



AGIIS Product Synchronization

Objective

The purpose of this document is to provide an understanding of the importance of product synchronization between the Ag Industry Identification System (AGIIS) and subscribers to the system. We also want to educate subscribers on the most efficient way to stay synchronized with AGIIS, whether that is from the perspective of a **Contributor** or **Consumer** of product information. The reader is assumed to have a working knowledge of the structure and content of the Product Directory.

Background and Overview

The goal of the product component of AGIIS is to provide a single location for industry trading partners to obtain a common industry identifier (GTIN - Global Trade Item Number) and set of related data elements containing product information required for eBusiness. Each product manufacturer is responsible for the loading and maintenance of their respective product identifiers and attributes in the Product Directory.

The Product Directory has been identified by AGIIS subscribers as a “critical source” for providing the Agricultural industry the base product data and codes required to enable accuracy and efficient exchange of eBusiness transactions and other information exchange. In order to remain a critical source, it is imperative that product contributors provide timely, accurate updates and that product consumers synchronize with AGIIS and apply updates to their internal systems.

The Product Directory has been designed to store information in such a way as to offer the maximum amount of flexibility for product-specific searches, queries and identifier enumeration. This flexibility does come with complexity. It is recommended that Councils develop and socialize guidelines for their specific segment’s use of the Product Directory, including defining where and how specific data is stored, formatted and interpreted. Although, the AGIIS system does perform some high level editing to help maintain data cleanliness, it is up to contributors and consumers, implementing the information and acting cooperatively, to manage their segment specific business rules for content. The Seed and Crop Protection segments has done significant work in this area and we encourage others to connect with them for more information on their process and practices.

Product Contributor

A Product Contributor is defined as any organization that owns or manufacturer’s products and uploads product information including: product, package size and package configuration information into AGIIS.

There are two options for viewing and loading product data into AGIIS. The first is the Hierarchal View which is the original view that was developed in AGIIS to support bar coding for the industry. In this view there are different levels of related information including company, product, package size and package configuration data elements. This view requires a product contributor to populate 29 required fields plus any optional information they would like stored and made available through AGIIS.



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The second option for viewing and loading product data is the Simplified Flat View. This option provides a flattened single level view of the product data while protecting the existing database design and interfaces. The Simplified Flat view reduces the number of required data elements needed to upload products into the directory from 29 to 12. This view is a good alternative for companies not yet interested in bar coding, but still want to distribute product information for other eBusiness purposes, such as reporting.

Product Contributors can use a CSV or XML file to upload and maintain products, or for one-off changes, the AGIIS web interface can be used. The specific file formats for both the Hierarchal and Simplified Flat View can be found on the AGIIS website under the Links menu in the Product section.

Product files can be communicated to AGIIS in real time via web services or they can be sent to an ftp site to be processed in a batch run. Batches are processed twice a day, once at 2:00 PM and again at 12:15 AM Central Time.

The end goal for a Product Contributor is to have current product information associated with a unique identifier. The Global Trade Item Number (GTIN) is the primary unique product identifier in AGIIS. This identifier is used by their customers in eBusiness transactions such as order to invoice transactions or sales reporting. Many manufacturers already enumerate their products with GTINs, and these existing codes may be used in AGIIS without restriction. Some segments deal in commodity products, and AGIIS can generate GTINs for these “generic” products without requiring a specific manufacturer association.

Creating a GTIN begins with a GS1 Company Prefix. The prefix is variable in length between 7 and 10 digits and is contained within the fourteen-digit GTIN-14, which is most commonly used by AgGateway Members. This prefix is licensed to a company by GS1 and is a unique number for the purpose of creating Identification Keys. The prefix can be used by the company for GTIN and Global Location Number creation. Once a GS1 Company Prefix has been obtained, it is entered into AGIIS to govern the assignment of GTIN numbers when loaded into the system. If you do not have a GS1 Company Prefix and would like to receive more information about them you can [click here](#).

The following data elements comprise a GTIN:

- Indicator Digit (Numeric digit 0-9, 1 digit. The Indicator Digit is assigned by the product owner, and it is the responsibility of each manufacturer to define their own GTIN hierarchy)
- Manufacturer’s GS-1 prefix (non-zero numeric digits between 1 and 11 digits)
- Package size ID (non-zero numeric digits between 1 and 11 digits. *Note: Total length of GS1 prefix and Package Size ID must equal 12 digits.*)
- A check digit (1 digit automatically calculated by AGIIS)

Product Contributors that use the Hierarchal View for loading products can supply the individual data elements that make up the GTIN at each level in the file format and the GTIN is built and calculated by AGIIS. Those Product Contributors that use the Simplified Flat view are required to supply a complete GTIN in the file. To assist with that effort GS1 offers a [GTIN Calculator](#) to make sure the GTIN is calculated correctly.



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There are a few simple guidelines that Product Contributors can follow when first loading products. See the list below:

1. Set-up/Review Subscriber Profile in AGIIS
 - a) Find out your organization's Subscriber Administrator
 - b) Add GS1 Prefixes or confirm your prefix is in AGIIS
 - c) Set-up Product Notifications
 - d) Fill-out or update Product Settings
2. Determine GTIN hierarchy that will be used for indicator digit that will be applied consistently across product lines. Update GTIN hierarchy on AgGateway wiki page so it can be shared with trading partners.
3. Create GTIN's
4. Add Product via AGIIS web interface
5. Create a Product Extract via format of choice
6. Use Extract as a template for creating bulk load
7. Submit to AGIIS FTP site to be loaded
8. Keep products updated

Member Services would be glad to walk Product Contributors through these steps and provide direction where needed.

Product Contributors play a critical role in the product synchronization process which is to keep product information updated accurately and timely in AGIIS. If products are not being updated, a breakdown in the entire synchronization process will occur.

Once products have been loaded successfully in AGIIS, we recommend that organizations develop an ongoing schedule to provide updates to AGIIS on a reoccurring basis, preferably in real time using web services as changes occur in internal systems. However, daily or weekly updates will work as well. Each organization needs to find a schedule that will work best for them and their customers, and Council-specific guidelines and agreements may be helpful in socializing expectations among participants. For questions on how to load products, or how to get started sending updates, please call Member Services at (866) 251-8618 or email at Member.Services@AgGateway.org.

Product Consumer

A Product Consumer is defined as any organization that views and extracts product information from AGIIS.

Product Consumers play an important role in the synchronization process because they consume the information and use the GTIN and other data elements in many eBusiness transactions with their trading partners. The type of information and data elements a Product Consumer wants to receive varies based upon the trading partner they are working with and the type of eBusiness implementation they are performing. For these reasons, AGIIS provides multiple ways to receive and to extract the product information.



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A Product Consumer can customize and schedule different product extracts (full, custom and subset) to reflect the data elements and particular timing of the extracts they need to get the information for different eBusiness processes. The extracts are available in an XML and CSV file formats. Extracts can be scheduled from the AGIIS website and there is a [Product/License Extract Overview](#) tutorial that explains how to create and set-up extracts. This is a good resource for Product Consumers.

The Product Subset feature allows a Product Consumer to create a cross reference between an AGIIS Package Configuration (the level the GTIN resides) and their proprietary code. The benefit product subsets provide is that it allows Product Consumers to create a link to only those products for which they have an interest. Once a product subset has been created, they can create a product subset extract which will provide notification if a product within their subset has been updated, or they can be notified if a supplier they work with has added a new product. The Product subset feature paired with the extract capability is an excellent tool that can be used for product synchronization. There is a [Product Subset](#) tutorial on the AGIIS website that demonstrates how to create a product subset cross reference.

Beyond scheduled product extracts, there are web services available that allows organizations to stay synchronized with AGIIS in real time. The AGIIS web services can be integrated with a company's internal systems, which not only will provide them with the most current product information available in AGIIS, but can also result in process workflow efficiencies. To find out more about AGIIS web services [click here](#).

Product Consumers can also receive updates via Product eBusiness Messaging Specification (ebMS). This functionality allows AGIIS Subscribers to receive product updates via ebMS in "real time". The ebMS updates is a push of information when it happens in contrast to web services which allows subscribers to pull information from the directory.

There are several options for Product Consumers to stay synchronized with AGIIS, but the task for each organization is to identify which data elements are critical for their internal use and each eBusiness implementation. It is always good to have a conversation with your trading partners to understand their expectations of the data you are exchanging and how frequently updates to the information is available in AGIIS.

If you have questions regarding AGIIS product synchronization or how to use the tool available in AGIIS regardless of being a Product Contributor or Consumer, please call Member Services at 866.251.8618 or email Member.Services@AgGateway.org.