

Industry Discussion Paper

Cattle and Sheep Livestock Data Benchmarking Model

Prepared by Des Bowler Issue date 16th November 2022

This industry discussions paper outlines possible options for industry wide livestock production performance from information collection at time of slaughter and any subsequent grading.

Livestock product systems and primary data sources:

(NOTE: NLIS is not shown as it is a regulatory system that has restrictions of data availability. LDL is not shown as it is a data consolidator and not a data source.)

<i>Species</i>	<i>Livestock source</i>	<i>Finishing</i>	<i>Production data</i>	<i>Movement data</i>	<i>Slaughter data</i>	<i>Carcase Assessment</i>	<i>Disease and Defects</i>	<i>MSA</i>
<i>Sheep</i>	Direct Consignment Mixes source			eNVD API	Plant system	DEXA#	Plant system	Mob
	Direct consignment From Breeder	Feedlot		Paper S/N API	Feedback		Feedback	Individual
	Saleyard			Manual entry				Feedback
	Direct Consignment Mixes source			eNVD API	Plant system	DEXA#	Plant system	Mob
	Direct consignment From Breeder	Grass		Paper S/N API	Feedback		Feedback	Individual
	Saleyard			Manual entry				Feedback
<i>Cattle</i>	Direct Consignment Mixes source		Feedlot system	eNVD API	Plant system	Plant system	Plant system	Individual
	Direct consignment From Breeder	Feedlot	AHD system*	Paper S/N API	Feedback	Feedback	Feedback	Feedback
	Saleyard			Manual entry				
	Direct Consignment Mixes source			eNVD API	Plant system	Plant system	Plant system	Individual
	Direct consignment From Breeder	Grass	Limited/Many	Paper S/N API	Feedback	Feedback	Feedback	Feedback
	Saleyard			Manual entry				

*AHD is a commercial system used by Feedlots for Benchmarking, #DEXA is a commercial system with industry funding.

NOTE: There are numerous commercial systems operated within Supply chain for data collection, consolidation and reporting.

Potential Benchmarking datasets

The benchmarking datasets below are based on the concept of clean high quality industry data being available and consolidated through various industry or commercial systems. The data sets would be broken up by species. There currently are no standards or industry models for a number of the dataset elements.

1. Movement dataset filterable and groupable by:
 - a. Time (date bands - e.g., daily, weekly, month, quarterly, yearly)
 - b. Source Region (groups of post codes)
 - c. Source type (saleyard, direct consignment [breeder/ backgrounder], direct consignment [consolidator], feedlot, dairy)
 - d. Destination type (saleyard, property, feedlot, processor, live export)
 - e. Destination Region (groups of post codes)
 - f. Transport method (commercial transport company, Source owned transport, destination owned transport, droving)
 - g. EU
 - h. Movement size
2. Slaughter dataset filterable and groupable by:
 - a. Time (date bands - e.g., daily, weekly, month, quarterly, yearly)
 - b. Purpose (dairy, culls, EU, commercial grades)
 - c. Lot size bands
 - d. Travel distance
 - e. Source type (Self [have been held of process PIC], saleyard, feedlot, direct consignment [breeder/ backgrounder/ grass finisher], direct consignment [consolidator], dairy)
 - f. Slaughter live weight bands
 - g. Dentition
 - h. HSCW bands
 - i. Finishing system (grass, grain, mixed)
 - j. Sex
 - k. HGP
 - l. Breed
 - m. EU
 - n. Halal
 - o. MSA
 - p. DOA, plant culls
3. Disease and defect dataset filterable and groupable by:
 - a. Time (date bands - e.g., daily, weekly, month, quarterly, yearly)
 - b. Source type (Self [have been held of process PIC], saleyard, feedlot, direct consignment [breeder/ backgrounder/ grass finisher], direct consignment [consolidator], dairy)
 - c. Region (groups of post codes)
 - d. Finishing system (grass, grain, mixed)
 - e. Slaughter live weight bands
 - f. Dentition
 - g. Lot size bands
 - h. Processing conditions (issues that have occurred at processing)
 - i. Transport conditions (issues that have occurred through transport e.g., Bruising)
 - j. Production conditions (diseases and defect conditions that occurred on farm)
4. Grading dataset filterable and groupable by:
 - a. Time (date bands - e.g., daily, weekly, month, quarterly, yearly)
 - b. Purpose (dairy, culls, EU, commercial grades)
 - c. Source type (Self [have been held of process PIC], saleyard, feedlot, direct consignment [breeder/ backgrounder/ grass finisher], direct consignment [consolidator], dairy)

- d. Region (groups of post codes)
- e. Finishing system (grass, grain, mixed)
- f. Slaughter live weight bands
- g. Dentition
- h. Lot size bands
- i. MSA graded
- j. Carcase assessment (chiller assessment, DEXA)
- k. EU
- l. Halal

Industry processes required for creation of datasets

To be able to create industry benchmarking dataset they are a number of core industry standards and publicly available industry registries required to be developed and adopted by industry.

The concept of public registries manages commercial and privacy sensitivity generally through providing two types of separate public functions. The first function for Validation which requires the requester already has the primary keys. The second function is “Deidentified data” access which is used for general geographical data. The example below is for a public PIC registry:

1. Validation – Providing a restricted set of data when a set of keys have been provided in an API call (PIC, LPA number, Postcode), if these don’t validate a “non-valid” response is provided, if there is a match the data provide is restricted to:
 - a. PIC
 - b. LPA number
 - c. Property Name
 - d. ABN
 - e. Business name
 - f. Post code
 - g. Shire or district.
 - h. LPA status
 - i. EU status
 - j. MSA status and member number
 - k. NFAS status
2. Deidentified data – Providing deidentified data for use with aggregation and benchmarking. When a PIC is provided in an API call, if the PIC is not valid a “non-valid” response is provided, if there is a current PIC the data provided is restricted to:
 - a. PIC
 - b. Post code
 - c. Shire or district.

The public registries available through APIs would need to include:

1. PIC Registry – Validation of PIC details.
2. NVD/MSA Declaration/ NFAS Declaration Registry – Validation of NVD using the Declaration type, Serial number and PIC. This would return the system (e.g., eNVD or paper NVD), Date of issue and Post code.
3. MSA Registry – Validation of MSA members.
4. Slaughter Registry – Validation of Slaughter PICs.
5. Slaughter Establishment Registry– Validation of AUS-MEAT establishment number, State establishment Number, NLIS establishment number, species, chain and PIC.