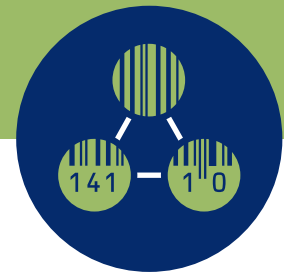


Initiative for Food Manufacturers and Raw Material Suppliers: English Version of Source Marking Guideline for Raw Materials



GS1 Japan formed an Industry Working Group (WG) made up of key Japanese processed food manufacturers and raw material suppliers, with the aim to improve supply chain efficiency and visibility. The WG has issued an English version of the Source Marking Guideline for Raw Materials as a part of this effort (*1). This guideline defines standard data items to be shown on raw materials and the recommended data carriers in which to carry these items.

Background of guideline creation

GS1 standards have not been adopted the supply chain between most Japanese raw material suppliers and processed food manufacturers. Therefore, many raw materials do not even carry barcodes, which results in requiring visual inspection of data items and manual check.

Recently some processed food manufacturers are demanding that raw material suppliers place barcodes on raw materials when delivered. However, since GS1 standards are not widely implemented, raw material manufacturers receive various requests

from processed food manufacturers to mark barcodes in different data items/formats (which character set to use, the number of digits, etc.). For this reason, there have been issues, such as the need to mark different barcodes (encoding different items/formats) according to clients even for the same raw materials. If unstandardized barcodes are widely used, there is concern that raw material suppliers will face heavy burden or won't be able to deal with it.

Given the above background, after analysis of the current situation and challenges, GS1 Japan created the Guideline, with participation from raw material suppliers, processed food manufacturers, solution providers, and experts.

Overview of the Guideline

This Guideline shows the rules regarding the required data items for barcodes carried on raw materials traded between raw material suppliers and processed food manufacturers along with the indication method, cautions, technical requirements,

*1 <http://www.gs1jp.org/use-cases/data/SourceMarkingGuidelineforRawMaterials.pdf>

Fig. 1 If data items and format are not standardized

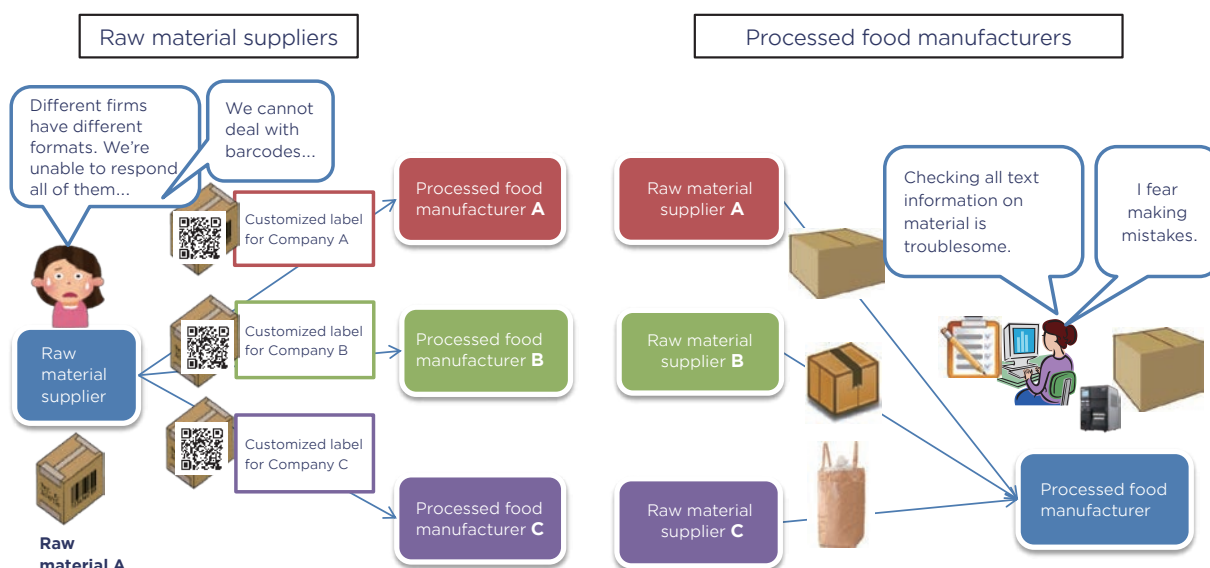
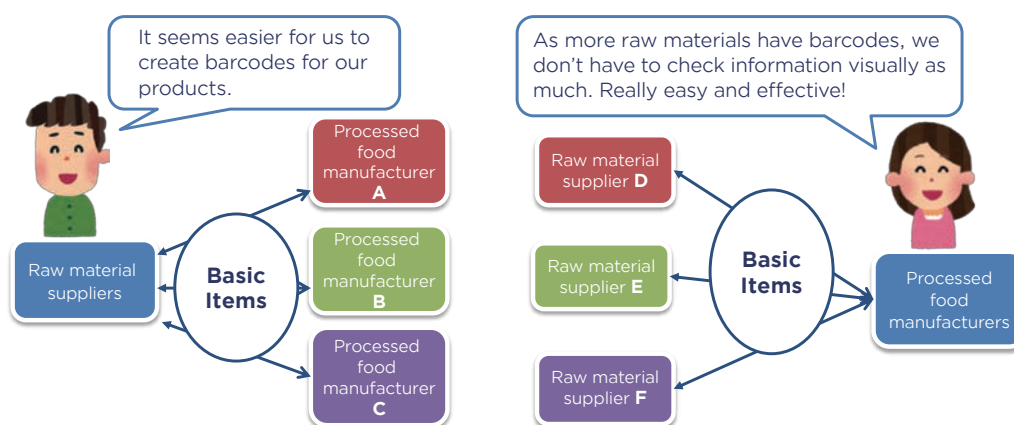


Fig. 2 If data items and format are standardized



Q&As, and other matters. The main purposes of the Guideline are:

- 1) Encouraging raw material identification using GTIN and GS1 Application Identifier(AI)
- 2) Source marking: Encouraging raw material suppliers to voluntarily attach barcodes on their products.
- 3) Shifting from manual control to systematic management using barcodes

Expected advantages and results of the Guideline

This Guideline prescribes the standard data items to be shown on raw materials. Using these standard items and format, raw material suppliers are no longer required to translate the same information into different types of codes or to show different data items on barcodes according to each client's demand. On the other hand, it is expected that

processed food manufacturers will create an environment that helps raw materials providers to easily respond to their requirements, and consequently, the raw material suppliers' source marking rate will be improved.

A barcode format system is a mechanism to read information quickly and accurately and process it on the computer. Expected results brought by standardized barcodes are as follows:

1) Accurate handling of incoming and outgoing deliveries





Introducing source-marked barcodes enables the shift from manual delivery operations to faster and more accurate automatic operations. Implementing systems utilizing barcodes is effective to,

- Prevent errors caused by visual confirmation and operation errors on incoming and outgoing deliveries

Fig. 3 Data items to be carried on a barcode

| Fixed measure items | Variable measure items |
|---|---|
| GTIN: AI (01) | GTIN: AI (01) |
| Production Date: AI (11) | Weight/Dimensions: AI (3nnn) |
| Best-Before Date: AI (15) or Expiration Date: AI (17) | Production Date: AI (11) |
| Batch or Lot Number: AI (10) | Best-Before Date: AI (15) or Expiration Date: AI (17) |
| | Batch or Lot Number: AI (10) |

Fig. 4 Recommended Data Carrier

| | Recommended | Acceptable |
|-----------|---|---|
| 1D symbol | <p>GS1-128</p>  <p>(01)04912345678911 (11)160510 (15)170305 (10)HHI1026</p> | <p>GS1 DataBar</p>  <p>(01)04912345678911 (11)160510 (15)170305 (10)HHI1026</p> |
| 2D symbol | <p>GS1 QR code</p>  <p>(01)04912345678911 (11)160510(15)170305 (10)HHI1026</p> | <p>GS1 DataMatrix</p>  <p>(01)04912345678911 (11)160510(15)170305 (10)HHI1026</p> |

Note: 2D symbol is only for domestic market, at this moment.

- Eliminate variation in time and accuracy among individual operators
- Eliminate unnecessary tasks for checking products
- Reduce time and labor costs by establishing system

2) Improving efficiency and accuracy of data entry

It is necessary to keep and archive the record of information about raw materials on a batch/lot basis as to when (date received/shipped), where from/to (origin of shipment / shipment's destination), and how many (quantity) in order to ensure traceability. While record keeping/archiving work can be done manually, use of barcodes makes it faster and more

accurate to keep and archive records.

3) Prompt response to inquiries

When responding to an inquiry from a consumer or trading partner, or in the case of an issue with a traded item, a raw material manufacturer needs to refer to the receiving/shipping records for their products. Such records might be archived as hard copy, but archiving and managing them on an electronic system would make it possible to significantly shorten data referencing time, and to respond to inquiries promptly.

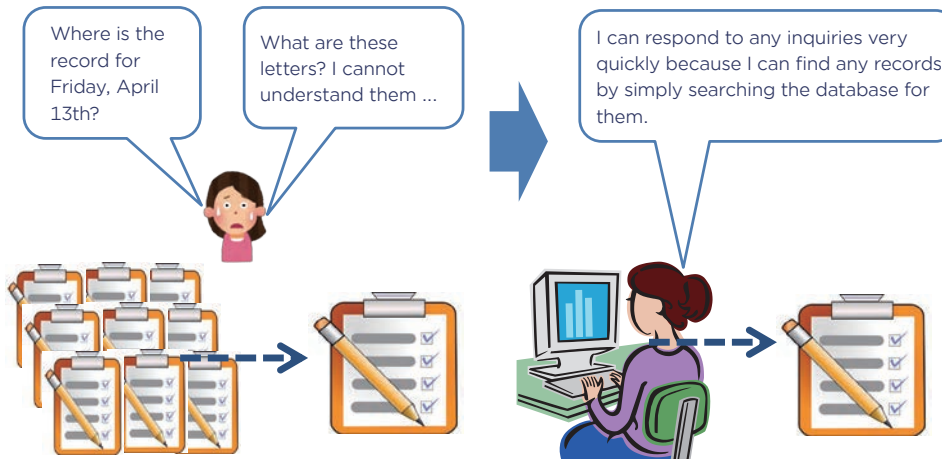
Fig. 5 Accurate operation on incoming and outgoing deliveries



Fig. 6 Improving efficiency and accuracy of data entry



Fig. 7 Prompt response to inquiries



Further efforts

GS1 Japan will work for wider acceptance of the Guideline and increase source marking rate in cooperation with relevant industries, and will also

continue to discuss how to utilize EDI, EPICS and the product database as the focal points of the second phase effort in the WG.

GS1 Japan

3rd Fl. Place Canada, 7-3-37 Akasaka, Minato-ku, Tokyo 107-0052, JAPAN

T +81-3-5414-8500 F +81-3-5414-8529

E jan@dsri.jp

www.gs1jp.org