infertile, Fertile	MA Stag
Mature Hind	2 Years +	Female	Unknown, Infertile, Fertile	



Stock Class	Birth Date	Sex	Fertility Status	Other Names
Mature Stag	2 Years +	Male	Unknown, Infertile, Fertile	
Hind	Any	Female	Unknown, Infertile, Fertile	
Stag	Any	Male	Unknown, Infertile, Fertile	
Other Deer	Any	Any	Unknown, Infertile, Fertile	
Breeding Stag	1 Year +	Male	Fertile	
Velveting Stag	1 Year +	Male	Unknown, Infertile, Fertile	



Appendix F – Stock Class Definitions for Goats (Informative)

Stock Class	Birth Date	Sex	Fertility Status	Other Names
Browsing	Any	Any		
Buck Hogget	Up to 12 months	Male	Unknown, Infertile, Fertile	
Goats 1 Year	Up to 12 months	Any	Unknown, Infertile, Fertile	
Goats 1+ Year	1 Year +	Any	Unknown, Infertile, Fertile	
Mixed Age Doe	1 Year +	Female	Unknown, Infertile, Fertile	MA Doe
Doe	Any	Female	Unknown, Infertile, Fertile	
Buck	Any	Male	Unknown, Infertile, Fertile	
Doe Stud	Any	Female	Unknown, Infertile, Fertile	
Buck Stud	Any	Male	Unknown, Infertile, Fertile	
Doe Other	Any	Female	Unknown, Infertile, Fertile	
Buck Other	1 Year +	Male	Unknown, Infertile, Fertile	
Gross Only		Any		