GS1 Barcodes

Manual for the usage of GS1 Identification Keys in the floriculture sector

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GS1 Nederland

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Introduction

The floriculture sector is constantly changing and benefits from great diversity and flexibility. During the past ten years it has moved from a supply-driven to a more demand-driven approach. Its markets have moreover expanded thanks to increased globalization, but so has the competition. Imports and exports are becoming more important compared with domestic production and consumption: the growth markets are outside the Netherlands.

The partners in the supply chain are also changing their approach: large market gardeners are trading directly with retailers in other countries, and cooperation between growers is increasing (growers' associations). The distribution channel is no longer confined to specialist retailers but now includes those with a wide range of goods, who aim for quality and added value.

Efficiency drive

Because the sector is in such a state of flux, more information is needed and processes need to be managed better. IT plays a major role in making this efficiency drive possible. Internationally there are also other needs, such as being able to trace where products come from.

Uniform system

The GS1 System is used worldwide in a host of sectors, including floriculture. A multiplicity of allocation of coding systems are in use in the floriculture sector, however. Some garden centres use the Codering Levend Groen system, there are the VBN codes, and companies often use their own internal codes. The aim of the Floriculture Product identification programme is not to abolish existing systems but, on the contrary, to use them and clean them up where necessary. This will enable us to come up with a uniform system, both nationally and internationally.

Clear rules

This action plan has been developed in collaboration with Floricode, which has launched the Floriculture Product identification programme in consultation with the sector. Research was done into whether the development of the sector could be furthered by designing a single uniform product allocation of the GTIN system, and if so, how. This showed that the problems of product identification affect the entire sector. A survey of plant breeders, growers, auctioneers and traders yielded over fifty problems and needs. Almost all the companies in the sector are affected by the problems in their day-to-day processes. One of the recommendations of the study was to draw up rules for the use of ID keys. This

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document sets out the rules for identifying products using Global Trade Item Numbers (GTINs). This action plan has been scrutinized by the project group and a delegation from the sector (including Together4Better).

Who is this action plan for?

Growers or trade associations embarking upon allocation of the GTIN (barallocation of the GTIN) products

Retailers selling products at the point of sale

All the other partners in between: everyone in the floriculture sector can benefit from this Guide. This document sets out the rules agreed in the floriculture sector on identifying products. It also includes a concise action plan showing how to set about using the GS1 System.

1 A single identification system

As well as the GTINs upon which the GS1 System is based, the floriculture sector uses several types of allocation of the GTIN, including VBN codes, internal supplier product codes and the *Codering Levend Groen* system. Each system has its own characteristics and advantages.

- Vereninging Bloemenveilingen Nederland (VBN) product code
  The VBN product code is a classifying code. Additional characteristics are needed in addition to a VBN code to identify a particular product, for example pot size or handle length. Classifying codes can be used in various scenarios.

- Supplier code
  Using a supplier code means you keep everything under control yourself. You decide how the number is made up and when something should or should not be changed. For trading partners this is a disadvantage, however, as each supplier has his own system. On top of this, it does not guarantee uniqueness.

- Codering Levend Groen (CLG)
  The Codering Levend Groen (CLG) system allocates the same code to each product (e.g. a Yucca plant), irrespective of supplier. The advantage is that everyone can use the same code everywhere, right up to the point of sale. CLG does not however support Traceability and Category Management, and it is not accepted internationally.

- The GS1 System
  The GS1 System provides each product with a unique code worldwide, which can be used from the order process right up to the retailer's point of sale and supports a number of processes. It is based on GTINs (Global Trade Item Numbers). These are already in regular use in the floriculture sector, but often only in the part of the cycle direct to the retailer. Nor do GTINs provide the best solution for every part of the cycle: in the 'clock auction' (Dutch auction) system, for instance, it is impossible to know how the product will be marketed subsequently. At that stage a GTIN has no added value and a classifying system may prove more suitable. GTINs *can* however work when reordering items sold in a clock auction.

- In addition to GTINs, GS1 has a Global Product Classification (GPC) system, and an international GPC is currently being designed and implemented for the floriculture sector, based on Dutch knowledge from the use of VBN codes. The aim is to use the VBN and GPC systems alongside one another in the Netherlands. GPC will thus

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provide the link to the international trade. It can support the Client Export cycle, for example. This document refers to the classification system but does not go into detail on the subject.

2 Who allocates a GTIN?

When using GS1 ID keys the first thing to decide is *who* will be responsible for allocating a GTIN to a product.

> The guiding principle is that GTIN allocation is done at source.

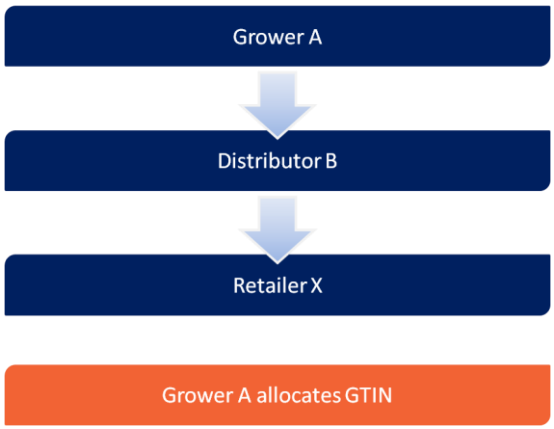
This could be the grower marketing his own branded product, or a wholesaler or distributor packaging the product and marketing it as his product, or a retailer making it a private label product using his own distinctive packaging. It could also be a growers' association presenting branded products.

2.1 The grower does the allocation of the GTIN

The grower can offer his products direct to a wholesaler, distributor or retailer. The grower will decide what GTIN to put on his product, depending on the commercial agreements reached. The grower will code his own branded products himself, so each product can be traced back to the grower directly, using the number. A central registry of all the numbers issued by GS1 worldwide can be found on www.gepir.org.

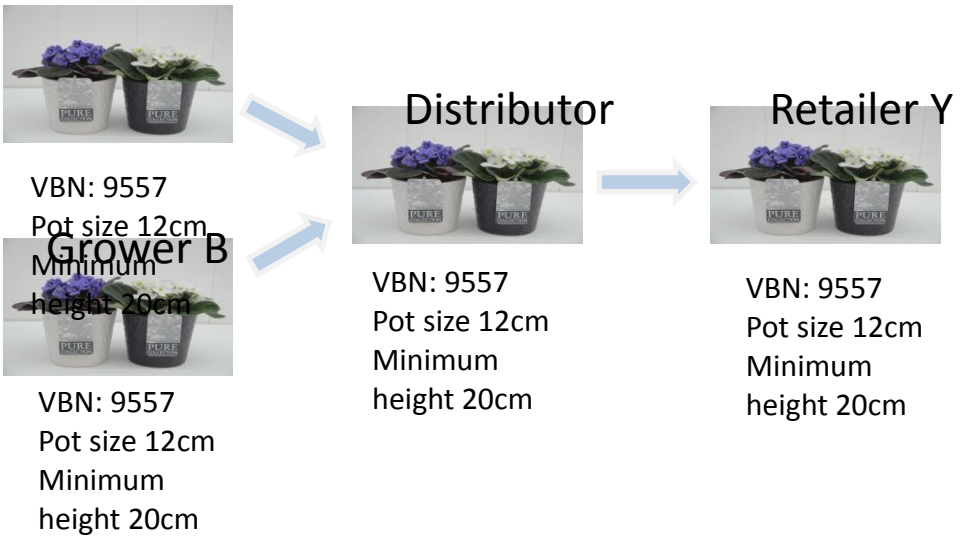
In the trade item master data file this could be shown as follows, for example:

Name	VBN code	Pot size	Minimum plant height	Number of cuttings/ plants per pot	Maturity stage	Grower's Article No.	GTIN
Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-01	8712345678906



2.2 The wholesaler or distributor does the allocation of the GTIN

The wholesaler/distributor may obtain his assortment from various growers, offering them in his own distinctive packaging. In this case it is the wholesaler who is responsible for allocating the GTIN. The wholesaler can apply this code himself or ask the grower to apply the GTIN to the product. Data on the GTIN and the packaging/label are exchanged in the Labelling Message.



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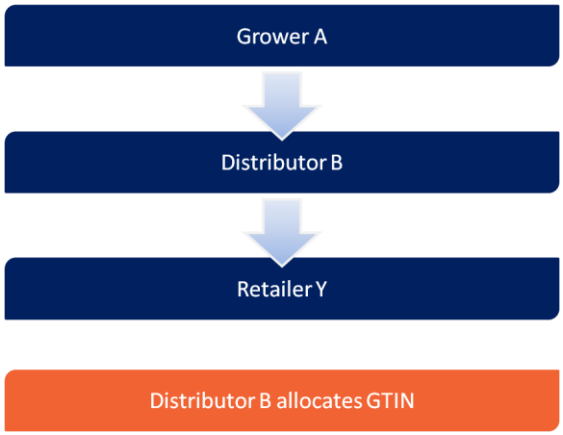
Name	VBN code	Pot size	Minimum plant height	Number of cuttings/ plants per pot	Maturity stage	Grower's Article No.	GTIN
1. Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-01	8712345678906
2. Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-05	8712435678908

The trader supplies the product as his own product in his own packaging, allocates a new GTIN and adds it to his trade item master data file.



2.3 The retailer does the allocation of the GTIN

The retailer can turn the product into a private label product and provide the specifications for the packaging and brand name. In that case it is the retailer who is responsible for allocating the GTIN, which then forms part of his specifications.

By 'retailer' here we mean both small shops and retailers with large numbers of branches in the Netherlands or elsewhere.

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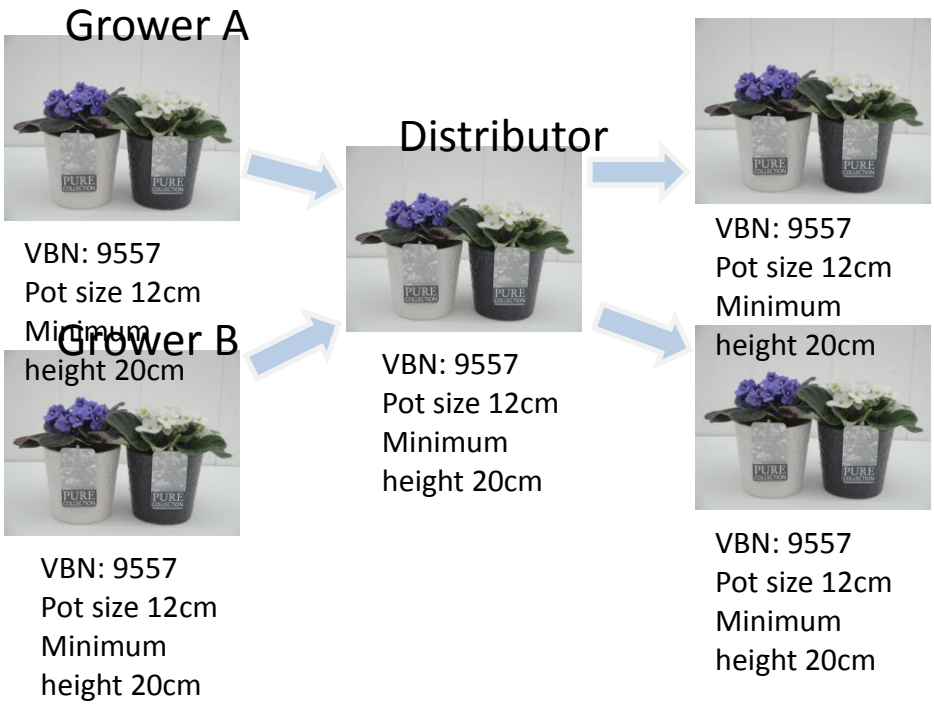

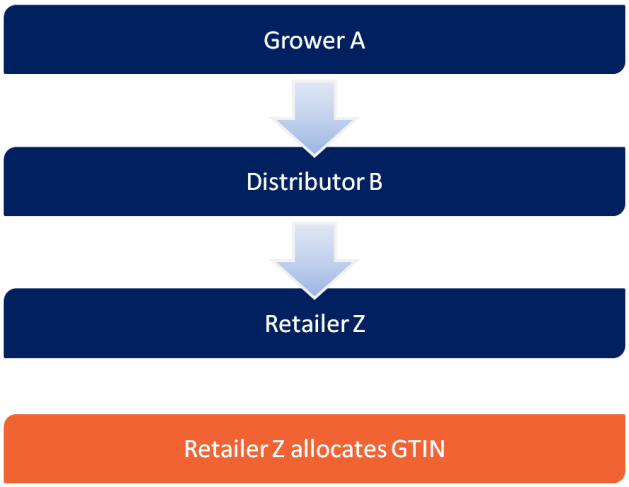

2.4 Conclusion: it depends on the situation

It is clear from the above scenarios that who does the allocation of the GTIN depends on the situation. It could be the case that a trader and grower supply to three customers with a different party doing the allocation of the GTIN in each case. In some situations the marketing method (e.g. clock auction) may impose limitations on what is feasible as regards allocation of the GTIN at source and applying barcodes or stickers for final customers.

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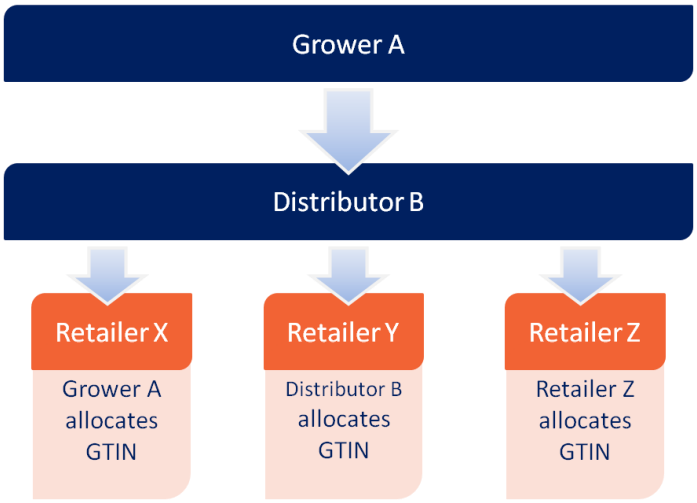
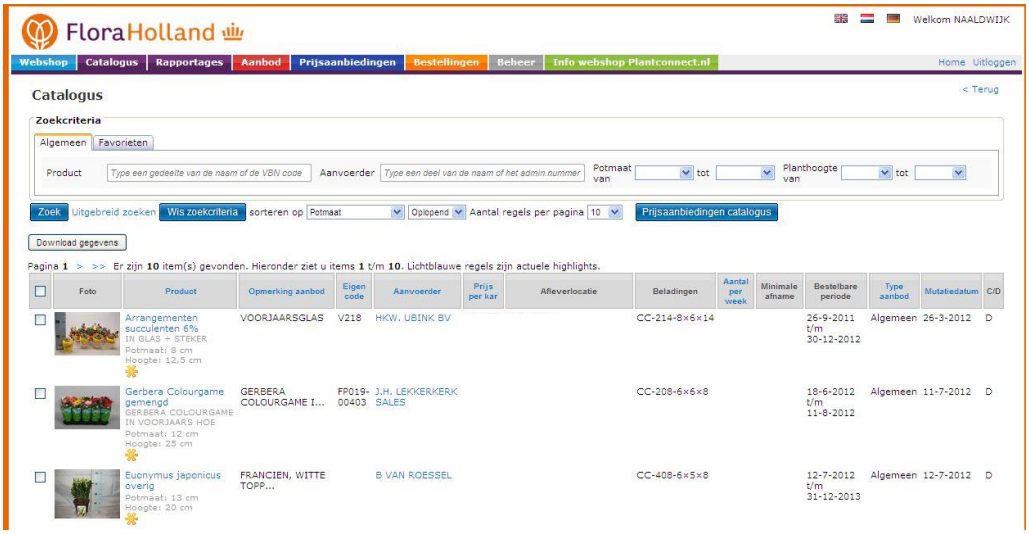

Grower A
Distributor B
Retailer X
Grower A allocates GTIN
Retailer Y
Distributor B allocates GTIN
Retailer Z
Retailer Z allocates GTIN

3 Getting started

You have taken the first step: you have decided who should do the allocation of the GTIN. If you do not need to do the allocation of the GTIN, you add the code supplied by the trader or retailer to your own files and apply the barcode, if that has been agreed.
If you *do* have to do the allocation of the GTIN, the following steps show what you need to consider when allocation of the GTIN and exchanging information on your assortment.

3.1 Determine your assortment

The assortment will often be available in various online catalogues: in the case of traders in their own web shops, and in the case of growers in e.g. PlantConnect. With these goods you will already have decided what variants you stock in what versions. One of the pieces of information you can now add to this is the GTIN. Each variant that you have included in your assortment as an individual ordering unit is allocated its own unique GTIN.



3.2 Allocation of the GTIN and entering numbers

In order to start allocation of the GTIN you will need a series of numbers from GS1 Netherlands. If you have a large assortment with lots of different product variants, Customer Support will be happy to advise you on how many numbers you will need. A series is referred to as a Global Company Prefix. The GTIN is often still referred to as the EAN code, referring to the old GS1 name.

GTIN structure

	Prefix	GS Company Prefix	Item reference	Check digit
Position	1 2	3 4 5 6 7 8 9	10 11 12	13
Example	8 7	1 2 3 4 5 6 7	8 9 0	6

The GTIN begins with the prefix, which indicates which national GS1 organisation has allocated the GS1 ID key. This is followed by the company prefix, i.e. the number that GS1 allocates to a company. We refer to the combination of prefix and company prefix as the Global Company Prefix. The three next digits are referred to as the item reference or article number: this is the part where you, the company, allocate consecutive numbers. The series from 000 to 999 provides you with 1,000 GTINs (not to mention 1,000 GLNs and 10 million SSCCs). The final digit is a check digit, which is calculated from the previous digits using a modulus 10 algorithm.

A GTIN is merely an identifier, in other words no more than a key to the respective information in a computer file. The ID keys themselves are 'dumb', they do not contain any meaning: you allocate consecutive ID keys to your products. You add an additional field for the GTIN in your computer system. You simply retain your own codes – e.g. your own article number, which you need for your internal operations, and a VBN code.

If your product has changed, decide in each case whether or not this means you need to allocate a new GTIN, based on the allocation rules or the change. You will find an overview of the rules in Chapter 4.

You add the GTIN in your internal systems:

Name	VBN code	Pot size	Minimum plant height	Number of cuttings/ plants per pot	Maturity stage	Grower's Article No.	GTIN
1. Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-01	8712345678906
2. Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-05	8712345678913
3. Saintpaulia mixed	9557	12 cm	20 cm	1	3	18-07	8712345678920

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Based solely on the VBN code and the attributes you would think these three products are the same, but if you look at the photos you can see that they are all different. When using ID keys this means using three different codes.

3.3 Using the codes

Messages

The GTINs are not only used when the customer pays at the point of sale but throughout the order process. All Floricode messages, such as quotation, order, delivery, invoice and labelling messages, are ready to have GTINs added, enabling the whole process to be digitized.

Once you have coded your assortment you need to inform your trading partners. This can be done on paper, electronically, fully computerized (using quotation messages) and using an e-catalogue or a central data pool. What you choose will often depend on your buyer base. It sounds more complicated than it actually is. You are already exchanging information about your assortment, so all you need to do is add a GTIN field.

Barcodes

As well as using it in messages, the GTIN needs to be applied to the product in scannable form (a barcode). Depending on your process and the products you stock, you can choose either to buy barcode software yourself or to have the barcodes pre-printed on your packaging. If you are thinking of buying software yourself, consider the following points carefully:

- Will you be applying barcodes to other logistics packaging, as well as products that can be scanned at the point of sale? Would you like to include more information in the barcode, for example production date or batch number?
- Would you like to apply barcodes to your logistics units (pallets, cage trolleys, etc.)?
- Would you like to apply barcodes on the production line or will they be applied at a later stage?
- Could storage conditions affect the quality of barcodes?
- Do you obtain the specifications for the labels, including barcodes, from your buyer or provider using the Floricode labelling message?

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Solution providers

GS1 Netherlands does not supply barcode software but we can help you to select a supplier of systems. You can find various companies that offer suitable solutions through the Solution Provider Finder on the GS1 Netherlands site (http://www.gs1.nl/support/). You can select the provider most suitable for you based on their reference material. In most cases your current software supplier will be able to supply barcode software or a barcode module, so contact them first.

3.4 Charges

GS1 Netherlands calculates the charge for allocation of the GTIN using GTINs based on company turnover. The specimen calculation below will give you an idea of what GS1 Netherlands could charge you. The list of charges is available online.

1,000 GTINs will be enough for your company. On the application form you indicate that your annual turnover is 4 million euros. In the GS1 Netherlands charging system your company falls into turnover category D (1-5 million per annum). The annual charge for this category is 300 euros, and there is a one-off charge of 400 euros. You apply in September, so your total charge is therefore 500 euros, comprising 400 euros plus the charge for the remaining four months of this year.

4 Rules for allocation of the GTIN

4.1 Basic rules for allocation of the GTIN

The great advantage of using GS1 ID keys is that both you and your trading partners use the same standard. This only works, however, if everyone applies the same criteria or rules. This chapter sets out the basic rules for the floriculture sector, with examples, and gives an overview of the rules that apply to changes.

The basics

Each product and each product variant is allocated its own GTIN. A Yucca in a plastic pot will have a different GTIN from a Yucca in a decorative pot. If you can order the same Yucca in a different decorative pot, this is a unique combination that is allocated its own GTIN. Kalanchoes are grown in different colours, each of which is allocated its own GTIN. There are different varieties of one and the same Kalanchoe (single bloom, multi-petal, etc.): if this is a distinctive feature for trading purposes, each of the different variants is allocated a

unique GTIN. If a trade item such as a decorative pot can be ordered separately, that item is allocated its unique GTIN. If the Yucca is available in different pot sizes, each pot size is allocated its own GTIN. The partner responsible for allocating the code (the grower/trader/retailer) decides what feature is distinctive for trading purposes.

The same plant in a different decorative pot is allocated a new GTIN

'Composite products' are common in the floriculture sector. Under the GS1 guidelines these are subject to the basic rules. The products in a composite item are available separately or combined. Each combination of multiple products is a unique combination that is allocated its own GTIN. The supplier/source decides what combinations are standard combinations and therefore unique products. These rules are important for both the retailer and the supplier: by differentiating between products you can improve your category management.

4.2 When to change a GTIN

If your product is changed and the change affects your trading partner's processes you must change your GTIN.

The language on the packaging is changed

If a language is added to the packaging the GTIN does not change: all that has happened is that a new market has been added, and this does not affect existing buyers. If a language is dropped and/or replaced on the packaging the GTIN *does* have to be changed: a market has been dropped and this could affect partners in the rest of the supply chain.

New GTIN

The Kalanchoe has been given the brand name TiSento, with the associated packaging and appearance, and is allocated a new GTIN.

The brand name is changed

If a product has a brand name and this is changed the GTIN must also be changed.

The packaging is changed

If the dimensions of a product are changed by more than 10% (increase or decrease) a new GTIN must be allocated. At the end of the chain the product must fit on the retailer's shelf. Dimensions are also important in the logistics process (e.g. loading). In the logistics process this rule only applies if the GTIN has been allocated to a standard packaging. This does not apply, therefore, to a barrel that serves as a load carrier.

Note: A 'live' product from the floriculture sector can change in appearance and size after the grower has delivered it. This does not affect the way the item is coded: it is not allocated a different GTIN.

Random mix

Where there is a random mix of products and the mix is changed a new GTIN is not needed. A new code for each change in the mix would mean vast numbers of new codes, which is not desirable. A good example is a set of different plants with coloured leaves in a decorative pot. Each mix can be different, but it is always presented as the same product and ordered as such. A mixed bunch of flowers where the mix is of colours, not of flower varieties, may also be covered by this rule. At trade unit level (barrel or rolly level) an example is the 'spring cart': a mix of plants is available and the mix can be different each time.

Note: A random mix *must* be based on a mix where it is known in advance whether products subject to plant health requirements may be included.

The random mix in a bunch of flowers is not allocated a new GTIN if the mix criteria remain the same (spring bouquet/pink shades, etc.).

Manufacturing/production

If a product is grown at a different nursery, that does not result in a different GTIN. The same applies if the same products are bought from another grower and then traded under your own name.

Note: The same products grown in a different country may constitute a different product: foreign production of the same cultivar can sometimes result in a difference in colour intensity and/or durability. There may also be differences in the plant health requirements. In such cases you allocate a new GTIN.

Price

If the packaging of a product states a particular recommended retail price set by the producer, the GTIN changes when this price is changed. If a price has been marked at the retailer's request and that price is changed, the GTIN remains the same.

Seasonal products

If a product is specially adapted for a holiday, e.g. Easter, the GTIN needs to be changed.

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An Easter bunny is added to a Soleirolia. This new version of the product is allocated a new GTIN.

Re-using codes

A GTIN can be reused for a different trade item if the existing item has been dropped. It may not be reused until 48 months after the item has been taken off the market. Only then it is reasonable to assume that trading partners no longer have a record of the item as 'Wood violet, blue' instead of 'Tray Petunia, mixed'.

5 In conclusion

These guidelines will help you to get started: you can apply for a number series, add the GTINs to your assortment and publish them along with other information on your product. The startup package includes an introductory course, which takes one afternoon, where you go through the steps with other participants. In practice you may come up against problems: if you have any questions about content or practical implementation, please contact Floricode or GS1 Netherlands.

Version Control and Contact Information

Date	Version	By	Changes
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8-4-2013	1.1	Sarina Pielaat	Minor modifications.

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GS1 Nederland biedt (internationale) standaarden voor unieke identificatie en het vastleggen en delen van gegevens. Dit doen we met barcodes, centrale artikeldatabases en elektronisch berichtenverkeer. Volgens ons is samenwerken in de keten een sleutel tot verbeteren van efficiency en effectiviteit.

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