Mini conference Sustainable Agriculture Coding & ID in Agriculture/Fresh F&V (GPC, GLN) & eLAB

UN/CEFACT
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Agenda

- Introduction Frug I Com
- Identification Global ID key – GLN
- Classification Global “Sector & Supply Chain” key – GPC
- Development new GPC segment Crops
- Use cases GPC segment Crops
- UN/CEFACT eLAB
- GS1 in EU F&V WG – Agricultural Quality Standards
- Q&A
Introduction Frug I Com

Foundation
Dutch Fresh Produce Centre (GroentenFruit Huis in Dutch)
Standard GS1 (downstream) & UN/CEFACT (upstream)
Business needs (e.g. ISO BIC code as unique ID for containers)
GPC – Part of the GS1 System of Standards

**Identify**
GS1 Identification Numbers
Companies, Products, Locations, Logistics, Assets and Services

**Capture**
GS1 Data Carriers
Barcodes and EPC-enabled RFID

**Share**
GS1 Data Exchange
Classification, Master Data, Transactional Data and Physical Event Data

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Identification with Global ID Key GLN

**SCENARIO 3**

**SME - GROWER & PACKER**

One physical location – Two roles – Three GLNs

Each GLN is based in the same Global Company Prefix (GCP)

- One legal entity
- One physical location
- Two roles
  - Role A - Growing
    - (production unit including harvesting and sorting)
  - Role B - Packing
- Results in: Three GLNs, because they are also doing packing activities for other SME’s

**ONE PHYSICAL LOCATION**

1

GLN no. 1 (main)
3027000001001

**TWO ROLES**

A

B

**THREE GLNs**

1A

1B

GLN no. 2
3027000001018

GLN no. 3
3027000001025
Classification Global “Sector & Supply Chain” key – GPC

Pome Fruits / Pitvruchten
Class Code: 50250800

- Apples
- Appels
- Malus domestica
- Brick Code: 10005900

- Japanese Medlars
- Japanese Mispels/Loquats
- Eriobotrya japonica
- Brick Code: 10005901

- Nashi
- Nashi-Peren
- Pyrus pynfolia
- Brick Code: 10005902

- Pears
- Peren
- Pyrus communis
- Brick Code: 10005903

- Quinces
- Kweeperen
- Cydonia oblonga
- Brick Code: 10006173

- Crabapples
- Wilde Appels
- Malus sylvestris
- Brick Code: 10006338

- Medlar
- Mispels
- Mespilus germanica
- Brick Code: 10006414

- Ya Pear (Shandong)
- Ya Peren (Chinese Peren)
- Pyrus ussuriensis var. viridis
- Brick Code: 10006415
What is GPC?

• A system that gives buyers and sellers a common language for grouping (or categorising) products in the same way, everywhere in the world.

• Improves the GDSN data accuracy and integrity, speeds up the supply chain's ability to react to consumer needs, and contributes to breaking down language barriers.

• Since 2007, GPC adoption has grown in coverage and in implementation (in parallel with the use of GTINs) in GDS.
Classification Global “Sector & Supply Chain” key – GPC

Level | Example
--- | ---
Segment | Food, Beverages and Tobacco
Family | Fruits Unprepared & Unprocessed (Fresh)
Class | Pome Fruits
Brick | Apples

- **Segment**: An industry segmentation or vertical
- **Family**: A broad division of a segment
- **Class**: A group of like categories
- **Brick**: Categories of like products
A GTIN can only be assigned to one Brick
More GTINs are classified under one and the same Brick

Brick Description:
Apples

GTIN: Global Trade Item Number
GTIN = 123456789123C

Brick Code = 10005900

GPC Brick Code = Mandatory Field GDSN (GS1 DAS/1SYNC Datapool)
GPC Translations

GPC is officially published in Oxford English and is translated to 16 other languages.

- Arabic
- Czech
- Chinese
- Dutch
- Finnish
- French
- German
- Hungarian
- Italian
- Japanese
- Persian
- Portuguese
- Russian
- Serbian
- Swedish
- Spanish
Upstream Information Exchange needs GPC for apple trees and tomato plants
Development GPC new segment Crops

Overview GPC

Plant-based Agriculture

- **Fruit & Vegetables (Fresh Foods)**
  
  *Available* - main commodities western world (scope: trade)

- **Flowers, Plants & Bulbs (Horticulture)**
  
  *Available* - all relevant commodities (scope: trade)

- **Crops cultivated, Plants Products**

  New development (NOT related to trade legislation)
  
  - Animal feed: corn/maize, alfalfa
  - Processed foods: grains, rice, potatoes, sugar beets and sugar cane
  - Other processing industry: cotton, flax, rapeseed, olives (olive-oil) and winegrapes
Development GPC new segment Crops

- **Overlap in sectors**
  GPC available for Horticulture and Fresh Foods

- **Plants**
  More commodities/products from the same plant
  Wheat vs byproduct Straw
  Celery leaves, Stem celery, Turnip rooted celery

- **Purpose**
  Tomatoes for industry – fresh consumption
  Byproducts (tomato-straw) – added value for waste

- **Type of commodity**
  Grain – Vegetable – Fruit - Fiber
Development GPC new segment Crops

**Pre-harvest level**
1. Crop (plant, tree, shrub)

**Post-harvest level**
2. Commodities/byproducts
3. Retail products

More GPC segments will be developed. These segments will be related to the sectors/supply chains where the (by)products are to be used.
Classification with Global ID - GPC

What
Supply chain partners do need the “GS1 Key” GPC as unique Global ID.

General primary production identification (upstream)
Classification Plant based pre-harvest phase & animal based
  ▪ Crops (cultivated)
  ▪ Livestock (live animals) (out of scope in this presentation)

More specific product identification (downstream & upstream)
Plant based post harvest & animal based and not alive
  ▪ Identify Harvested product/commodity
  ▪ Identify Livestock products (more or less available, improvements)
Use cases GPC segment Crops (beyond GDSN=Master data retail)

Three use cases:
- ITC Global Sustainable Network/Colombian Coffee Growers Federation
- UN/CEFACT eCrop* - Crop Data (e.g. Farm Digital project)
- UN/CEFACT eLab - Laboratory Observation Report

* UN/CEFACT eCrop supported by countries: US, Austria and The Netherlands. Based on GS1 Keys
Identification with Global ID - GLN

The Sustainability Network Initiative of UN/ITC & GS1 supports a unique Global ID for each individual agricultural producer.

**Who**
All supply chain partners do need the GS1 Key GLN as unique Global ID. (Also starting point GS1 in Europe standards deployment Fresh Produce)

**General identification in Agriculture**
- SME of primary producer food & non food

**More specific identification in Agriculture**
- Production Site of primary producer
- Produce Handling Unit of primary producer/packer
Use cases GPC segment Crops

- Different plots
- Crop - coffee bean plant
- Harvested product (beans)
- Commodity (roasted beans)
- Product (at retail store)
- Growers with other crops
Use cases GPC segment Crops

**CULTIVATION MESSAGE**

<table>
<thead>
<tr>
<th>LOCATION / CROP</th>
<th>PARTY / PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATED INFO</td>
<td>RELATED INFO</td>
</tr>
<tr>
<td>PRE-HARVEST</td>
<td>POST-HARVEST</td>
</tr>
</tbody>
</table>

**ABOUT**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>PRODUCT</th>
<th>TREATMENTS</th>
<th>DELIVERY</th>
<th>QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION ID or GTIN</td>
<td>PRODUCT-TYPE or GPC</td>
<td>WHEN</td>
<td>BATCH ID</td>
<td>CERTIFICATE (GLOBAL GAP, BRC, ETC.)</td>
</tr>
<tr>
<td>M2</td>
<td>CULTIVATION METHOD</td>
<td>WHAT</td>
<td>GTIN</td>
<td>LAB RESULTS</td>
</tr>
<tr>
<td>PERIOD</td>
<td>TRADE-INFO</td>
<td></td>
<td>ADDITIONAL TRADE-INFO</td>
<td></td>
</tr>
</tbody>
</table>
Use cases GPC segment Crops
Use cases GPC segment Crops - eCrop

Why...

A CONCERN FOR THE GROWER...
Use cases GPC segment Crops

Gain for industry

- Proper international classification for several use cases
- Suitable for The Global Sustainability Network
- Suitable for UN/CEFACT eCrop (pre harvest)
- Suitable for UN/CEFACT eLab (pre harvest)
- Common upstream applications in horticulture, fresh produce & commodities and animal feed

✓ Quality Control
✓ Crop Protection
✓ Yield Measurement including Waste Management

- Suitable for UN/CEFACT Traceability (pre- and post harvest)

business need for further development of EPCIS standard
UN/CEFACT eLab

- Company 1
  - Request for Observation
  - Sampler Person
  - Physical Sample and Observation Contract
  - Sample Received Report
  - e-Lab Observation Report
  - Observation Report Incl. Conclusions
  - Invoice

- Laboratory
  - Intake and process sample
  - Perform observations
  - Prepare report observations and conclusions

- eCultivation
  - eCrop eLab
Next steps to think about – solving problems for SME’s

- **Information on F&V labels – digitization**
  Guidance regarding use of 2D barcodes with label information for the consumer (GS1 2D or QR-codes)

- **Identification grower & packer (dispatcher/shipper)**
  Simple Global ID’s for companies will support sustainability. Not for every certification scheme a separate producer ID. Unique ID’s needed for Quality reasons/trust (legislation) and certification schemes (grower / packer have to comply with several certification schemes).
Questions?

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