Meat Messaging

Pilot Summary Interim Report

BARCODES IN LIEU OF SHIPPING MARKS PILOT PROGRAM FOR FRESH MEAT PRODUCTS FROM AUSTRALIA - FSIS NOTICE 62-10

Prepared for: Food Safety and Inspection Service

U.S. DEPARTMENT OF AGRICULTURE

Prepared by: Des Bowler

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1. Contents

2. Executive Summary

Since 2019, the FSIS have agreed to run a pilot trial, administered by AUS-MEAT and AMPC, testing the ability of the Australian-U.S. red meat supply chain to utilise barcodes as shipping marks for the sale of fresh meat products. A successful implementation would mean the FSIS inspectors, export establishments and I-houses could still input and receive consignment information when shipping marks are damaged or missing.

Meat Messaging is a cloud-based, industry portal that uses global identification and messaging standards to communicate consignment information between trading partners, from processors and exporters to inspection houses and the buyer.

A pilot trial testing the system was initiated in early 2020, with the first pallet sent on February 14th, 2020. Three processors have volunteered to use the Meat Messaging system, sending their products to three end users across the United States that pass through two I-Houses in Philadelphia and Houston, respectively.

Thirteen of the 15 consignments have been received successfully. Consignment information, including shipping mark, health certificate, product packaging date, weight, and number of cases per pallet and shipment were all able to be transferred between export establishment, I-house, and the end user (when relevant).

Issues around consignments have been from poor work practices damaging product or the pallet's SSCC placard. Product damage was due to the tops or sides of the cases being torn open when moving pallets. Participating organisations were informed to provide slip sheets to all pallets, to reduce damage to pallets.

Several new consignments are currently being organised to test additional supply chain configurations. These include supply chains that will go through I-houses in California, and orders exported from JBS Dinmore and Teys. Previously, these were being arranged for delivery by mid-2020. However, due to delays because of COVID-19 restrictions, inspections on previous supply chain combinations did not complete until early 2021. The new shipments are slated to be finished by late-2021.

3. Background

This report is prepared by Management for technology on behalf of AUS-MEAT and AMPC regarding the pallet pilot trial (AMPC Project number 2019-1039; FSIS Notice 62-20). [1]

Historically, consignment information regarding palletised containers of meat products have required a shipping mark so that both exporters and I-houses can verify a consignment. Damaged shipping marks means that a crucial link is missing from a consignment, and the health status and legitimacy of the consignment cannot be verified.

By utilising the same GS1 ID data schemes that are used for products and pallets (such as a GTIN for trade units and an SSCC for logistical units), a barcode could be substituted in place of a printed shipping mark. This barcode could then be used to link data on the containers, their pallet, shipping container, health certificate and all the associated information by the exporter. As such, any product's container barcode could then also be scanned, and traced back to its consignment through a barcoded shipping mark.

Since 2019, the FSIS have agreed to run a pilot trial administered by AUS-MEAT and AMPC, testing the ability of the Australian-U.S. red meat supply chain to utilise barcodes as shipping marks for this purpose. A successful implementation would mean the FSIS inspectors, export establishments and I-houses could still input and receive consignment information when shipping marks are damaged or missing.

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[1] FSIS (2 December 2020) *FSIS Notice 62-20: Barcodes in Lieu of Shipping Marks Pilot Program for Fresh Meat Products from Australia*, FSIS, United States government, accessed 24 March 2021.

4. Pilot Trial Methodology

To date, three export establishments in Australia, two inspection facilities in Houston and Philadelphia and two end users in Texas and have combined to make six different supply chain combinations.

These supply chains were identified internally through a supply chain key (see Table 1). Initially, FSIS released Notice 37-19, listing details of the project and the initial list of participants. This notice has since been updated to FSIS Notice 62-20 (See Appendix).

Figure 1 - Overview of the Meat Messaging Pallet Pilot

Key staff members at each section of the supply chain were asked to provide comments, and where possible provide visual evidence, of any issues regarding the Meat Messaging protocols (Table 6). Figure 1 below shows the summary of steps for the updated pallet pilot protocol applied by the shipments.
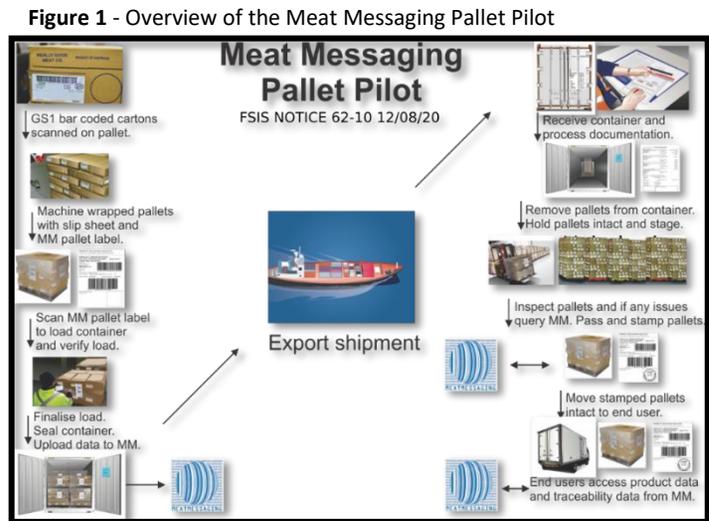
Table 1 – Supply Chain Key details on the initial consignments.

| Supply Chain	Establishment	Product	US Destination Port	Inspection EST (USA)	End User
A	Beenleigh (294)	Bull 95's (2580)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Burger Maker (M5907-P5907)
B	Rockhampton (7)	Bull 95's (2580)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Burger Maker (M5907-P5907)
C	Biloela (399)	Bull 95's (2580)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Burger Maker (M5907-P5907)
D	Beenleigh (294)	85's [some/ not all] (2634)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Plymouth Beef (M4037-P4037) [2]
E	Rockhampton (7)	85's [some/ not all] (2634)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Plymouth Beef (M4037-P4037) [2]
F	Biloela (399)	85's [some/ not all] (2634)	Philadelphia	Mullica Hill Pendricktown (I-6690)	Plymouth Beef (M4037-P4037) [2]
G	Beenleigh (294)	90's (2613)	Houston	Americold Laporte (I-20)	Cargill Meat Solutions (M86F-P86F)
H	Rockhampton (7)	90's (2613)	Houston	Americold Laporte (I-20)	Cargill Meat Solutions (M86F-P86F)
I	Biloela (399)	90's (2613)	Houston	Americold Laporte (I-20)	Cargill Meat Solutions (M86F-P86F)

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[2] Although Plymouth Beef was part of the initial consignment matrix, they were unable to receive consignments to completion during the trial (see Table 2).

5. Pilot Trial Results and Discussion

5.1 Completed consignments.

To date, there have been 13 of 15 consignments that have successfully demonstrated compliance to the FSIS pallet pilot (see Table 2 to Table 5). The first load that completed the protocol, passing inspection and verifying that approval with the Load's exporter, was inspected on the August 20th, 2020 (see Load 7 in Figure 2 below). The last shipment was completed on January 22nd, 2021 in Philadelphia (Load 14).

Figure 2 - Pallet pilot trial timeline.
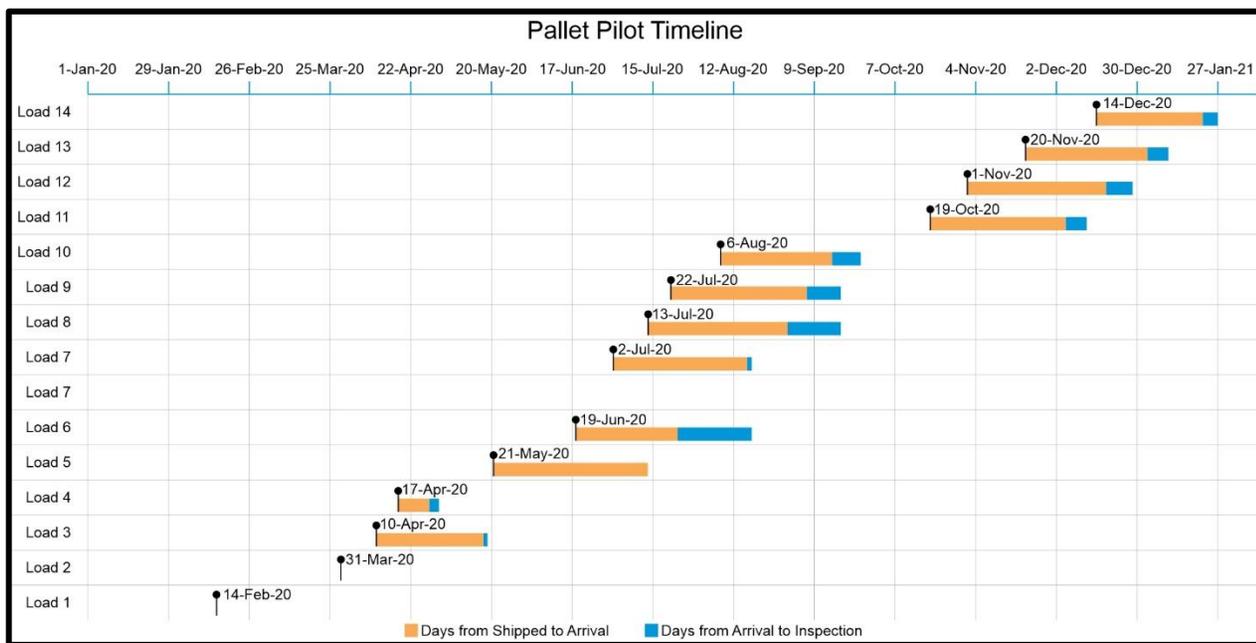
Timeline of the project had to be altered largely due to ongoing logistical issues stemming from COVID restrictions slowing the rate of arrivals and inspections. There were also issues with the initial loads caused by pallet placard materials not fit for purpose and inability to return data from end users and I-houses (see Table 6 and Section 4.2).

Table 2 - Consignments sent by participating foreign establishments.

PARTICIPATING FOREIGN ESTABLISHMENTS			
Name	*Est. Number*	*Consignments to date*	*Notes*
Teys Australia Meat Group PTY LTD	7	5	
Teys Australia Beenleigh PTY LTD	294	5	
Teys Australia Biloela PTY LTD	399	2	
JBS Australia PTY LTD	235		

Table 3 - Consignments received by import inspection establishments.

PARTICIPATING OFFICIAL IMPORT INSPECTION ESTABLISHMENTS			
Name (as in FSIS Notice 62-20)	*Name (as of April 8, 2021)*	*Est. Number*	*Consignments to date*
Lineage Logistics PFS, LCC	Same	I19	
Americold Logistics	Same	I16	
Versacold Texas LP	Same	I20	8
PreferredFreezer Services Houston Port LLC	Lineage Logistics	I37	
PreferredFreezer Services Houston Gulf Coast	Lineage Logistics	I66	
Mullica Hill Storage	Americold Logistics	I182	
Mullica Hill Pedricktown	Same	I6690	4
TC Trading	Same	I207	
Nordic Logistics and Warehousing	Same	I39	
Agro Merchants Group Charleston	Same	I5	

Table 4 - Consignments received by participating Federal establishment end users.

PARTICIPATING FEDERAL ESTABLISHMENT END USERS		
Name	*Est. Number*	*Consignments to date*
Burger Maker	M5907-P5907	4
Plymouth Beef	M4037-P4037	
Cargill Meat Solutions	M86F-P86F	8
Costco Wholesale Meat Plant	M18532	

In response to these delays, an intentional gap between consignments was made to manage the delays in shipping and inspections throughout what has been experienced since mid-2020. It is expected that the last of the original consignments will be processed in late-2021. These include consignments from JBS Dinmore and Teys and JBS exports to Costco Wholesale Meat Plant (FSIS establishment code: M18532).

Table 5 – Details on completed consignments.

Load	Teys Order	Shipping Mark	Container	Message SSCC	Health Certificate	Carton count	Est.	Shipment Date	Destination	Arrival Date	FSIS notified	I-house	Inspected Date	Final User
14	257882	TBN000227025	TRIU6668427	93322180000227000	9674624	686	7	14- Dec-20	PHILADELPHIA	22-Jan-21	Yes	I-669	27-Jan-21	Burger Maker (5907)
13	253688	TBN000557018	MCRU9010908	93322180000227000	9650736	696	294	20-Nov-20	HOUSTON	04-Jan-21	Yes	I-20	11-Jan-21	Cargill (86)
12	253686	TBN000227001	CGMU3069301	93322180000227000	9629106	696	294	1-Nov-20	HOUSTON	21-Dec-20	Yes	I-20	28-Dec-20	Cargill (86)
11	253297	TBN000226998	TEXU9014534	93322180000226900	9620499	696	399	19-Oct-20	HOUSTON	07-Dec-20	Yes	I-20	14-Dec-20	Cargill (86)
10	252726	TBN000226981	MCRU2002958	93322180000226900	9546985	692	7	6-Aug-20	PHILADELPHIA	15-Sep-20	Yes	I-669	25-Sep-20	Burger Maker (5907)
9	252302	TBN000226974	MCRU2073680	93322180000226900	9528814	696	294	22-Jul-20	HOUSTON	07-Sep-20	Yes	I-20	18-Sep-20	Cargill (86)
8	251078	TBN000226967	SUDU1172831	93322180000226900	9518493	689	399	13-Jul-20	HOUSTON	31-Aug-20	Yes	I-20	18-Sep-20	Cargill (86)
7	250814	TBN000226950	MCRU2059172	93322180000226900	9507318	696	294	2-Jul-20	HOUSTON	17-Aug-20	Yes	I-20	20-Aug-20	Cargill (86)
7 [3]	250814	TBN000226936	TBA	93322180000226900	NA	NA	NA	NA	HOUSTON	NA	NA	NA	NA	NA
6	249773	TBN000220316	SEGU9371001	93322180000220300	9489899	696	7	19-Jun-20	PHILADELPHIA	24-Jul-20	Yes	I-669	21-Aug-20	Burger Maker (5907)
5	248825	TBN/9428964	MSCU3616887	93322180000218200	9465703	696	7	21-May-20	HOUSTON	13-Jul-20	Yes	I-20	13-Jul-20	Cargill (86)
4	246881	TBN/9426787	CRLU3158618	93322180094267800	9432976	696	294	17-Apr-20	HOUSTON	27-Apr-20	Yes	I-20	01-May-20	Cargill (86)
3	244897	TBN/9425528	TRIU6740671	93322180094255200	9413172	696	7	10-Apr-20	PHILADELPHIA	18-May-20	Yes	I-669	19-May-20	Burger Maker (5907)
2	245760	TBN/245760	SUDU1147818	93322180094232300	9375433	NA	NA	31-Mar-20	NA	NA	NA	NA	NA	NA
1	243309	TBN/2433090	TCLU1900772	93322180000196100	NA	NA	NA	14-Feb-20	NA	NA	NA	NA	NA	NA

[3] Consignments from this Load to Load 1 were unable to be completed. See comments in Table 6 below.

Table 6 - Comments from exporters, I-house inspectors, and staff on consignment issues.

Load	Comments
14	Trans Damage - 3 cases refused.
13	No issues
12	Transportation damage. Replace placards. Couldn't print at location.
11	No issues. There were no major issues, I did question the immediate container/cert. The cert listed the total cases. But they presented it as alternative packaging… 1 pallet wrapped with a placard reflecting the cases on that pallet. I have submitted a question to see if the certificate as well as PHIS needs to reflect the number of pallets or the number of cartons. Since they are presenting a pallet as 1 unit, I am thinking the certificate should reflect that as well.
10	No issues.
9	No issues.
8	No issues. Company can't access Meat Messaging.
7	Successful shipment – some label damage.
7	SSCC didn't filter back to Uniworks they found some were brittle and broke after 24 hours in the freezers.
6	Successful shipment through to end user. (See report) [4]
5	Shipping mark incorrect
4	No issues
3	Issue with Shipping mark. See note 1 (*Note omitted from interim report*).
2	Had the wrong shipping mark on the placard.
1	Did not fit the container.

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[4] Meat Messaging (21 August 2020) *All Carton Serial Number Report; Meat Messaging, accessed 23 March 2021.*

5.2 Consignment Export Process

The major steps of the export consignment process that are of concern in this pilot involve the case palletisation, with slips sheets and plastic wrap, the placement of the SSCC placard, and entering consignment details into the Meat Messaging system.

5.2.1   Palletising the cases.

Cases need to be formed into tight logistical units during shipments, both to protect the cases and to move them easily and safely. This process is known as palletisation.

The following is a step-by-step breakdown of this process (Figure 3), taken by observing the exporters participating in the pilot trial:

Figure 3 – Process for palletising pallets for shipment.

Step 1.	Two-way plastic pallet is placed near the cases.
Step 2.	Plastic slip sheet is placed on top of the two-way pallet.
Step 3.	Cases are stacked together and scanned.
Step 4.	Another slip sheet is placed on top.
Step 5.	Palletised cases are then lifted to the machine wrapper. **NOTE: P**allet is wrapped too, folding the bottom slip sheet against the cases.
Step 6.	Pallet placards are stuck on top of the plastic wrap, on opposite sides of the palletised cases.

At this point, the pallets are considered a logistical unit and are loaded into the shipping container.

The most important measures that can be made to ensure that no damage is made to the cases during shipping is ensuring that the cases are wrapped, with a slip sheet placed on top and bottom. Further details on why the slip sheets, and the two-way plastic pallets are needed is explored below (Section 4.2.2 and 4.2.3, respectively). Consignment issues due to not following these measures are explored in Section 4.4.1.

5.2.2   Slip sheets.

Placing slip sheets on the top and bottom of each stack of cases decreases the potential for damaging product during the loading and unloading process (Figure 3). The top surface of the bottom pallet must have a suitable protective layer to minimise the potential for damage related to the use of machinery that will separate pallets during unloading (such

as roller forks and forklifts with push/ pull attachment). If the top is exposed, it will result in damage due to human error when operating forklifts or roller forks (see Section 4.4.1).

The thickness of the slip sheet is also important. Utilising slip sheets **that have a thickness of at least 800um is pivotal** to its successful utilisation. They are designed to withstand the elements, and they will not crack, split, or absorb moisture.

5.2.3   Pallet wrapping

The wrapping of pallets and the application of the pallet placard must be suitable to maximise protection and the retentions of the placard. Figure 4 below shows an automatic pallet wrapper that is covering a suitable area of the pallet.

Figure 4 – Pallet after being wrapped on a machine wrapper.

The automatic pallet wrapper requires both the slip sheet (see Section 4.2.2 below) and the specialised, plastic pallet for the containers to sit on top of. This is not a ubiquitous process in the supply chain industry, but it does provide an effective solution to wrapping containers in a slip sheet tightly. Forklifts fitted with either a specialised push/ pull attachment, or roller forks that use counter-spinning rollers, can then be used to move slip sheet pallets during unloading (see Section 4.3.1).

5.2.4   Loading pallets into the shipping container.

An informative video on the pallet loading process has been created and published on the Meat Messaging YouTube page, [5] taking companies step-by-step through the Meat Messaging pallet loading requirements.

The pilot trial's volunteer organisations allowed photos to be taken to document the pallet loading process. Figure 5 and Figure 6 depict the loading process by one of the organisations during the pilot trial. The Meat Messaging-linked SSCC placard can be seen on the outside of the slip sheet in Figure 5.

Figure 5 – Pallet showing pallet placard with SSCC and pilot pallet shipping

Figure 6 - Pallets with pallet placards loaded into shipping container.

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[5] Meat Messaging, 25 November 2020 'Loading Meat for Export to the U.S. Using Slip Sheet Pallets and Meat Messaging' [video], Meat Messaging, YouTube, accessed 23 March 2021.

5.2.1 Entering consignment information into Meat Messaging.

Information systems that deal with consignments and shipments can communicate with partner's system through the Meat Messaging website. Complete shipment and delivery information (consigner and consignee details, addresses, etc.) can be entered into the portal, and retrieved, edited, or added to at any point before it is finalised as a GS1 EANCOM Dispatch Advice message.

Consignment information can be entered through the Meat Messaging portal manually in case of a system error. Figure 7 shows a screenshot of the portal, where new messages can be made or uploaded if this occurs. Datafiles with this information already compiled can also be uploaded into the portal, instead of manually entering in the information.

Figure 7 - Meat Messaging portal can be used to enter in consignment information.

5.3 Consignment Import and Inspection

Once the consignment has been shipped overseas and received by the import inspection houses, the shipment containers are unloaded, staged in rows, and inspected by officials. Some pallets may have cases taken for random food safety sampling (if selected by FSIS for an exam) and given updated pallet information. At each stage, the Meat Messaging portal can be used to retrieve and confirm this information. Some shipments may stay intact having a label and certificate verification.

5.3.1   Pallet Unloading Process.

Once shipments are received at the import inspection facilities, they are unloaded and prepared for inspection. The process follows these general steps (Figure 8):

Step 1.   Shipping container's seal is checked, and status recorded.

Step 2.   Pallet's temperature probes are recorded and checked against requirements.

Step 3.   Prepare slip sheets so pallets can be removed with forklift push/ pull attachment.

Step 4.   Forklift grabs slip sheet edge to pull pallet onto forklift tines.

Step 5.   Palletised cases are placed onto a wooden pallet base.

Step 6.   "Stage" for inspection (each pallet is lined up in a row next to each other).

A video explaining the unloading process was released on the Meat Messaging YouTube page, [6] to allow the trials contributing organisations and other interested parties easy access to the unloading process.

The roller forks can be used for "pallet-less" handling. Roller forks are in fact 'standard' lift truck forks with two layers of rollers. When the under most row of rollers touches the floor, it causes the uppermost rollers to rotate in the opposite direction whereby the forks slide under the slip sheet without disturbing the products.

Figure 8 - Pallet unloading process, as observed at a participating inspection facility.

[6] Meat Messaging, 27 January 2021 'Unloading Meat Exporting to the U.S Using Slip Sheets and Meat Messaging' [video], Meat Messaging, YouTube, accessed 23 March 2021.'

Some instances of the pallet unloading process were also documented. Figure 9 and Figure 10 depict the unloading process with a forklift and roller fork, respectively. Footage of a roller fork unloading a trial pallet can be found on the Meat Messaging YouTube page. [7]

See Section 4.4.1 for more details on damaged cases.

When the forks are lifted-up, the rollers 'fall' downwards and place the products securely on the upper side of the forks, enabling the products to be unloaded in the opposite loading order and works with shipping container floors.

A roller fork consists of a special lift truck fork that serves as a supporting frame with a special hinge in the heel allowing it to always lay flat on the floor. Inside the fork are two layers of rollers, one on top of the other, that drive each other when the forks are moved over the floor.

The basic principle is that the upper rollers rotate at the exact same speed, but in the opposite direction of, the lower rollers, which are in contact with the ground. When the roller forks are lifted from the ground, the rollers automatically lower and the load is held on the forks. This interaction is depicted in Figure 11.
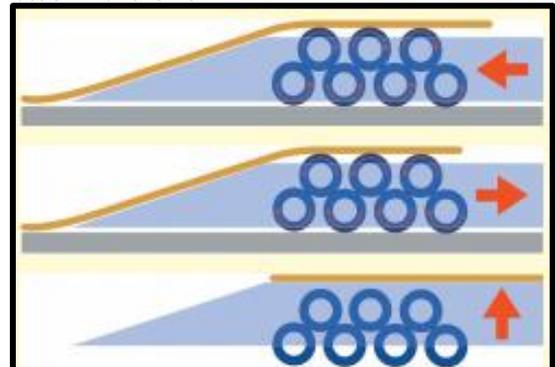
Figure 9 – Pallet being unloaded with the SSCC placard clearly visible.

Figure 10 – Roller fork being used to unload a pallet, passing under pallet's slip sheet.

Figure 11 - Diagram of the forces of movement in action in a roller fork.

[7] Meat Messaging, 9 July 2020, 'Using Roller Forks to Unload a Shipment in the US' [video], Meat Messaging, YouTube, accessed 23 March 2021.

5.3.2   Pallet Inspection

Once consignments arrive and are unloaded at an I-house, IPP need to verify the load by checking pallet and case labels.

Inspection Best Case scenario

The best case scenario once the pallets have been unloaded, is that there is no damage to the cases or the pallet placards. Inspectors will then be able to assess the pallet, verify details visually and give it an inspection mark, as seen below:

Step 6. *"Stage" the pallets for inspection.*
Each pallet is lined up in a row next to each other.

Step 7. *Stamp placard.*
Once consignment details are confirmed, the pallet label is stamped with a US inspection mark.

Figure 12 - Pallet inspection "Best Case" process.

Inspection alternate cases.

1. *Cases obscured by plastic wrap.*

Part of the process of verifying case labels may require removing some of the plastic wrap around the cases, potentially disturbing the pallet's SSCC placard. FSIS included this instruction as part of FSIS Notice 62-20, under Section VI. Label Verification, [5] stating:

'A. IPP are to perform label verification […] **without removing the plastic wrapped around the pallet**. If IPP cannot perform the label verification because the plastic is covering information on the shipping containers, IPP are to request that official import inspection establishment management remove the plastic just enough for IPP to verify the information. This does not mean the plastic must be completely removed from the pallet. Pallets are to be rewrapped as needed.' [5]

However, if the placard is damaged and cannot be read, or it needs to be replaced as part of re-wrapping the pallet, import inspection warehouse management can use the Meat Messaging system to reprint an accurate label.

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[1] FSIS (2 December 2020) FSIS Notice 62-20: Barcodes in Lieu of Shipping Marks Pilot Program for Fresh Meat Products from Australia, FSIS, United States government, accessed 24 March 2021.

2. *Placard cannot be read by inspector and verified visually.*

If the placard is damaged to the point where it cannot be read, either its barcode or the case label barcodes can be scanned instead, following these steps:

Figure 13 - Scanning placard barcode at inspection.

Step 6.   Step 7a.

Step 7b.   Step 8.

Step 6.   "Stage" the pallets for inspection.
Each pallet is lined up in a row next to each other.

Step 7.   Scan in consignment details.

     a.   Scan pallet SSCC placard on pallet to find consignment details on Meat Messaging. If it cannot be scanned, then the carton label barcode can be used instead.

     b.   Scan carton label barcode to retrieve consignment information.

Step 8.   Stamp placard. Once consignment details are confirmed, the pallet label is stamped with a US inspection mark.

Figure 14 - Search results details given on a consignment uploaded into the Meat Messaging industry portal.

Last SSCC - 00093322180000220316

Comp. prefix	Name	Est. no.	Contact
9332218	Really Good Meats		John Smith

Logistics information / Movement history:

Date	Message ID	From country	Est no.	Move type	Status	To country	Group/ Pallet SSCC	Transport unit
202006081719	093322180000220316	AUSTRALIA	2784	Export	OPEN	UNITED STATES OF AMERICA	00893322180001787500	CN

Figure 14 shows a search result layout and type of information available through the Meat Messaging industry portal. All this information can be automatically retrieved by an I-house's internal information system through contact with the Meat Messaging system. The SSCC is scanned, and the associated information that can be seen in Figure 14 is linked with it, along with a report of all the cases, called the "All Carton Serial Number Report". An example from Teys has been linked to below [8]

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[8] Meat Messaging (n.d.) *All Carton Serial Number Report*, Meat Messaging, accessed 1st April 2021.

Authorised users can also update the pallet's SSCC information to reflect changes to the pallet, such as number of cases after some have been removed for inspection.

The Meat Messaging-linked, SSCC placard also provides space for an inspection stamp once it has passed inspection. Figure 15 shows a pallet that passed inspection as part of the pallet pilot trial.

Figure 15 - Stamped pallet placard after inspection

5.4 Issues identified.

5.4.1 Damage to cases during loading.

Upon the final shipment of the latest pallet pilot, three boxes were rejected from the shipment because the top of the boxes were ripped from the "teeth" of the forklift by human error.

Figure 16 - Cartons damaged by forklift picking up pallet stacked on top of them.

The images shown in Figure 16 are from the pallet pilot and show the damage that can be done without having a slip sheet on the top of the crate. Pallets must have slip sheets placed on the top and bottom of the pallet (see Section 4.2.2).

Care needs to also be placed when loading them, ensuring the sides of the stacked pallets are even with each other. The pallets plastic wrap will help maintain this even side and provide a protective layer around the cases.

Figure 17 - Images of pallet wrap being teared off, damaging SSCC placards.

Prior instances of damage to a pallet's plastic wrap were also documented earlier in the trial. It was determined that these were the result of QA practices before loading onto the shipping containers. Exporters have been advised to not remove the plastic wrap from the crate to take photos of the load. This will end up causing damage to the outer placard, making it difficult for the importing country to scan the consignment details (Figure 17).

5.4.2   Smeared stamp ink

The placards from a shipment to the US in August shows the stamps had been smeared off (see Figure 18). When the pallet displayed for inspection, the stamp may have been touched before it could dray causing it to smudge.

During the trial, placard materials that were not suitable for stamp ink had a label added onto the inspection stamp field, with the stamp then placed on top of the label. However, these are temporary measures that increase the time it takes to inspect.

Ultimately, the ink used from the stamp is not suitable for the placards materials and is causing it to be smeared off in the handling process. Alternatively, the type of placard stamp may need to be changed to a print that is less glossy.

A temporary solution is to place a label made of the appropriate material to match the stamp ink on top of the inspection field (Figure 19).

However, it is better to use printing placards that do not have a glossy finish. This material does not allow the stamp to dry properly, especially in colder environments.

In addition, the stamps used for certification need to have ink that is suitable for non-porous surfaces. Solvent ink pads are one solution. They do not require re-inking the stamp pad between uses, has a low odour, and is archival and acid free.

They can be used for non-porous surfaces, including glass, metal, shrink plastic, laminated paper, cellophane, aluminium foil, leather & acrylic.

Figure 18 - Smeared US inspection stamp.

Figure 19 - Label placed over placard field allowed it to be stamped.

5.4.3   Understanding projects' concept

There is a concern that some key organisations on the U.S. side of the project do not fully understand the project, or its importance.

Import establishments might still be struggling with both the initial concept (i.e., using a barcode to retrieve important information when the placard or case label cannot be read), and with the portal. There is also a concern that sufficient training has not been delivered to USDA staff involved n the project, following incorrect actions taken on a previous shipment.

More training could help mitigate these issues. As of publishing, several more training workshops have been delivered by the Meat Messaging group. Another method to consider is to allow comments for end users about how they found the process, as well as survey questions that target or test the project partners understanding of the barcode solution and the portal.

There is also a concern that both exporters in Australia and importers in the U.S. are not timing the release of information efficiently. For instance, some exporters may be able to access certificate information on their shipments up to 30 days before they export. The impact of this has not been fully explored by the U.S.-based partners.

5.5 Future Consignments

Work is underway to confirm future consignments. This includes additional locations, currently listed participants that have not made consignments, new participants that are both importers and end users, and the addition of different product types.

5.5.1   Current participants – new locations.

Teys are preparing a consignment with Burger Maker but are in negotiations to determine which export establishment and I-house to process the order through.

5.5.2   Current participants – no consignments sent to date.

FSIS Notice 62-20 lists an appendix with current participants in the pallet pilot trial. Ideally, all these listed participants will have completed consignments at project's end. However, as noted previously (see Section 5.1), some of these facilities have changed ownership. The commitment of these companies to the project will need to be confirmed.

JBS Dinmore is an exporter who is yet to complete a consignment. They are in the process of planning their consignments. Details are yet to be finalised.

5.5.3   New participants

There is a desire for the project to add in different configurations of supply chain companies into the project. The current model assumes that exporter, importer and end user are different companies and locations. To further test the robustness of the placard barcode solution, companies that are both the import establishment and end user are being looked at to include in the project. Details are yet to be finalised.

5.5.4   New product types

Currently, only three product types have been traded, all of which are used in the same type of value chain, making burger patties. Additional product types, including primal and sub-primal types, that are sued in different value chains and have different information regarding their import requirements, are being looked at to add to the project. Details are yet to be finalised.

6. Recommendations

The pilot consignments to date have demonstrated that the pallet pilot protocol is robust and sufficient to be successfully followed along different supply chains.

The Meat Messaging pallet pilot protocol has been shown to be operationally and commercially feasible. It has proved that the alternative to applying shipping marks on individual cartons by moving intact pallets, identified with inspection stamped placard, through the supply chain to the end-user is viable.

The pilot has illustrated that the protocol can improve the operational efficiency, visibility, and traceability of the supply chain for those organisations that currently utilise the GS1 system. This system is key, as the GD1 ID Keys and barcodes utilised in the project allowed Meat Messaging and the volunteer organisations access to consignment details and product information. For information on the GS1 standards for carton, pallets and consignments visit GS1 US. [9] More pallet pilot explanatory details are available at Meat Messaging. [10] These guides will be supplemented with training workshops delivered by Meat Messaging staff to project partner staff, particularly importers and USDA staff. As of publishing, several of these workshops have been delivered.

Additional pilot consignments will continue as planned to ensure sufficient replication of the pilot protocol through the nominated combinations of supply chains.

The delays that have occurred through 2020 with production schedules as well shipment and inspection throughput have resulted in the pallet pilot anticipated number of pallet pilot consignment not being achieved until the end of the calendar year 2021. The next consignment being prepared will be leaving from a Teys establishment to Burger Maker via Philadelphia. A full list of participants can be found in the FSIS Notice 62-20.
It is recommended that additional participants, product types, and company supply chain models (i.e., import establishment and end user as the same company) should be added to the project, to further test the information models robustness.

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[9] GS1 AIBSL, https://www.gs1us.org/

[10] Meat Messaging, 'Palletising', Meat Messaging, accessed 23 March 2021.

7. Appendix

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