



# Produce Traceability Initiative

## Best Practices for Product Substitutions

(Revision 1.1)

### About this Best Practice Guideline

*Best practices* are generally accepted, informally standardized techniques, methods or processes that have proven themselves over time to accomplish given tasks. The idea is that with proper processes, checks and testing, a desired outcome can be delivered more effectively with fewer problems and unforeseen complications. In addition, a "best" practice can evolve to become better as improvements are discovered. The Produce Traceability Initiative (PTI) is a voluntary U.S. produce initiative. The best practice documents are the recommendations created and agreed to by all facets of the produce industry supply chain and PTI Leadership Council.

Consent between trading partners may replace specific recommendations as long as the minimum traceability information requirements are met in good faith.

### Revision History

This section itemizes the changes from the last published Best Practice.

Version No.	Date of Change	Changed By	Summary of Change
1.0	June 2009	Supplier Subgroup	Created
1.1	11/4/11	Master Data Working Group (MDWG)	Combined Best Practices External Substitution and Best Practices Internal Substitution documents
1.1	11/4/11	MDWG	Revised formatting

### Objectives

The objective of this document is to establish a best practice for communication of substitutions between trading partners. In doing so, it will detail the main scenarios by which these substitutions are accomplished, the business flow for the scenarios, and how to communicate the substitutions.

## Introduction

There are times in the course of order fulfillment where it becomes necessary to substitute an ordered item with another item. The most common cause of this is due to a supply or inventory issue with the ordered item. If substitutions are not communicated between trading partners, the receiving process slows down and can cause delays in using the items as well as in invoicing for payment. By following the PTI best practices, these issues can be avoided.

In this best practice document, industry community terminology is used. See Table 1 for a guide to such terms.

### Table 1: Terms/Definitions

Listed below are terms used by the produce industry and their cross-references with the GS1 Glossary of Terms:

<b>Sector Term</b>	<b>GS1 Glossary Term</b>	<b>Definition</b>
<ul style="list-style-type: none"> <li>• Alternate Source</li> </ul>		A trading partner who is contracted by a supplier to drop ship a substitute item on behalf of the supplier. This party can be a grower, a distributor, a re-distributor or a co-packer.
	Advance Ship Notice (ASN)	The Electronic Data Interchange (EDI) transaction that provides the receiving company with advance data on shipments to better plan workloads and receipt processing.
<ul style="list-style-type: none"> <li>• Balance/Fill Item</li> </ul>		An item is considered a balance or fill item when the buyer asks the supplier to determine the amount of an item to be shipped based on criteria such as room left on the truck. This type of denotation is used to fill trucks and to utilize all the capacity available.
<ul style="list-style-type: none"> <li>• Buyer</li> </ul>		This term is used to refer to the trading partner who issues an order to the supplier. This party can be a retailer, a distributor, or a re-distributor.
	Electronic Data Interchange (EDI)	The computer-to-computer exchange of structured information, by agreed message standards, from one computer application to another by electronic means and with a minimum of human intervention.
	Global Location Number (GLN)	The globally unique GS1 System identification number for legal entities, functional entities, and physical locations. The Global Location Number is 13 digits, which comprise a GS1 Company Prefix, Location Reference, and Check Digit. Supply side trading partner locations generally include corporate headquarters, regional offices, warehouses, plants, and distribution centers. Demand side trading partner locations generally include corporate headquarters, divisional offices, stores, and distribution centers.

	Global Trade Item Number <sup>®</sup> (GTIN <sup>®</sup> )	The globally unique GS1 System identification number for products and services. A Global Trade Item Number may be 8, 12, 13, or 14 digits in length, represented as GTIN-8, GTIN-12, GTIN-13, and GTIN-14 respectively.
• Item Substitution		It is not uncommon for buyers to allow suppliers to substitute different items for product that is ordered if the supplier has an insufficient quantity of the ordered item on hand at order fulfillment time. A “substitute” item is generally the same commodity that does not compromise the specification or quality of the product. These items are considered to be “preapproved substitutes” based on prior agreement between the two parties. The supplier may or may not need to contact the buyer before effecting the substitution on the order.
• Ordered Item		An item which is entered on an order. An order is sent to the supplier from the buyer.
• Passing		The common term for confirmation of oral notice or agreement as in a sales confirmation.
• Substituted Item		An item which is sent as a replacement for an ordered item which is out of stock at the supplier. An item is only considered to be a substitution if it is used as a replacement on the order once the order has been sent to the shipping department for processing. Prior to this step, changes to an ordered item are considered part of the ordering process and not a substitution.
• Supplier		The trading partner who receives an order from a buyer and ships it. This party can be a grower, a distributor, or a re-distributor.
	Trading Partner	A party to transactions in the supply chain, such as a supplier (seller) or a customer (buyer).

## **Best Practices for Direct Shipment with a Product Substitution**

### **Business Scenarios**

**Scenario 1:** Supplier does not have enough inventory to cover a Global Trade Item Number (GTIN) on a buyer’s Purchase Order (PO) and therefore substitutes another GTIN.

#### Actions

1. The following actions should be taken by the supplier:
  - Set up and communicate substitution parameters under which acceptable substitutions can be made.
  - Prior to substitutions occurring, provide market partners with product information for system synchronization.
  - When a substitution occurs, the appropriate GTIN, and possibly lot number, should be reflected on the Advance Ship Notice (ASN) or passing.

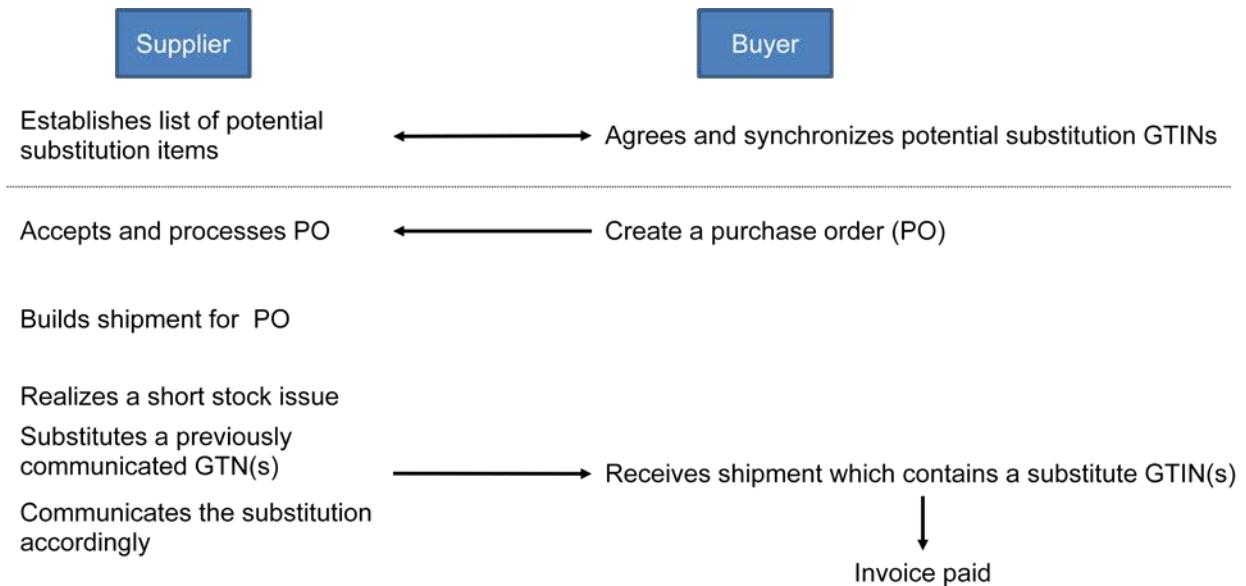
2. The following actions should be taken by the buyer:
  - Once accepted, the item information should be synchronized with internal systems. This is necessary to allow receipt and processing of the substitute.

### Business Flows

1. The following business flows demonstrate the basic back and forth that happens to accomplish a direct shipment of a PO with a substitution.
  - **Scenario 1 (Figure 1):** Direct shipment of a GTIN substitution which has been previously communicated and agreed to (this is the best practice recommendation for direct shipments with substitutions).

The supplier has communicated a list of substitute GTIN(s). A PO is received from the buyer. While processing the shipment, it is determined that an ordered item has too little or no stock to be able to complete the PO as ordered. The supplier is able to substitute this item and continue fulfilling the order. The shipment is sent and received at the buyer's location. Since the item has been previously communicated and agreed to, the order is accepted, stocked, and the invoice is processed and paid in a reasonable manner.

**Figure 1: Business Flow for an Internal Substitution Where the Substituted Item Has Been Previously Communicated and Agreed to**

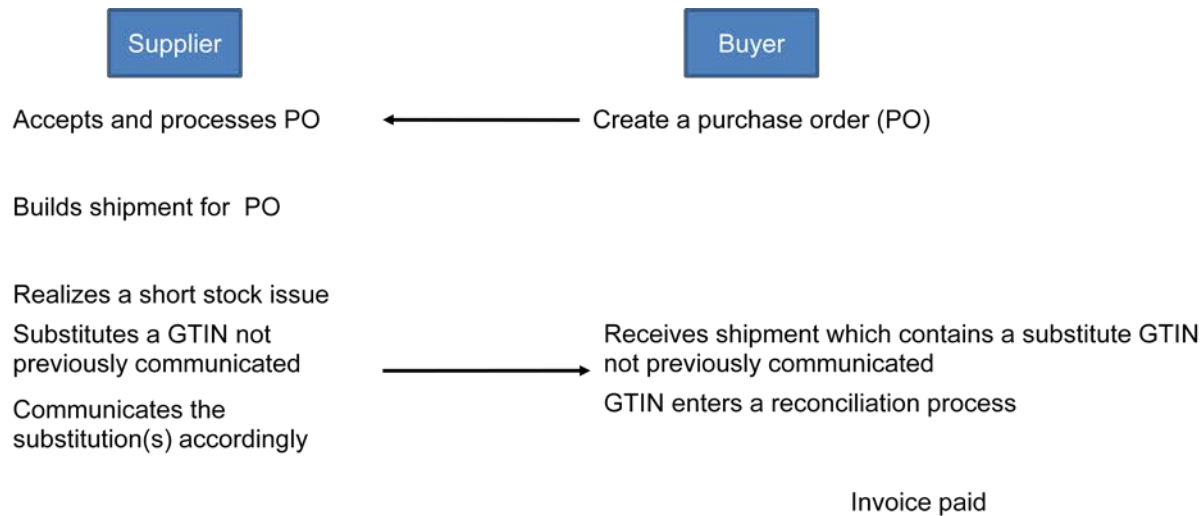


- **Scenario 1 (Figure 2):** Direct shipment of a GTIN substitution which has not been previously communicated (this is not the best practice recommendation for direct shipments with substitutions and should be avoided whenever possible).

The PO is received from the buyer. While processing the shipment, it is determined that an ordered item has too little or no stock to be able to complete the PO as ordered. Possible substitute GTINs which are in stock have not been previously communicated.

Using a substitute GTIN, the supplier continues fulfilling the PO. The shipment is sent and received at the buyer’s location. Since the GTIN has not been previously communicated, there are additional processes that need to be accomplished to reconcile the GTIN received against the GTIN ordered. These processes may include communication and review of the GTIN, a discussion with the supplier, and reconciliation and payment of the invoice.

**Figure 2: Business Flow for an Internal Substitution Where the Substituted Item Has Not Been Previously Communicated and Agreed to**



**Best Practices for Drop Shipment with a Product Substitution**

**Business Scenarios**

**Scenario 2:** Supplier does not have enough inventory to cover a GTIN on a buyer’s Purchase Order (PO) and therefore substitutes another GTIN. The substitute GTIN is drop shipped from an alternate source and not the supplier’s own shipping facility.

**Note:** Having an alternate source ship substituted product directly to the buyer is a process that should be approved with the buyer in advance. Some buyers have specific delivery processes which will need to be followed for this situation.

**Actions**

1. The following actions should be taken by the supplier:
  - Set up and communicate substitution parameters under which acceptable substitutions can be made.
  - Prior to substitutions occurring, provide market partners with product information for system synchronization.
  - For drop shipments, communicate with buyer the alternate shipper of the GTIN and any other information needed to ensure the shipper is authorized to effect delivery.
  - When a substitution occurs, the appropriate GTIN, and possibly Batch/Lot Number, should be reflected on the Advance Ship Notice (ASN) or passing.

2. The following actions should be taken by the buyer:

- Once accepted, the item information should be synchronized with internal systems. This is necessary to allow receipt and processing of the substitute.

### Business Flows

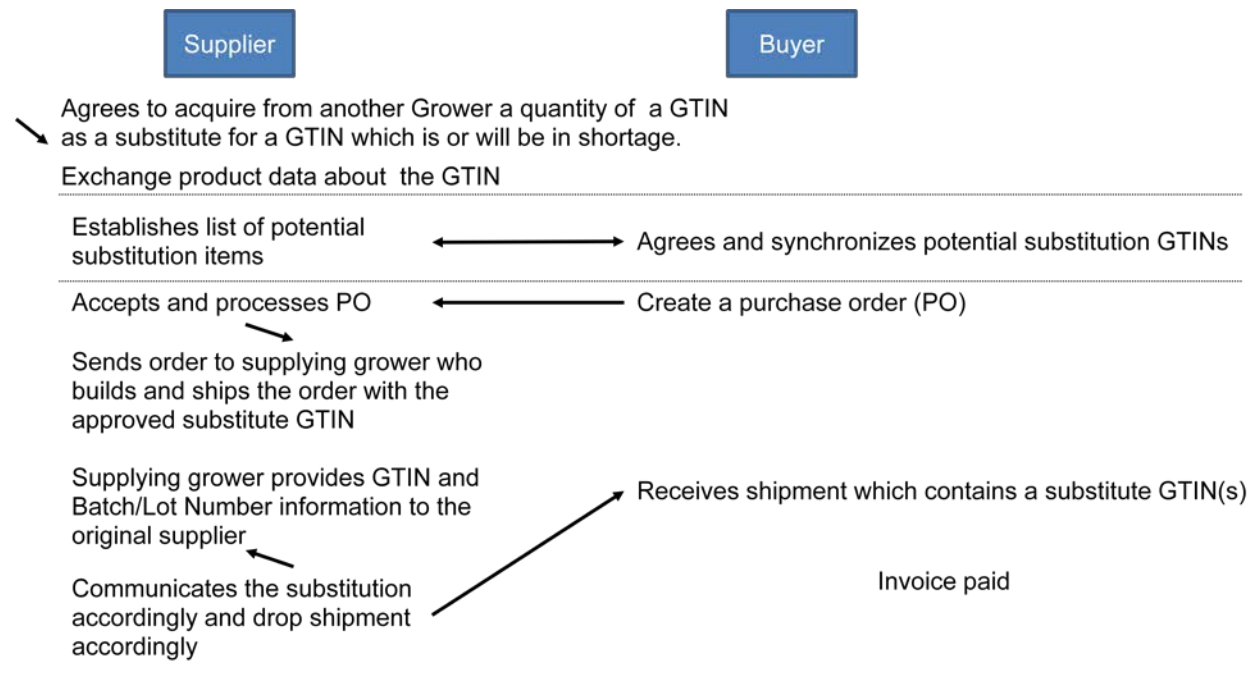
1. The following business flows demonstrate the basic back and forth that happens to accomplish a drop shipment of a PO with a substitution.

- **Scenario 2 (Figure 3):** Drop shipment of a GTIN substitution which has been previously communicated (this is the best practice recommendation for direct shipments with substitutions).

The supplier has communicated a list of substitute GTIN(s). A PO is received from the buyer. While processing the shipment, it is determined that an ordered item has too little or no stock to be able to complete the PO as ordered. Possible substitute GTINs which are in stock have been previously communicated.

To effect timely shipment, the substitute GTIN will need to be shipped from the alternate source (drop ship). The shipment is sent and received at the buyer's location. Since the item has been previously communicated, the order is accepted, stocked, and the invoice is processed and paid in a reasonable manner.

**Figure 3: Business Flow for an External Substitution Where the Substituted Item Has Been Previously Communicated and Agreed to**



NOTE: This flow also notates that the substituted Item is drop shipped from a secondary supplier.

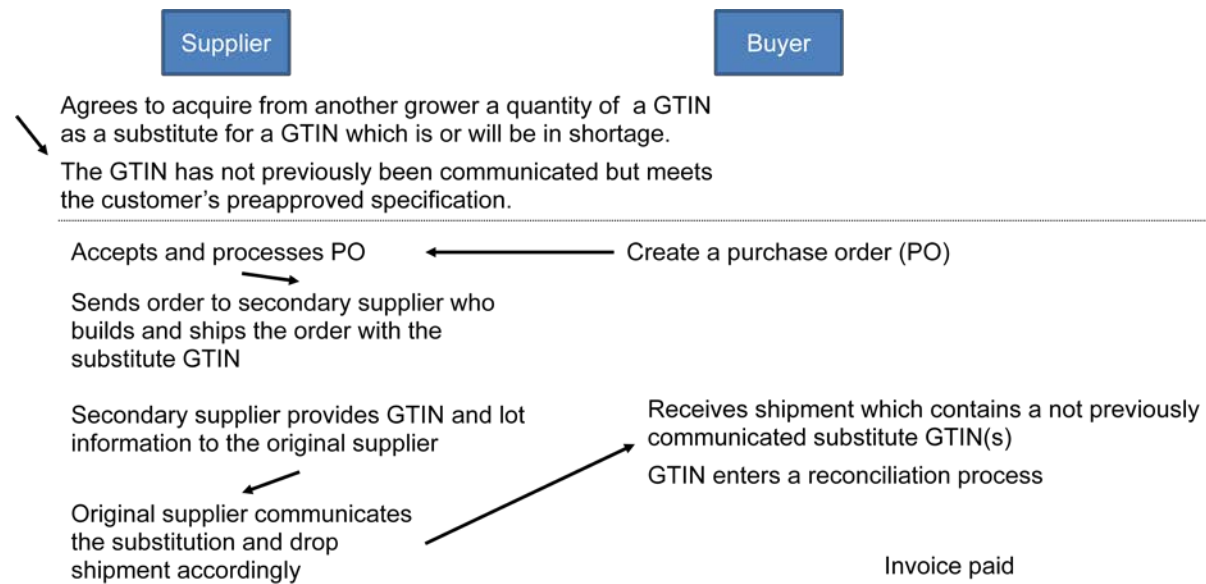
- **Scenario 2 (Figure 4):** Drop shipment of a GTIN that has not been previously communicated (this is not the best practice recommendation for direct shipments with substitutions and should be avoided whenever possible).

A PO is received from the buyer. While processing the shipment, it is determined that an ordered item has too little or no stock to be able to complete the PO as ordered. Possible substitute GTINs which are in stock have not been previously communicated.

To effect timely shipment, the substitute GTIN will need to be shipped from the alternate source (drop ship). The shipment is sent and received at the buyer’s location. Since the GTIN has not been previously communicated, there are additional processes that need to be accomplished to reconcile the GTIN received against the GTIN ordered. These processes may include communication and review of the GTIN, a discussion with the supplier, and reconciliation and payment of the invoice.



**Figure 4: Business Flow for an External Substitution Where the Substituted Item Has Not Been Previously Communicated**



NOTE: This flow also notates that the substituted Item is drop shipped from a secondary supplier.

**Information to be Shared About Substitutions**

There are two main types of information about substituted items that should be shared between trading partners:

1. **Product Information:** This information should be sent as soon as possible and only if the data has not been shared previously. If data has not been shared and the substitution is made during the shipping process, product information should be shared as soon as possible.
2. **Substitution Information:** This information should be shared order by order as it pertains to that order. It should be shared as soon as the information is confirmed. This information would detail what was ordered and what was substituted. This information would aid in the receipt and invoice reconciliation process. See Figure 5 for an example.

## **File Sharing (Formats) and Transmission Methods**

There are a number of different formats in which to share this information. The decision on which format to use will be based on the capabilities of the various trading partners. The most prominent formats are:

### 1. For Master Data

- Excel, Text, or flat file
- Portal - Retail website
- Electronic Data Interchange (EDI)
- File Transfer Protocol (FTP)
- Global Data Synchronization Network (GDSN)

### 2. For Transactional Data

- Excel, Text, or flat file
- Portal - Retail website
- Electronic Data Interchange (EDI)
- File Transfer Protocol (FTP)

**Note:** It is recommended to utilize EDI to communicate changes to the purchase order and ASN as a best practice. These documents can be sent electronically and have a standardized format which can be read and utilized as is needed. Trading partners are encouraged to reach out to each other to discuss their EDI capabilities.

## **Substitution Sheet**

One of the main issues with the substitution process is knowing what is on the shipment and how it relates to the ordered items. If the substitution is not clearly communicated, the receiving process slows down and can cause delays in using the items as well as in invoice payment. Communication of what items were substituted on the shipment is an important step to help reduce issues at receiving time, specifically when the substitution is of an item which has not been previously communicated.

If trading partners can share EDI change documents and ASNs, these delays and manual processes can be reduced. For those trading partners who are not able to accept these EDI documents, substitution information could be added to the Bill of Lading (BOL) or a Substitution Sheet can be created which can be utilized. This sheet should mirror the BOL and contains all items on the order including substitutions and the items that have been substituted.

It is recommended that this document only be included when there is a substitution on the order. This will provide a notice that a substitution exists. The sheet should be sent with any documents sent to the buyer's receiving dock (BOL, Manifest, etc.), the buyer's accounting department (invoice, etc), and to the buyer. While this may appear to be somewhat excessive, it

