



EAN?UCC SPECIFICATION FOR THE IDENTIFICATION AND TRACEABILITY OF FRUIT, VEGETABLES AND POTATOES

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1 INTRODUCTION

This document provides a standard solution for the identification and traceability of fruit, vegetables and potatoes so that a fresh and healthy product can be guaranteed to the consumer. The international EAN•UCC identification and communication system is used for this purpose. The use of these standards strengthens the reliability and the velocity of information transfer as to the origin and handling of fruit, vegetables and potatoes. Thus, a more efficient and cost effective supply chain can be developed.

Traceability requires a verifiable method to identify and trace fruit, vegetables and potatoes in all their packing and transport/storage configurations at any point in the supply chain, such as the grower, the packer, the auction, the distribution centre, the retailer, Traceability means that a unique identification number must be assigned to fruit, vegetables and potatoes. Such numbers can be provided by EAN•UCC. The aim is to accurately apply and record unique identification numbers so that a link between each point of the processing in the supply chain can be guaranteed.

When defining traceability, the direction in the supply chain must be distinguished.

Tracking (downstream the supply chain) is the ability to follow the path of a product through the supply chain, based on one or more relevant criteria. This is important when it comes to recalls of products which are a threat to human health.

This document focuses on traceability of fruit, vegetables and potatoes downstream the supply chain, specifically from the grower to the point of sale.

Tracing (upstream the supply chain) is the ability to identify the origin and the characteristics of a particular product through of the supply chain, based on one or more relevant criteria. Tracing is especially useful to detect the cause of quality problems, the accuracy of some product characteristics (organic farming, integrated system, ...) or to check the path the product has followed.

In this case, we will go backwards in the supply chain, starting from the point of sale and ending at grower level (possibly till the field where the fresh products have been grown).

An effective traceability requires that each operator in the supply chain identifies his product in a unique way, and that places of destination and the links between the incoming and outgoing products are also recorded in databases. To make this work, each operator is responsible for the accuracy of information and the availability of these data towards the other partners in the supply chain. The period of availability of these data is further defined in the legislation of the Belgian Federal Agency for the Safety of the Food Chain (see § 3 p.9).

Currently, general legislations on labelling and tracing food exist. In addition, specific legislations on labelling fruit, vegetables and potatoes have been developed. As for the general legislations there is first of all the law of 14 July 1991 of the Belgian Ministry of Economic Affairs concerning trade practices, the obligation of consumer information and protection. This one provides mainly general information on the product name, the composition of the product, product labelling, the name of origin, the obligation to inform the consumer, ...

Furthermore, as general legislation, the European Regulation (EC) 178/2002, article 18 about traceability in matters of food safety, shall be mentioned. This one specifies that food and feed business operators must be able to identify any person by whom they have been supplied/or to which their products have been supplied. To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand. This legislation will come into force as from the 1st of January 2005.

As for the specific legislations, the European Regulation (EC) 2200/96 on the common organization of the market in fruit and vegetables, has to be applied. It provides an overview of classification rules by category, calibration rules, rules concerning the presentation and labelling of fresh fruit and vegetables. This Regulation takes into account the UN/ECE standards. In addition to the above Regulation, the European Regulation (EC) 1148/2001 about checks on conformity to the marketing standards applicable to fresh fruit and vegetables, was

established. The latter was developed to control the predefined standards for fruit and vegetables, with the exception of controls on products at the retail point of sale for the end consumer.

Specifically for potatoes, guidelines have been established in the Belgian Royal Decree of 30/11/1999 related to the commerce in early potatoes and ware potatoes. The standards defined in this legislation rely on the UN/ECE standards.

Furthermore, the Belgian Federal Agency for the Safety of the Food Chain published the Royal Decree of 14/11/2003 concerning auto control, notification duty and traceability in the supply chain (published on 12/12/2003). This legislation specifies that a unique approval number will be assigned to each active business operator in the food sector so that each operator in the food chain can be identified and registered in a unique way. Possibly the cross-point bank number will be used as approval number. For the moment, this has not been decided yet. EAN Belgium•Luxembourg will follow up further developments in this area and will include it, where needed, in this EAN•UCC specification (see § 3 and § 3.1 note AI 703X p. 11-12).

This document also takes into account all legal prescriptions related to specific products, such as the Royal Decree of 22/10/1996 for the integrated seed fruit production in Belgium, the « Terra Nostra » specification for potatoes established by Orpah and other specifications established by VBT (Belgian Association of Auctions) and auctions for fruit and vegetables.

Automatic data capture solutions (symbol marking), the roll-out of databases, EDI solutions, ... are preferred tools to provide controlling authorities with the necessary information for the traceability of fruit, vegetables and potatoes in food safety matters.

This document will mainly focus on :

- Each information transfer between involved partners, starting from the grower and ending at retail.
- Fresh products in each phase of the supply chain : pallets, cases or boxes pre-packed fruit and vegetables, cases or palloxes with potatoes, pre-packed retail trade items.

The use of the EAN•UCC system in the supply chain of fruit, vegetables and potatoes is based upon the «General EAN•UCC Specifications » and the « Fresh Produce Traceability Guidelines » of EAN International. They are recommended by the UN/ECE (United Nations Economic Commission for Europe) which closely cooperates with EAN International.

Adoption of this document is voluntary.

Have contributed to the roll-out of this document :

This document has been published by EAN Belgium•Luxembourg in collaboration with :

Users :

CARREFOUR
COLRUYT
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MAKRO
MATCH

Federations :

FEDIS
VBT (Belgian Association of Auctions)
NUBELT/ BELGAPOM
NUFEG

2. THE EAN•UCC IDENTIFICATION SYSTEM

Bar codes carry data. They are used in the EAN•UCC system to encode relevant product or service information in each stage of the supply chain.

2.1 IDENTIFICATION OF TRADE ITEMS

Generally, a unique and international EAN•UCC number is assigned to each trade item (e.g. a grape of FLANDRIA tomatoes on a film wrapped tray intended for the point of sale) or to a standard grouping of trade items (e.g. a pallet with several cases of FLANDRIA tomatoes transferred from the storage location to the retail outlet). This number is known as the GTIN (Global Trade Item Number). The GTIN doesn't contain any product information; it is simply an identification number that can be used as a key to access information stored in databases.

There are four GTIN data structures available for the identification of trade items : EAN/UCC-14, EAN/UCC-13, UCC-12 and EAN/UCC-8. The choice of the data structure depends on the kind of product and the kind of application used.

2.1.1 Fixed weight trade items

Trade partners consider most packages of fruit, vegetables and potatoes with a more or less constant weight as units with a "fixed weight". This can be the case for retail trade items (e.g. a little tray with 2 mangos - organically farmed), a bag of early potatoes Terra Nostra of 5 kg), products sold by the piece (1 melon - organically farmed) a standard grouping of items (e.g. a tray with 6 boxes of ELSANTA strawberries of 500 gr.).

Fixed weight trade items are identified with an EAN/UCC-13 number (or possibly with an EAN/UCC-14 number in case of a standard grouping of items). An example of a GTIN in EAN/UCC-13 format :

 5 412345 000013	<ul style="list-style-type: none">➤ 5412345 = EAN/UCC company prefix (in this example assigned by EAN Belgium •Luxembourg)➤ 00001 = article number assigned by the company➤ 3 = check digit
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Note : In this example the company prefix has 7 digits. If the prefix contains 8 or 9 digits (depending on the identification needs of the company), the article number will have a length of respectively 4 or 3 digits.

2.1.2 Variable weight trade items

Variable weight trade items are units that may be sold, ordered or produced in quantities which can vary continuously.

Variable weight trade items, with the exception of retail trade items, are identified with an EAN/UCC-14 number, where the 'indicator' (first digit at the left) has the value **9**. This EAN/UCC-14 number must always be completed with a quantity.

When several non retail variable measure trade items exist for a specific retail variable measure trade item, each one must be allocated its own GTIN starting with a 9.

For this application, members of EAN Belgium •Luxembourg use the GTIN in EAN/UCC-14 format as follows :

Indicator	EAN/UCC company prefix	Article number	Check digit
9	54 M M M M M	A A A A A	C
or 9	54 M M M M M M	A A A A	C
or 9	54 M M M M M M M	A A A	C

In EDI messages and in the CDB (Central Data Bank) variable weight trade items are always identified with an EAN/UCC-14 number.

For variable weight retail trade items the price or weight is always encoded in the bar code for scanning at the point of sale. This solution is purely national.

For pre-packed products carrying the brand name of the manufacturer, the following numbering structures are to be used to indicate the price:

Prefix	National article number assigned by EAN Belgium •Luxembourg	Price in euro (2 decimals)	Check digit
2 9 5	A A A A A	E E E E	C
2 9 6	A A A A	E E E E E	C

Prefix 295 is used to indicate a price until 99,99 euro, prefix 296 for a price until 999,99 euro.

To encode the weight, the manufacturer uses the following numbering structure :

Prefix	National article number assigned by EAN Belgium •Luxembourg	Weight (3 decimals)	Check digit
2 8	A A A A A	Q Q Q Q Q	C

Pre-packed products carrying the brand name of the distributor (private label) or products packed in the store, will be identified by the distributor himself. Therefore he can use prefix 02 in a fixed numbering structure.

Prefix	Article number assigned by the distributor	CP*	Price in euro (2 decimals)	Check digit
02	A A A A	CP	E E E E E	C

* Price Check digit (CP) : printer and weighing machine manufacturers know the calculating algorithm

If the distributor prefers to use another structure than the one mentioned above, prefixes 20 till 27 can be used for this purpose (see § 3.4.3).

For retail trade items the bar code to be used is EAN-13 (or possibly UPC-A), the only bar code that can be read by point-of-sale scanners.

Example : (variable measure retail trade item)



2.2 THE UCC/EAN-128 SYMBOLOGY

As mentioned above, the GTIN doesn't contain any specific product information. However, additional product information may also be required, for example the lot number, weight or packaging date. Within the supply chain of fruit, vegetables and potatoes the UCC/EAN-128 symbology can be used to encode data additional to the product identification (GTIN). Examples of these are palletisation date, national approval number of the producer and net weight. The EAN•UCC Application Identifiers (AI) are mandatory when using the UCC/EAN-128 symbology. An AI is a prefix used to define the meaning and format of the data encoded in the data element that follows.

Example: (fixed measure trade item)



(01) 05425004000044 (13)021007 (7030) 0564607710013

- AI (01) is the GTIN
- AI (13) is the packaging date, here 7 October 2002
- AI (7030) is the national approval number of the grower (see § 3.1 p. 11-12, note on AI 703X)

EAN•UCC defines the meaning of each AI. These AI's can be used in various applications and sectors.

2.3 IDENTIFICATION OF LOGISTIC UNITS

A logistic unit is an item of any composition established for transport and/or storage that need to be managed through the supply chain. Tracking and tracing of logistic units in the supply chain is one of the main applications of the EAN•UCC system. Therefore logistic units need to be identified by a Serial Shipping Container Code or SSCC. In combination with the EDI despatch advice (delivery note), a quick and correct reception of products becomes possible. Furthermore, all information related to a logistic unit, i.e. approval number, GTIN(s), packaging date, etc., can be transmitted via EDI with the SSCC as reference. Thus, the SSCC is the preferred tool for traceability purposes.

The SSCC is a unique 18 digit EAN•UCC number identifying the logistic unit, which is carrying this number. The SSCC is used with the UCC/EAN-128 symbology. The AI for the SSCC, is "00".

Example:



{ 00 } 154123456000012345

- 1 = Extension digit , extension of the item reference (possible values from 0 to 9)
- 54123456 = EAN/UCC company prefix (in the assumption of an 8 digit company prefix)
- 00001234 = Item reference
- 5 = Check digit

3 RECOMMENDATIONS

This chapter examines each stage of the supply chain of fruit, vegetables and potatoes and explains how the EAN•UCC system is implemented in accordance with existing legislations. The following legislations have been taken into account : the UN/ECE guidelines, the Regulations (EC) 2200/96 and (EC) 1148/2001 for fresh fruit and vegetables, the Royal Decree of 30/11/99 for early potatoes and ware potatoes, the Regulation (EC) 178/2002 concerning procedures and requirements in matters of food safety and the Belgian law of 14 July 1991 on trade practices, the obligation of consumer information and protection. Furthermore, the Royal Decree of 14/11/2003 of the Belgian Federal Agency for the Safety of the Food Chain has also been taken into account (published on 12/12/2003).

The Royal Decree of the Belgian Federal Agency for the Safety of the Food Chain claims that each business partner in the food chain – for fruit, vegetables and potatoes each processor mentioned in this document - shall have in place systems and procedures as from the 1st of January 2005 to register the following data :

- Incoming register
 - Nature of the incoming product
 - Identification of this product
 - Quantity of this product
 - Date of reception
 - Identification of the supplier
 - Other data prescribed by the ministry

- Outgoing register
 - Nature of the outgoing product
 - Identification of this product
 - Quantity of this product
 - Delivery date
 - Identification of the client
 - Other data prescribed by the ministry

Furthermore, a link must be guaranteed between the incoming and outgoing products. These registered data must be available and saved during the durability period of the product plus 2 years or, in the absence of a durability period, during minimum 2 years. For primary production (grower level) the information must be saved during 5 years.

All participants in the supply chain should take individual responsibility in providing bar codes with the right information, and must ensure that secure, accurate recording systems for that information are maintained.

The information contained in this chapter is summarised in the table on page 9. It gives an overview of the information transfer via the EAN•UCC system through of the supply chain. All the Application Identifiers and data that can be used on the labels, are listed in this table.

The data translated in bar codes must be in accordance with the human readable data on the label.

Overview of the information transfer when labelling fruit, vegetables and potatoes		
GROWER	AUCTION/PACKER/IMPORTER	DISTRIBUTION/ RETAIL
Box/case label → see 3.2.2 or 3.3.3.1		Pallet label → see 3.3.3.2
Bar code : UCC/EAN-128		Label on retail trade items → see 3.4.3 Bar code : EAN-13
<p><i>Symbol marking at box/ case level is optional and in agreement with the client-distributor.</i></p> <p>ACCOMPANYING DOCUMENT POTATOES/ FRUIT and VEGETABLES (vegetable or fruit register, field-paper potatoes, ...) info : ▶ grower identification ▶ field number ▶ organic or chemical crop protection ▶ ...</p>		<p><u>UCC/EAN-128:</u> AI (00): SSCC AI (13) : palletisation date AI (02) : GTIN of the trade item contained (only for uniform mono- and multi-lot pallets) AI (30) : variable count AI (37) : number of trade items contained (only for uniform mono- and multi-lot pallets) AI(310X): net weight AI (703X) or AI (412) : grower/ supplier/ importer - operator identification ⁴ AI (422) : country of origin (if not from Belgium)</p> <p><u>In human readable on pallet level :</u> Number of the grower/ packer³ Approval number of the grader/ packer - operator Product name, variety or trade type Class/ category Size Net weight Country of origin Palletisation date SSCC</p>
		<p><u>Human readable :</u> (Approval) number of the grower/ grader/ packer -operator Product name, variety or trade type Class (not used for potatoes) Size Net weight Country of origin Packaging date (optional) Lot number or SSCC ²</p> <p>EAN-13 = the key to the article database at the point of sale</p>

¹ To encode the GTIN on fixed measure cases, it's also possible to use the EAN-13 bar code (see § 3.3.3.1)

² To guarantee traceability, the combination lot number - grower identification, or the SSCC, or the combination grower number - GTIN – packaging date is required (see note § 3.3.3 p.17)

³ The number of the grower/packer on the label is only for uniform mono- and multi-lot pallets and only for specific products (Flandria, Eurep-gap, ...)

⁴ On uniform mono- and multi-lot pallets use : AI 7030 (or AI 412); on mixed pallets : use AI 7031-9 (or AI 412). (see note on AI 703X/AI 412 p. 11-12)

In practice the delimitation between the phases “grower” and “auction/ packer/importer” may be difficult to define! Some growers will do the sorting, packaging and labelling themselves. If the grower delivers his products directly to the point of sale, only the label on point-of-sale level is required.

3.1 THE AI's IN THE SUPPLY CHAIN OF FRUIT, VEGETABLES AND POTATOES

The AI's recommended by EAN International and EAN Belgium •Luxembourg for fruit, vegetables and potatoes are :

AI	Definition	Data title	Format AI	Format data	Meaning in the chain of fruit, vegetables and potatoes	FNC 1 (**)
00	Serial Shipping Container Code (SSCC)	SSCC	n2	n18	SSCC	
01	Global Trade Item Number	GTIN	n2	n14	GTIN	
02	GTIN of trade item contained in a logistic unit	CONTENT	n2	n14	GTIN of the trade item contained	
10	Lot number	BATCH	n2	an..20	Lot number	✓
11	Production date	PROD DATE	n2	n6 (YYMM DD)	Harvest date	
13	Packaging date	PACK DATE	n2	n6 (YYMM DD)	Palletisation /packaging date	
15	Best before date	BEST BEFORE	n2	n6 (YYMM DD)	Best before date	
251	Reference to the source	REFERENCE TO SOURCE ENTITY	n3	an..30	Field number	✓
30	Variable count *	VAR. COUNT	n2	n..8	Variable count	✓
310X	Net weight	NET WEIGHT	n4	n6	Net weight of the product (see note p.11)	
330X	Gross weight	GROSS WEIGHT	n4	n6	Gross weight of the product	
37	Count of trade items contained in a logistic unit	COUNT	n2	n..8	Count of trade items contained	✓
422	Country of origin	ORIGIN	n3	n3	Country of origin (country where the product was grown)	✓
412	Purchased from (GLN)	PURCHASED FROM	n3	n13	Producer/ auction/ packer/ grader/ importer identification (see note p. 11)	
703X	ISO country code plus the approval number of the processor	APPROVAL NUMBER OF PROCESSOR	n4	n3+an..27		✓
90 - 99	Internal applications	INTERNAL	n2	an ..30	Internal or national applications	✓

Abbreviations :
n : numeric digit
an : alphanumeric character
n2 : field of 2 numeric digits
an..27 : field that may contain up to 27 alphanumeric characters

* AI (30) is used to complete the identification of a variable measure trade item. It contains the number of items contained in such a unit and, therefore, should never applied in isolation. For fruit, vegetables and potatoes, it can only be used on pallets, or possibly on cases or boxes having a variable weight. However, in practice we notice that most of the boxes and cases have a fixed weight and pallets are a multitude of those boxes/cases.

** In a UCC/EAN-128 bar code this data element must be followed by a FNC 1 separator character, unless this element is the last one in the bar code.

Note on AI 310X

AI 310 represents the net weight in kilo and can only be used on variable measure trade items. X specifies the position of the decimal point. For example, 3102 means that the net weight contains 2 digits after the decimal point.

In all stages discussed in this document, the net weight must be seen as the 'weighed' weight or the calculated net weight.

Article 6 of the European Regulation (EC) 2200/96 for fresh fruit and vegetables stipulates that the net weight must be mentioned on the label of pre-packed products. However, for products normally sold by the piece, the requirement to indicate the net weight shall not apply if the number of pieces can be clearly seen and easily counted from the outside or, failing that, if the number is indicated on the label.

The Belgian Royal Decree of 30/11/99 related to the commerce in early potatoes and ware potatoes states that the operator shall always indicate the net weight on the packing unit.

In all other cases it is not mandatory to indicate the net weight. However, it shall be indicated on the label if at least one of the following processors in the chain requires it.

Note on AI 703X and AI 412

AI 703X as well as AI 412 can be used to identify the producer/ grader/ packer/ shipper/ importer in bar code format.

➤ *AI 703X*

EAN Belgium •Luxembourg decided to use AI 703X (Approval number of Processor) rather than AI 412 (GLN – see further) to identify the Belgian growers and other operators. This decision was taken because many small Belgian companies (especially growers) don't have a GLN. Either they are not member of EAN Belgium •Luxembourg and/or they are not included in the Belgian GLN database.

All Belgian growers do have, directly or indirectly (via the auction there are member of), a national approval number assigned by the Ministry of Agriculture (soon a national number will be assigned by the Belgian Federal Agency for the Safety of the Food Chain). The grader/ packers of potatoes as well as the fruit and vegetable growers, who aren't member of an auction, directly receive a national approval number. Auctions, all of them possessing a national approval number, assign in their turn a membership number to their member growers. This number, in combination with the approval number of the auction, must be indicated on the label of cases and pallets produced by the same grower. This way all uniform mono- and multi-lot pallets of operators in the supply chain of fruit, vegetables and potatoes can be identified in a unique way.

As for groupings of items from different growers (mixed pallet), it must be possible too to identify the origin of products. Therefore EAN Belgium •Luxembourg recommends using the approval number of the auction/ packer/ grader on the label. The auction/ packer/ grader shall in his turn record the data of the content of mixed pallets and, when needed, make them accessible to other partners in the supply chain. This enables the tracing of each product on a pallet.

The mandatory indication of the approval number of the auction/ packer/ grader/ shipper on the label is also strengthened by the legislation of the Belgian Federal Agency for the Safety of the Food Chain, mentioning that all operators in the food sector will have a national approval number assigned.

In the EAN•UCC standards the 'Approval number of Processor' is preceded by AI 703X and represented in the UCC/EAN-128 symbology. The fourth digit of the AI indicates the sequence of the processors in the supply chain :

- **AI 7030** approval number of the grower (also if the grower packs his products himself)
- **AI 7031** approval number (number of the Belgian Federal Agency for the Safety of the Food Chain) of the auction/ 1st packer/ grader ...
- **AI 7032-9** approval number (number of the Belgian Federal Agency for the Safety of the Food Chain) of the next partner in the supply chain (2nd till 9th packer/ grader ...)

The data following the AI can be split up in two parts:

- The 3-digit ISO code of the country where the processor is settled (if fields abroad – see note below)
- The approval number of the processor assigned by a recognized organisation (Ministry of Agriculture/ Belgian Federal Agency for the Safety of the Food Chain), or the combination approval number – member number if the operator has no approval number (yet), but is affiliated at a cooperative organisation having an approval number.

Note: If a Belgian grower owns fields abroad, he shall use AI 422 in the bar code to indicate the country of origin for all products grown on those fields.

The data field of the approval number may contain up to 27 alphanumeric characters.

If no direct identification of the grower is possible (mixed products), EAN Belgium•Luxembourg recommends the use of the AI 7031-9. In all other cases (uniform mono- and multi-lot products) only AI 7030 should be used.

Following the rules mentioned above, members of EAN Belgium•Luxembourg apply AI 703X as follows :

- Currently, for fruit and vegetable growers who are member of an auction, the following structure is used :

AI	ISO numeric code for Belgium	Approval number of the auction (assigned by the Ministry of Agriculture)	Membership number (assigned by the auction to the grower)
7030	056	VVVVV	LLLLL

- Currently, for graders / packers of potatoes, growers who are not member of an auction and other operators, the following structure is used :

AI	ISO numeric code for Belgium	Approval number of the operator (assigned by the Ministry of Agriculture)
703X	056	X X X X X

Where X = 0 for growers who are not member of an auction

1 for the auction/ 1st packer/ grader ...

2 for the 2nd packer/ grader...

...

- For all fruit and vegetable growers (including graders/ packers of potatoes) and other operators the following structure will be used once the national approval number is assigned by the Belgian Federal Agency for the Safety of the Food Chain :

AI	ISO numeric code for Belgium	Approval number of the operator (assigned by the Belgian Federal Agency for the Safety of the Food Chain – possibly the cross-point bank number)
703X	056	X X X X X . . . ?

Where X = 0 for growers

- 1 for the auction/ 1st packer/ grader ...
- 2 for the 2nd packer/ grader...

➤ *AI 412*

Other countries use the GLN (Global Location Number) concept for the grower/ grader/ packer/ importer identification. AI 412 “Purchased from” is used to identify those operators.

The GLN is a 13 digit number and enables a unique identification of a legal, physical or functional address. For instance, a GLN can identify a company, but also a storage or grading location. Thus, each company can have several GLN's. The structure and allocation of the GLN vary from country to country. The leading digits are always the prefix of the EAN organisation, the last digit is the check digit.

Members of EAN Belgium & Luxembourg use the GLN as follows:

EAN/UCC company prefix	Location number	Check digit
54 M M M M M	A A A A A	C
54 M M M M M M	A A A A	C
54 M M M M M M M	A A A	C

Furthermore, all commercial locations in Belgium have a GLN in the national GLN database (see www.eanbelgilux.be – searching company data).

3.2 THE GROWER



The grower is each operator who produces or harvests plant products. The grower is the first operator in the supply chain of fruit, vegetables and potatoes which may apply the EAN•UCC standards.

Traceability back to the individual product relies on the accuracy of information required by the legislations mentioned below and registered by the grower.

3.2.1 Legislations in force

The European Regulation (EC) 2200/96 on the common organization of the market in fruit and vegetables and the Royal Decree of 30/11/1999 related to the commerce in early potatoes and ware potatoes define labelling requirements based on the UN/ECE standards. Those standards stipulate that the following information shall legibly and conspicuously be indicated on the label :

UN/ECE – Labelling requirements for fruit, vegetables and potatoes
▪ Identity of the packer and/or shipper
▪ Country of origin (and optionally national, regional or local place name)
▪ Nature of the product (only if the content is invisible from the outside)
▪ Variety or trade type (according to the corresponding standard prescriptions)
▪ Size (if sized)
▪ Product category or class (not used for potatoes)

For potato growers the standards mentioned above shall only be applied if those growers label their products themselves. In this case potatoes shall indicate “early potatoes” or “ware potatoes” on the label. Furthermore, the approval number of the potato graders/ packers must be indicated on the label so that they can be identified. For potato growers who don’t label their products themselves, the above labelling requirements shall be applied by the next operator in the supply chain (see § 3.3 auction/ packer/ importer).

Furthermore, the European Regulation (EC) 1148/2001 concerning checks on conformity to the marketing standards applicable to fresh fruit and vegetables is to be applied and states that each grower of fresh fruit and vegetables shall provide all information required by the controlling authorities.

As for the indication of the net weight on the label, we refer to the prescriptions in § 3.1 (see p.11, note on AI 310X).

The European Regulation (EC) 178/2002 concerning traceability in matters of food safety states that growers shall have in place systems and procedures which allow for information on their products to be made available to the competent authorities on demand. On national level the Royal Decree of 14/11/2003 of the Belgian Federal Agency for the Safety of the Food Chain states that an incoming and outgoing register shall be kept, as well as links between the incoming and outgoing products. (see p. 10)

None of those legislations explain how the information mentioned above shall be represented or how these data shall be transmitted. One of the possibilities is to register the required information in databases and to transmit them by electronic way. Another possibility is to label products with the required information. The information on the label can be represented in human readable format or can be a combination of text and bar codes.

3.2.2 EAN recommendations

The general objective is to enable each processor in the supply chain to label his products using the information forwarded by the previous partners in the chain. EAN Belgium•Luxembourg defines minimum requirements for the data to transmit allowing the next stage in the supply chain to represent the information in bar codes. These data can be represented on case cards, cover sheets, self-adhesive labels, ...

Data in human readable format on the card/ label	
▪	Number of the grower/ producer (approval number for graders/ packers of potatoes)
▪	Product name, variety or trade type
▪	Class/ category (not used for potatoes)
▪	Size
▪	Country of origin
▪	Net weight (if imposed by law or agreed with the client -distributor)
▪	Lot number (see below)
▪	Harvest date (optional)
▪	Field number (optional)
▪	Packaging date (optional)

The grower can put a lot number on his products. In this case the combination lot number - grower identification guarantees traceability. If however no lot number is mentioned in this stage, it must be assigned later on by the auction/ packer/ importer (see note § 3.3.3 p.17).

The harvest date can be useful if the grower needs more information on the durability of his products or in case of product recall. The field number provides more information on the origin of the product.

If growers use pre-printed cards or if they print their bar codes themselves, we refer to § 3.3 (auction / packer / importer).

3.3 THE AUCTION/PACKER/IMPORTER



All relevant information on the fresh products, registered by the grower, must be available for the next partners in the supply chain. This may be an auction, a grader, a packer, or an importer. In this stage the fresh products will be sorted by quality, size, colour, ... and will be packed as logistic units. If the grower is equipped for sorting and packing, the steps described in this paragraph can be achieved at grower level. However, most of the growers are not in this situation.

The EAN•UCC system enables to encode each processed unit through the supply chain of fruit, vegetables and potatoes. If there is more than one sorting and packing stage, all the data related to the origin and the characteristics of fruit, vegetables or potatoes, must be available in each stage, at least in a human readable format in accordance with § 3.2.1 and 3.2.2.

3.3.1 Legislations in force

In this stage too, the UN/ECE standards to which the European Regulation (EC) 2200/96 on the common organization of the market in fruit and vegetables and the Royal Decree of 30/11/1999 related to the commerce in early potatoes and ware potatoes refer, are to be applied. Those standards stipulate that the following information shall legibly and conspicuously be indicated on the label :

UN/ECE – Labelling requirements for fruit, vegetables and potatoes
▪ Identity of the packer and/or shipper
▪ Country of origin (and optionally national, regional or local place name)
▪ Nature of the product (only if the content is invisible from the outside)
▪ Variety or trade type (according to the corresponding standard prescriptions)
▪ Size (if sized)
▪ Product category or class (not used for potatoes)

Potatoes shall indicate “early potatoes” or “ware potatoes” on the label. Furthermore, the approval number of the potato graders/ packers shall be indicated on the label so that they can be identified.

The European Regulation (EC) 1148/2001 concerning checks on conformity to the marketing standards applicable to fresh fruit and vegetables is to be applied and states that each business operator of fresh fruit and vegetables shall provide all information required by the controlling authorities.

As for the indication of the net weight on the label, we refer to the prescriptions in § 3.1 (see p.11, note on AI 310X).

The European Regulation (EC) 178/2002 concerning traceability in matters of food safety claims that food and feed business operators must be able to identify any person by whom they have been supplied/or to which their products have been supplied. To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand. On national level the Royal Decree of 14/11/2003 of the Belgian Federal Agency for the Safety of the Food Chain states that an incoming and outgoing register shall be kept, as well as links between the incoming and outgoing products. (see p. 10)

3.3.3 EAN recommendations

Based on the data forwarded by the previous partners in the supply chain, products can be labelled with the required information. Examples of labels are shown in § 3.3.4. A distinction must be made between the label on box/ case level and the label on pallet level.

The following table shows the complete list of data with their corresponding AI's used on (fixed measure) boxes/cases :

Data	AI
▪ GTIN	01
▪ Lot number (see note below)	10
▪ Harvest date (optional)	11
▪ Packaging date	13
▪ National approval number	703X <i>or</i>
▪ GLN 'purchased from'	412
▪ Field number (optional)	251
▪ Country of origin (if not from Belgium)	422

Note : There are three possibilities to guarantee traceability :

- The grower can provide products on box/ case level with a lot number. The combination grower identification and lot number guarantees the traceability ;
- If no lot numbers are provided on box/ case level by the grower, the auction/packer/ importer (or distributor) can use the SSCC, assigned on pallet level, as a lot number on each box/ case stacked on this pallet. In this case the SSCC guarantees traceability. The auction/ packer/ importer (or distributor) is presumed to record all relevant data concerning products and grower(s) for each individual pallet.
- Traceability can also be guaranteed with the combination grower identification, GTIN and packaging date of the product concerned.

It is recommended to print at least the following data in bar code format on the label of boxes and cases :

- GTIN (01)
- Lot number (10)
- National approval number /GLN (AI 703X or AI 412)

The following table shows the complete list of data with the corresponding AI's used on pallet/ logistic unit level:

Data	AI
▪ SSCC	00
▪ GTIN of the trade item contained	02
▪ Lot number	10
▪ Variable count	30
▪ Count of trade items contained	37
▪ Palletisation date	13
▪ Field number (optional)	251
▪ Net weight (if imposed by law or agreed with client-distributor)	310X
▪ Gross weight (if agreed)	330X
▪ National approval number	703X <i>or</i>
▪ GLN 'purchased from'	412
▪ Country of origin (if not from Belgium)	422

For uniform mono-lot pallets, i.e. a pallet composed of identical items (identical in GTIN, lot number, size...), at least the following data are required in the UCC/EAN-128 bar code :

- SSCC (AI 00)
- GTIN of the trade item contained (AI 02)
- Number of trade items contained (AI 37)
- National approval number / GLN (AI 703X or AI 412)
- Palletisation / packaging date (AI 13)
- Variable count (AI 30)

For uniform multi-lot pallets, i.e. a pallet composed of identical items (identical in GTIN, size, ...), but with at least two products carrying a different lot number, the above mentioned data are also recommended.

For mixed pallets, i.e. if not all the units are homogeneous (different GTIN's and/or different growers,...), AI 02/37 can't be encoded in the bar code. This information shall be registered in databases so that, at a later stage, via the SSCC or possibly an internal lot number it is possible to track down the origin of the individual products on the pallet concerned. The other minimum data mentioned above are also recommended for mixed pallets.

On cases and boxes as well as on pallets at least the following information should be represented on the label in human readable format:

- Product name (only if the content is invisible from the outside) and variety of the product
- Class/category (not used for potatoes)
- Size
- Country of origin
- Net weight (if imposed by law or agreed with the client -distributor)
- Approval number of the potato grader/packer
- Number of the grower (only for uniform mono - and multi-lot products) and/or packer (for uniform as well as mixed products)
- Lot number (on box/case level) or SSCC (on pallet level)
- Palletisation date (on pallet level) or packaging date (on box/ case level – optional).

3.3.3 Examples of labels

3.3.3.1 Label on box/ case level

In addition to the required data in human readable format, some data can also be translated in EAN•UCC bar codes. Symbol-marking boxes/cases or not is to negotiate with the individual client-distributor. However, EAN Belgium •Luxembourg recommends symbol-marking at this level, whenever possible.

Users of the EAN•UCC standards can find some examples of labels on the next page.

On box/ case level there are 2 methods to encode the GTIN on the label. If the package is only used for distribution, all the data can be translated in the UCC/EAN-128 symbology. If the package is also sold to the consumer at the point of sale, the GTIN will be encoded in an EAN-13 bar code and the other data in an UCC/EAN-128 bar code.

Example 1 : Box/case label with an UCC/EAN-128 bar code (closed package – the content is invisible from the outside) :

Variété/Variëteit : **POMME/APPEL BOSKOOP** **CL.1 KL**

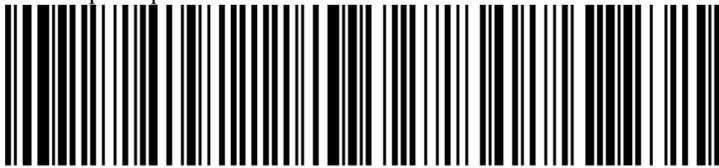
Poids net / Netto gewicht : **9 KG e** Kal./Cal. **75/80**

Lot : **XXXX**

Origine/oorsprong : **BELGIQUE/BELGIË**

Prod. : **XXXX**

Emballé le/ verpakt op : **8.01.2003**



(01)05425004000033 (7030)0564607712345

Example 2 : Box/case label with an UCC/EAN-128 bar code on potatoes :

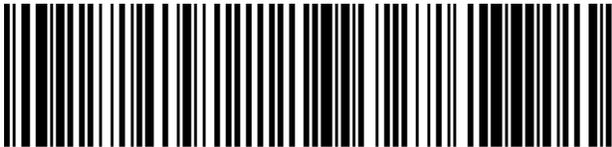
Pdt de consommation – Consumptieaardappelen

variété/ variëteit : **CHARLOTTE** **20 KG e**

Origine/oorsprong : **BELGIQUE/BELGIË** Kal./Cal. **38/55 mm**

Ber./ prep. : **46077** Lot : **XXXX**

Emballé le/ verpakt op : **8.01.2003**



(01)05425004000132 (7030)05646077

Example 3 : Box/case label with an EAN-13 and an UCC/EAN-128 bar code :

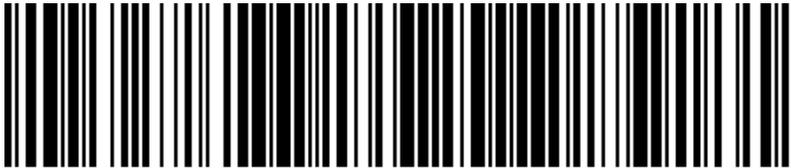
TOMATES /TOMATEN FLANDRIA **6 KG e**



5 425004 000033 Prod. : **XXXX**
Origine/Oorsprong : **BELGIQUE/BELGIË**

Kal./Cal. **67/82 mm** Lot : **XXXX**
CL.1 KL

Emballé le / verpakt op : **8.10.2002** Champ/ Veld : **01**



(7030) 0564607712345 (251) 01

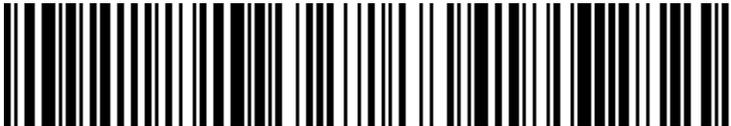
In the last example additional information (field where the tomatoes are grown) is encoded. This information can be encoded and registered by the grower, but is not mandatory.

3.3.3.2 Label on pallet level

The “EAN•UCC logistics label” is used to label uniform mono-lot, multi-lot as well as mixed pallets. It has been agreed to divide the data in the UCC/EAN-128 bar codes in three lines:

- Line 1: palletisation date + national approval number / GLN
- Line 2 : GTIN of the content + net weight in kilogram + number of boxes/ cases per pallet
- Line 3 : SSCC

Example of a logistics label on a uniform mono/multi-lot pallet :

AUCTION XXX		
SSCC : 254250040700005566		
PRODUCT : TOMATES / TOMATEN FLANDRIA		BELGIQUE/BELGIË
VARIETY :		
GTIN. CONTENT 5425004000044	COUNT 100	SIZE 82-92 MM
PALLETISATION DATE 2002.06.12	PRODUCER XXXX	NET WEIGHT 480.00 KG
 (13) 020612 (7030) 0563668122345		
 (02) 05425004000044 (3102) 048000 (37) 100		
 (00) 254250040700005566		

Example 1 of a logistics label on a mixed pallet (different GTIN's, same grower) :

KIWI COMPANY	
SSCC : 941583512345678911 ORIGIN : NEW ZEALAND	
PRODUCT : MIX KIWI GOLD – KIWI GREEN	
PALLETISATION DATE : 21 January 2003	GROSS WEIGHT : 360 KG
 (13) 030121 (3302) 036000 (412) 9415835123458  (00) 941583512345678911	

Example 2 of a logistics label on a mixed pallet (same product, several growers) :

AUCTION XXX	
SSCC : 154123456789123452 ORIGIN : BELGIQUE/BELGIË	
PRODUCT : POMMES/APPELS ELSTAR SIZE : 70/80	
PALLETISATION DATE : 10 February 2003	TOTAL NET WEIGHT : 480 KG
 (13) 030210 (3102) 048000 (7031) 05654321  (00) 154123456789123452	

3.4 DISTRIBUTION/RETAIL



All relevant information on fruit, vegetables and potatoes registered by the auction, packer or importer, shall be available for the next partners in the supply chain. In this next stage products are handled and/or processed and stored at the point of sale or delivered to the final consumer. 'Distribution/ retail' includes shops, supermarket distribution centres, wholesale outlets, ... as well as factory canteens, restaurants, institutional catering, catering operations and distribution terminals.

This specification only provides recommendations to label pre-packed fruit, vegetables and potatoes in accordance with the EAN•UCC system on point-of-sale level.

3.4.1 Legislations in force

For retail trade items as well, the UN/ECE standards to which the European Regulation (EC) 2200/96 on the common organization of the market in fruit and vegetables and the Royal Decree of 30/11/1999 related to the commerce in early potatoes and ware potatoes refer, are to be applied. Those standards stipulate that the following information shall legibly and conspicuously be indicated on the label :

UN/ECE – Labelling requirements for fruit, vegetables and potatoes
▪ Identity of the packer and/or shipper
▪ Country of origin (and optionally national, regional or local place name)
▪ Nature of the product (only if the content is invisible from the outside)
▪ Variety or trade type (according to the corresponding standard prescriptions)
▪ Size (if sized)
▪ Product category or class (not used for potatoes)

Potatoes shall indicate “early potatoes” or “ware potatoes” on the label. Furthermore, the approval number of the potato graders/ packers shall be indicated on the label so that they can be identified.

As for the indication of the net weight on the label, we refer to the prescriptions in § 3.1 (see p.11, note on AI 310X).

Furthermore, there is the Belgian law of 14 July 1991 of Economic Affairs on trade practices, the obligation of consumer information and protection of the consumer. This law defines some basic requirements to indicate on the label :

- price (legibly and unambiguously, only the total price, price in euro, ...)
- quantity (legibly and conspicuously, only the nominal quantity expressed in a measure unit, ...)
- product name, composition and labelling of the product (at least in the language(s) of the language area, product mix, presentation, composition, quality, security, ¹ ...)
- name of origin (denominations allowed, what if the name is misused, ...)

The European Regulation (EC) 178/2002 concerning traceability in matters of food safety is to be applied and states that the aim of this legislation is to ensure consumer confidence and the confidence of trading partners. This confidence can only be ensured if in matters of food safety the consumers and the controlling authorities can be notified appropriately, so that possible, uncalled distortions can be avoided. The way to notify involved parties (in this case the consumer) is not specified in the legislation.

The Royal Decree of 14/11/2003 of the Belgian Federal Agency for the Security of the Food Chain claims that all distributors shall have an incoming register and shall record links between the incoming products and those processed by the distributor (repacked, cut, ...) (private labels). (see p. 8)

¹ Logo's representing the production method can be categorised under “presentation” and “quality”. In this document we don't enter into detail on these logo's. At this stage, those logo's must always be printed on the label.

3.4.2 EAN recommendations

The data represented in human readable format and/or in UCC/EAN-128 symbology on the labels produced by the auction, packer or importer, can be used for the labels on retail packages.

As for all retail trade items, the unit intended for the final consumer must carry a GTIN in an EAN-13 bar code for point-of-sale scanning. For variable weight articles, the weight, the quantity or the price shall be included in the bar code, for scanning at the point of sale.

On retail trade items the following information shall be mentioned in human readable format on the label :

- Product name (only if the content is invisible from the outside) and variety of the product
- Class/category (not used for potatoes)
- Size
- Country of origin
- Net weight (if imposed by law or agreed with the client -distributor)
- Number of the grower (only for uniform mono/multi-lot products) and/or the packer ((for uniform as well as mixed products)
- Approval number of the potato graders/ packers
- Lot number (or SSCC)
- Packaging date (optional)

Once the Belgian Federal Agency for the Safety of the Food Chain assigns an approval number to each business operator in the food chain, this shall be represented for other operators too (auction, packers, ...).

3.4.3 Recommendations of EAN Belgium•Luxembourg and examples of labels on retail trade items

A. Identification of fixed weight pre-packed products

➤ Pre-packed products carrying the brand name of the manufacturer

Taking into account the characteristics of fruit, vegetables and potatoes and the fact that most of these fresh products in Belgium are traded via auctions, EAN Belgium •Luxembourg elaborated a national solution. For the article number it has been decided to use the article numbers assigned and developed by the Belgian Association of Auctions (VBT). All Belgian auctions can use those numbers and can ask additional numbers at the VBT. For other Belgian parties (packers, ...) the use of the VBT article number is optional. For graders/packers of potatoes and on imported products the 'international' GTIN rules have to be applied.

- For VBT- auctions :

EAN/UCC company prefix of VBT	VBT Article number	Check digit
5400357	XXXXXX	C

Example :

AARDBEIEN – FRAISES ELSANTA	
CAT 1	BELGIQUE/BELGIË
POIDS NET-NETTO GEWICHT:	PRIX-PRIJS/KG:
500 gr e	4,91 € /kg
EMBALLE LE – VERPAKT OP:	PRIX-PRIJS:
27.10.2002	2,45 €
TRACABILITE – TRACERBAARHEID :	
Lot : XXXX	
Prod. : XXXX	
	
	5 400357 605005

- For other parties :

EAN/UCC company prefix	Article number (VBT or other)	Check digit
54 M M M M M	XXXXX	C

Example 1 :

PRIMEURAARDAPPELEN 1 KG e	
TERRA NOSTRA	
BELGIQUE/BELGIË	
consomptie – consommation	
kal./cal. 35/60 mm	
LOT: XXXX	PRIX-PRIJS: 1,69 €
BER. /PREP : XXXX	
EMBALLE LE – VERPAKT OP: 27.12.2002	
	
	5 401234 653119

Example 2 :

RAISIN BLANC – WITTE DRUIF	
SANS PEPINS – ZONDER PITTEN	
CAT 1 ISRAEL	
POIDS NET-NETTO GEWICHT:	RIX-RIJS/KG:
500 gr e	4,61 € /kg
EMBALLE LE – VERPAKT OP:	RIX-RIJS:
27.10.2002	2,31 €
TRACABILITE – TRACEERBAARHEID :	 5 400112 336809
Lot : XXXX	
Prod. : XXXX	

➤ **Pre-packed generic products**

In the absence of international guidelines for generic fruit, vegetables and potatoes, EAN Belgium•Luxembourg took the initiative to establish a national solution. For retail trade items of fruit, vegetables and potatoes a national catalogue has been developed. Everybody can consult this catalogue on www.eanbelgilux.be or can ask for a copy at the secretariat of EAN Belgium •Luxembourg.

On fixed weight products the catalogue numbers will be used as follows :

Prefix	Packaging type and weight (* 1)	National catalogue number (*1)	Check digit
5 4 0 0 0 0	X X	Ca Ca Ca Ca	C

(*1) Information available on www.eanbelgilux.be or at the secretariat of EAN Belgium•Luxembourg.

B. Identification of variable weight pre-packed products➤ **Pre-packed products carrying the brand name of the manufacturer**

To encode pre-packed products carrying the brand name of the manufacturer EAN Belgium•Luxembourg has allotted prefixes 295 and 296 to encode the price and prefix 28 to encode the weight. The Belgian Association of Auctions (VBT) centralises all requests for national article numbers from the Belgian auctions.

In this case the article number is assigned by EAN Belgium•Luxembourg and is valid for all the clients of the manufacturer in Belgium and the Grand Duchy of Luxembourg.

The data structure most commonly used is:

Prefix	National article number	Price in € (2 decimals)	Check digit
2 9 5	A A A A A	E E E E	C

Example:

<p>Biologisch witloof /Chicon biologique BRAVA BELGIQUE / BELGIË KLASSE 1 / 1^{ERE} CLASSE</p> <p>TRACABILITE – TRACEERBAARHEID : Lot : XXXX Prod : XXXX</p>		
 2 951503 401444	Emballé le / verpakt op: 07/09/02	
2,40 € Prix-Prijs/kg	0,600 kg Poids net/netto gew.	1,44 € Prix/Prijs

- Pre-packed products carrying the brand name of the distributor (private label) or products packed in the store

Pre-packed private label products or products packed in the store, are identified by the distributor. EAN Belgium •Luxembourg recommends the following structure :

Prefix	Article number	CP	Price in €(2 decimals)	Check digit
0 2	A A A A	CP	E E E E E	C

The article number is assigned by the distributor. CP is the price check digit. This structure is only a recommendation, the distributor can also choose for another structure, for which he can use the EAN/UCC prefixes 20 to 27.

Example 1:

<p>TOMATES/ TOMATEN FRANDRIA BELGIQUE/ BELGIË CL. 1 KL.</p>	
TRACEABILITE - TRACEERBAARHEID : Lot : XXXX Prod : XXXX	EMBALLE LE -VERPAKT OP : 30.10.2002 PRIX-PRIJS/KG : POIDS NET/NETTO GEW : 1,69 €/kg 0,576 kg
 2 025254 000970	PRIX-PRIJS: 0,97 €

Example 2 :

POMME/APPEL LIMOUSIN	
“GOLDEN DELICIOUS”	
FRANCE/ FRANKRIJK	
CL. 1 KL. CAL./KAL. 70/80	
TRACABILITE – TRACEERBAARHEID :	EMBALLELE –VERPAKT OP : 24.10.2002
Lot : XXXX	
Prod : XXXX	
	PRIX-PRIJS/KG: POIDS NET/NETTO GEW : 1,99 €/kg 0,750 kg
n 2332000 001106	PRIX-PRIJS : 1,49 €

➤ Pre-packed generic products

For pre-packed generic fruit, vegetables and potatoes, EAN Belgium•Luxembourg published a catalogue with national article numbers (see above).

For these products EAN Belgium•Luxembourg has allotted prefix 298 to encode the price in euro and prefix 289 to encode the weight. The most commonly used data structure is :

Prefix	National catalogue number (*1)	Price in € (2 decimals)	Check digit
2 9 8	0 Ca Ca Ca Ca	E E E E	C

(*1) Information available on www.eanbelgilux.be or at the secretariat of EAN Belgium•Luxembourg.