



The Global Language of Business

GS1 Global Meat and Poultry Traceability Guideline, Part 4. Pork Supply Chain

Release 1.0, Ratified, Nov 2015

Document Summary

Document Item	Current Value
Document Name	GS1 Global Meat and Poultry Traceability Guideline, Part 4. Pork Supply Chain
Document Date	Nov 2015
Document Version	1.0
Document Issue	
Document Status	Ratified
Document Description	

Contributors

Name	Organisation
Andrew Steele	GS1 Australia
Angela Schillings-Schmitz	GS1 Germany
Carolyn Lee	GS1 Global
Craig Alan Repec	GS1 Global
Denis O'Brien	GS1 Ireland
Des Bowler	INIT Media
Diana Carrillo	GS1 France
Diana Carrillo	GS1 France
Douglas Hill	GS1 Denmark
Erik Sogard	GS1 Denmark
Gary Hartley	GS1 New Zealand
Greg Rowe	GS1 Global
Isabelle Chatagnier	GS1 France
Jim Bracken	GS1 Global
John Hall	GS1 UK
Kurt Herregodts	GS1 Belgium Luxembourg
Mark Rance	anzcofoods
Michelle Southall	GS1 US
Mike Sadiwynk	GS1 Canada
Paul Lothian	Tyson Foods
Ralph Troeger	GS1 Germany
Roxanna Saravia	GS1 Argentina
Sabine Klaesser	GS1 Germany
Silverio Paixo	GS1 Portugal
Slobodan Romac	GS1 Croatia

Log of Changes

Release	Date of Change	Changed By	Summary of Change
0.1	17 December 2014	Jim Bracken	Post for community review
0.1	10 March 2015	Des Bowler	Update based upon community review comments
1.0	Nov 2015	D.Buckley & Des Bowler	GS1 branding updated. EU examples removed, barcode examples replaced and text clarified.

Disclaimer

GS1®, under its IP Policy, seeks to avoid uncertainty regarding intellectual property claims by requiring the participants in the Work Group that developed this **GS1 Global Meat and Poultry Traceability Guideline, Part 4. Pork Supply Chain** to agree to grant to GS1 members a royalty-free licence or a RAND licence to Necessary Claims, as that term is defined in the GS1 IP Policy. Furthermore, attention is drawn to the possibility that an implementation of one or more features of this Specification may be the subject of a patent or other intellectual property right that does not involve a Necessary Claim. Any such patent or other intellectual property right is not subject to the licencing obligations of GS1. Moreover, the agreement to grant licences provided under the GS1 IP Policy does not include IP rights and any claims of third parties who were not participants in the Work Group.

Accordingly, GS1 recommends that any organisation developing an implementation designed to be in conformance with this Specification should determine whether there are any patents that may encompass a specific implementation that the organisation is developing in compliance with the Specification and whether a licence under a patent or other intellectual property right is needed. Such a determination of a need for licencing should be made in view of the details of the specific system designed by the organisation in consultation with their own patent counsel.

THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this Standard, whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any intellectual property rights, relating to use of information in or reliance upon this document.

GS1 retains the right to make changes to this document at any time, without notice. GS1 makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

GS1 and the GS1 logo are registered trademarks of GS1 AISBL.



Table of Contents

1	Introduction	5
1.1	Traceability along the pork supply chain.....	5
1.1.1	Pork supply chain model	7
1.2	How are companies in the pork supply chain identified uniquely?	8
2	Carcase Ticketing.....	8
3	Variable Measure Trade Items Not Scanned in General Retail at Point-of-Sale (Carton/Case Labelling).....	8
4	Variable Measure Trade Items Scanned in General Retail at POS.....	11
4.1	Where can I get additional help?	11
A	APPENDIX – Roles in the Supply Chain	12

1 Introduction

There are different pork supply chain traceability models depending on the production method utilised along the supply chain.

For a glossary of terms used in the GS1 meat and poultry traceability guideline, please click on this link:

[GS1 Global Meat and Poultry Traceability Guideline, Glossary](#)

For additional information on the GS1 global meat and poultry traceability guideline, please click on this link:

[GS1 Made Easy – Global Meat and Poultry Traceability Guideline Companion Document](#)

1.1 Traceability along the pork supply chain

Trading partners can fulfil one or more roles in the pork supply chain. A comprehensive table of supply chain roles appears in the appendix.

The pork supply chain model below shows best practice models for the application of GS1 standards for livestock traceability, while complying with common regulatory requirements.

Specific markets and/or customers may have additional traceability requirements that must be fulfilled. Refer to your local GS1 Member Organisation's Meat and Poultry Traceability Guideline for local market traceability requirements. A complete list of local GS1 Member Organisations is available on the GS1 global website at www.gs1.org

The key traceability elements include:

For livestock as trade items:

- Individual or mob animal identifier
- Batch production information such as age (or month/year of birth), region or country of birth, fattening and finishing
- Feed (grain and supplements) batch and quality identification through supply documentation and serialised GTINs for feed supplements
- Livestock batch movement declaration showing property consigning the livestock
- Animal treatment
- All of the above information can be sent as an electronic message using GS1 eCOM standards such as the EANCOM Despatch Advice Message. (Note: In the U.S. the ANSI X.12 message ASN (Advanced Shipping Notice) is used for these purposes).

For Carcases as trade items not scanned in general retail at point-of-sale:

- Where the carcase is considered a trade item it is uniquely identified using the of Application Identifier AI (01) GTIN (Global Trade Item Number) and AI (10) Batch or Lot Number or AI (21) Serial Number, linking the carcase to the individual animal ID
- Where the carcase is treated as a logistic unit it is uniquely identified using an SSCC (Serial Shipping Container Code) linking the carcase to the individual animal ID, or animal group
- Date, time, batch/lot, property or properties that supply the livestock, market eligibility as well as weight and quality attributes (e.g. carcase grade)
- Government or authority issued registration Number of slaughterhouse/de-boning facility
- Where de-boning occurs in a different location than the slaughter, information needs to be passed from the slaughter facility to de-boning facility. This information would generally require the use of a regulatory transfer document for the consignment
- All of the above information can be sent as an electronic message using GS1 eCOM standards such as the EANCOM Despatch Advice Message. (Note: In the U.S. the ANSI X.12 message ASN (Advanced Shipping Notice) is used for these purposes).

For Cartons/Cases as trade items not scanned in general retail at point-of-sale:

- Carton/case product, identified with GTIN + batch/lot or a GTIN + Serial number, should be linked to a carcass ticket for boning batch, date and time or to the GTIN and serial number of the carcass. For some markets individual animal identification may also be required
- Carton/case labels need to comply with country, region and market regulations as well as customer requirements. All of this information should appear in barcode format (GS1-128 barcode) and in human readable format
- Meat transfer certificates/health certificates or equivalent regulatory transfer documents are generally required for consignments
- All of the above information can be sent as an electronic message using GS1 eCOM standards such as the EANCOM Despatch Advice Message detailing all carton/case identification as well as product attributes. (Note: In the U.S. the ANSI X.12 message ASN (Advanced Shipping Notice) is used for these purposes).

For Variable Measure Trade Items scanned in general retail at point-of-sale:

- Variable measure trade items that are scanned at point-of-sale have two main GS1 applications that are available. In some instances due to trading partners (e.g. Retailer) requirements both options may be applied to the one variable measure fresh food trade item. **Before implementation of any GS1 applications for variable measure trade items that are scanned at point-of-sale mutual agreement should be obtained between the trading partners.**
- The two main GS1 applications for variable measure fresh food trade items are:
 - Variable Measure Fresh Food Trade Items using a GTIN and additional attributes encoded with GS1 DataBar Expanded or Expanded Stacked.
 - Variable Measure Trade Items using a Restricted Circulation Number (RCN) encoded with the EAN/UPC symbology family.

Trade items can be summarised as in the table below

Table 1-1 Trade item package summary

Package Types	Definition	Product Examples
Chilled carcass or carcass portion	Whole or carcass piece that is supplied by a processor to an exporter, importer, value-adder, distributor, wholesaler, food service operator or retailer. Product is most often variable weight. Some product may be wrapped or have other outer covering method.	Fresh pork carcass. Fresh pork leg.
Frozen carcass or carcass portion	Whole or carcass piece that is supplied by a processor to an exporter, importer, value-adder, distributor, wholesaler, food service operator or retailer. Product is most often variable weight. Some product may be wrapped or have other outer covering method.	Whole frozen pork carcass. Whole pork quarters.
Catch/fixed weight carton/case fresh or frozen product	Variable weight carton/case product, where there is tight tolerance for minimum and maximum weight range. This may be packed as layer packed, vacuum packed, wrapped or other methods	22.7kg / 50lb frozen 80cl pork trim carton/case. Vacuum packed primal cuts. Processed meats.
Variable weight carton/case fresh or frozen product	Variable weight carton/case product, where there is large tolerance for minimum and maximum weight range. This may be packed as layer packed, vacuum packed, wrapped or other methods	13.6kg / 30lb chilled pork Tenderloin carton/case. Vacuum packed primal cuts. Processed meats.

Package Types	Definition	Product Examples
Fixed weight bulk fresh or frozen product	Fixed weight bulk pack, typically a poly lined sided and lidded pallet sized container holding 1000kg/2200lb of product.	1000kg / 2200lb frozen 80cl pork trim.

Most trade items have a company (processor) allocated GS1 Global Trade Item Number (GTIN). Where the company has multiple processing facilities the same GTIN is used for the same product, irrespective of the processing facility. To ensure traceability is maintained to the specific processing facilities, the company will use different additional information attached to the GTIN, such as a number for live animal identification or serial number that includes a processing facility code.

Where product is being packed for a specific third party such as a product brand owner, the product brand owner may allocate the GTIN to be used. This is likely to include additional information attached to the GTIN such as a serial number that includes a processing facility code. This is used to differentiate which processing facility the brand owner has used.

If a company further processes and packages a product in the supply chain, such as the case with store-processed product, then that company becomes the manufacturer and is responsible for assigning a GTIN or item reference and traceability attributes. This may be achieved by using a combination of human readable and scannable product information. This information should also be stored for future retrieval, if necessary.

Whenever a carcass, carton/case or bulk product is loaded out of a processing facility the GS1 barcodes are recorded against the load out movement.

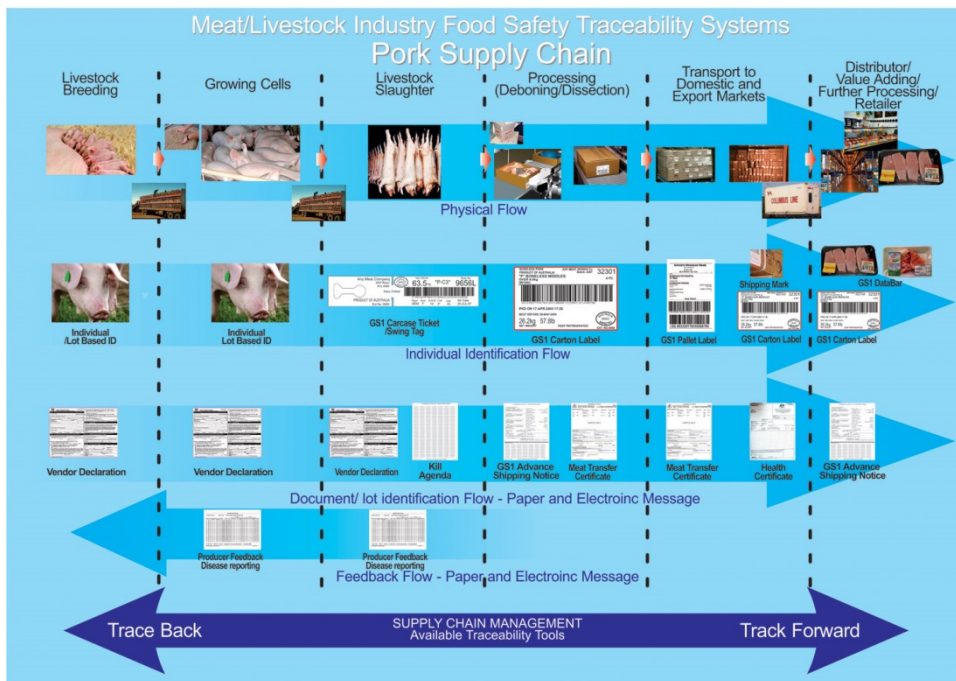
It should be noted that governments and national companies may require additional business information to appear on the label barcodes and it is recommended that users work closely with local regulators.

1.1.1 Pork supply chain model

The global pork supply chain is characterised by a number of features:

- A small number of primary producers (breeding, fattening/ finishing) supply piglets to growing cells producers. Animals at growing cells stay together for life. Market ready pigs are shipped to processing as a batch/lot

Figure 1-1 Pork supply chain traceability model, in one or more countries



1.2 How are companies in the pork supply chain identified uniquely?

The GLN makes possible the unique and unambiguous identification of physical locations and parties used in the supply chain. Identification in this manner is a prerequisite to efficient Electronic Commerce between trading partners (e.g., Electronic Data Interchange (EDI), electronic catalogues).

The GLN is a 13-digit number created by a GS1 Company Prefix, a Location Reference and a Check Digit.

Each company or organisation that is a member of a GS1 Member Organisation may use GLNs to identify locations under the terms of its membership.

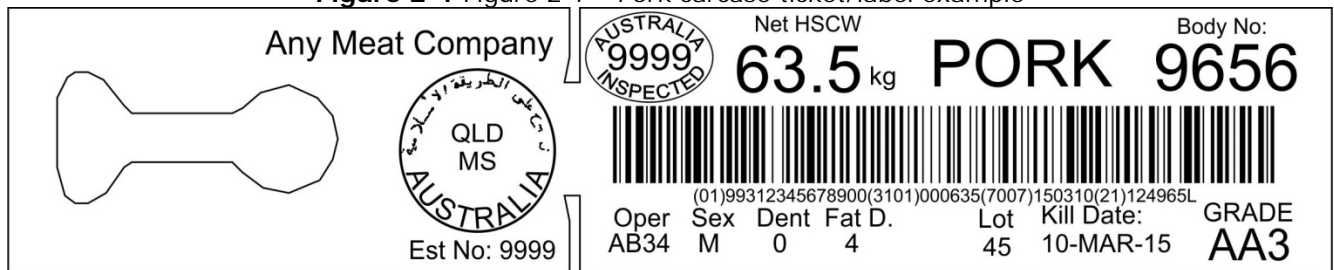
For exported as well as domestic beef, there may be government and industry registries that list establishments that are permitted to process for local consumption, export or import beef. The use of GLN supplements but does not replace establishment numbers.

2 Carcase Ticketing

The barcode symbology used in the pork industry for Carcase ticket/label is GS1-128 barcode.

The barcode symbology can represent attribute information such as net weight, slaughter date and serial numbers in a standard format. This ensures that the attribute information encoded by one company can also be scanned and interpreted by any other company in the supply chain.

Figure 2-1 Figure 2 1 – Pork carcase ticket/label example



NOTE: Example only - Review importing country regulations and contact market representatives for current labelling criteria.

Table 2-1 Minimum pork carcase barcode information required represented by GS1 Application Identifiers (AIs)

AI	Example Data & Format	Attribute Information
(01)	99312345678900	Global Trade Item Number (GTIN)
(310n)	000635	Net Weight – Kilograms
(7007) Historical (11) has been used.	150310	Harvest Date (YYMMDD) Referred to as the “kill” or “slaughter” date in the meat industry Historical the AI 11 has been used for “kill” or “slaughter” date.
(21)	1249656L	Serial Number

3 Variable Measure Trade Items Not Scanned in General Retail at Point-of-Sale (Carton/Case Labelling)

Trade items in the meat and poultry industry are often variable measure because the production process results in a wide range of weights for the same product or because the products are created to meet a special order that states a specific quantity or weight.

Domestic and importing country regulations, as well as specific market regulations, may specify certain human readable date and other information to be printed on labels. These requirements override any GS1 specified requirements detailed in this document.

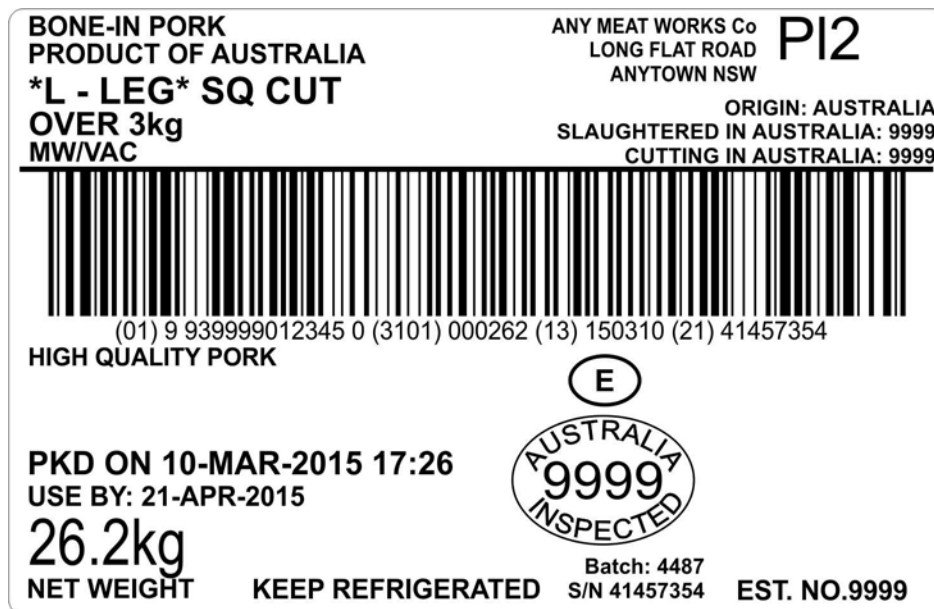
The barcode symbology used in the meat industry for variable measure trade items not scanned at Point-of-Sale carton/case labels is GS1-128. The GS1-128 barcode allows secondary attribute information over and above primary global trade item identification to be represented in the barcode.

The barcode symbology can also represent attribute information such as batch or lot numbers, serial numbers, expiry dates and weight in a standard format. This ensures that the attribute information encoded by one trading partner can also be scanned and interpreted by any other trading partner in the supply chain.

Additional country, market or customer requirements may be applicable in certain circumstances. Contact the applicable representatives in those markets to determine the current requirements.

Refer to your local GS1 Member Organisation's Meat and Poultry Traceability Guideline for local country or market traceability requirements. A complete list of local GS1 Member Organisations is available on the GS1 global website at www.gs1.org

Figure 3-1 Figure 3 1 – Trade item meat carton/case label example



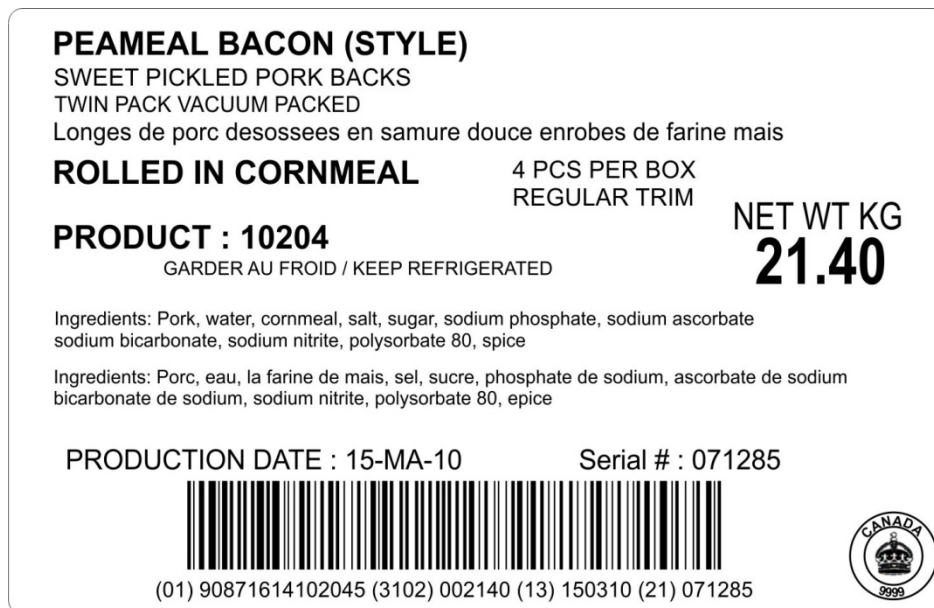
NOTE: Example only - Review importing country regulations and contact market representatives for current labelling criteria.

Figure 3-2 Trade item meat carton/case label example



NOTE: Example only - Review importing country regulations and contact market representatives for current labelling criteria.

Figure 3-3 Trade item meat carton/case label example



NOTE: Example only - Review importing country regulations and contact market representatives for current labelling criteria.

Table 3-1 Minimum meat carton/case barcode information required represented by GS1 Application Identifiers (AIs)

AI	Example Data & Format	Attribute Information
(01)	90871614102045	Global Trade Item Number (GTIN)
(310n)	002140	Net Weight – Kilograms
(13)	150310	Packaging Date (YYMMDD) Referred to as the date the beef is taken off the carcass or processed.

AI	Example Data & Format	Attribute Information
(21)	071285	Serial Number

4 Variable Measure Trade Items Scanned in General Retail at POS

Variable measure trade items that are scanned at point-of-sale have two main GS1 applications that are available. In some instances due to trading partners (e.g. Retailer) requirements both options may be applied to the one variable measure fresh food trade item. **Before implementation of any GS1 applications for variable measure trade items that are scanned at point-of-sale mutual agreement should be obtained between the trading partners.**

The two main GS1 applications for variable measure fresh food trade items are:

- Variable Measure Fresh Food Trade Items using a GTIN and additional attributes encoded with GS1 DataBar Expanded or Expanded Stacked.
- Variable Measure Trade Items using a Restricted Circulation Number (RCN) encoded with the EAN/UPC symbology family.

Trading partners should ensure that retailer labelling requirements are known and understood when following this guideline. Where a retailer specified requirement contradicts this guideline the retailer requirement should be followed.

Refer to your local GS1 Member Organisation's Meat and Poultry Traceability Guideline for local market retail traceability requirements. A complete list of local GS1 Member Organisations is available on the GS1 global website at www.gs1.org

4.1 Where can I get additional help?

Users are encouraged to contact their local GS1 Member Organisation who can provide guidance on the use of GS1 keys and local data messaging practices. A complete list of GS1 Member Organisations is available on the GS1 global website at www.gs1.org

A APPENDIX – Roles in the Supply Chain

Roles in the Supply Chain

The table below provides a list of the primary and support roles found in the poultry supply chain and, if covered, where traceability guidance is provided in this document for each role.

Role	Activities	Alias / Examples
Primary Roles		
Livestock producer – breeder	<ul style="list-style-type: none"> ■ Source feed ■ Breed and ship 	Suppliers of live animals for raising/finishing
Livestock producer – grower/finisher	<ul style="list-style-type: none"> ■ Source feed ■ Source birds ■ Raise, harvest and ship 	Suppliers of live animals for processing
Meat and poultry processors	<ul style="list-style-type: none"> ■ Slaughter ■ Process ■ Package ■ Label ■ Store ■ Sell ■ Ship carton/case, carcass and bulk product 	Processor/meatpacker, supplier
Exporter/importer/wholesaler/trader	<ul style="list-style-type: none"> ■ Buy and sell ■ export and import carton/case and carcass product (May or may not physically handle the product) 	Traders, distributor, supplier
Retail store	<ul style="list-style-type: none"> ■ Receive ■ Store ■ Process ■ Package/Label ■ Display ■ Sell to Consumer 	Grocery store, supermarket, grocery chains, shop, butcher store.
Retail distributor or wholesaler	<ul style="list-style-type: none"> ■ Receive ■ Store ■ Sell ■ Ship 	Retail distribution centre, distribution centre, import/export warehouses, wholesaler warehouses
Support Roles		
Feed stuff supplier	<ul style="list-style-type: none"> ■ Produce and ship 	Suppliers of feed for animals destined for the meat industry Traceability records for feed supplements and other raw ingredients needs to be maintained
Medical supplier	<ul style="list-style-type: none"> ■ Produce and ship 	Suppliers of medicines, medical supplies and medical equipment for veterinarians and producers of livestock Traceability records for medicines needs to be maintained



Packing material supplier	<ul style="list-style-type: none">Produce and ship	Suppliers of packing material (crates, bags, boxes, labels, bins, clamshells, etc.)
Ingredient supplier	<ul style="list-style-type: none">Produce and ship	Feed manufacturers Feed supplement manufactures
Third party logistics service provider	<ul style="list-style-type: none">TransportStore	Truck / rail / ship / air
Regulatory organisations	<ul style="list-style-type: none">Compliance oversight	Customs, inspection, and grading agencies