

Describing Products for use in Packhouse and Coolstore systems.

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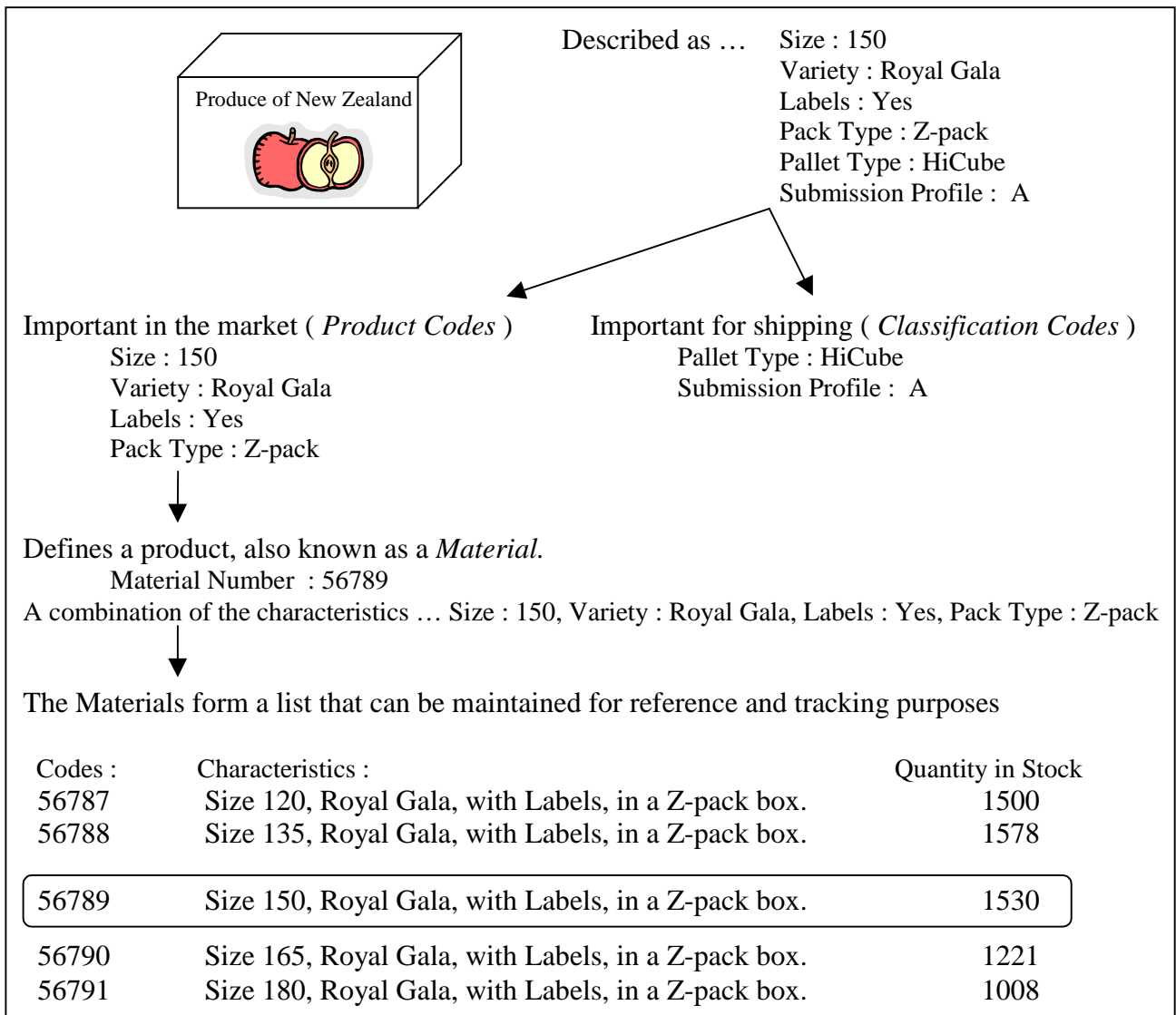
Aim: You would think that a packed carton of fruit could be described easily. But if you put one carton in front of ten people, would they describe it in exactly the same way? If you could get them all to agree on a description, communication and understanding between parties would be better and everyone's job in the chain of selling these cartons could be made easier, especially when thousands of cartons are involved.

Our aim in this document is to explain how codes have been used to describe packed fruit and why these codes were designed. Attached to this document are Appendices A to F with supporting examples.

Introduction:

Marketers of fruit use descriptions to ensure the right product and quantities are both produced and sold. A packed carton of fruit has defined characteristics that describe what is in the box and what the packhouse has done to it. For example it may be a pack of 150 Royal Gala apples that each have an individual fruit label applied and then put in a standard Z-pack carton. In Diagram 1 below, this idea and some of the terms used are introduced.

Diagram 1 : Its just a box of apples !



There are only a few possibilities for each characteristic. For 'Variety' there is: Royal Gala, Braeburn, Coxs Orange, Red Delicious etc. If this limited range of possible values can also be kept common between all those trying to pack fruit, then ...

- the marketer can define exactly the way he wants the fruit packed.
- the marketer can check what different suppliers are producing.
- communication and understanding between all parties is better, so making everyone's job in the chain easier.

Characteristic Types:

The names used to describe the qualities of the fruit (characteristics) can be separated into two groups (within the Enza System) as follows:

Product Codes – these describe what makes this product unique from a marketing point of view. e.g. the pack type will be important as certain markets may request a specific type.

Classification Codes – additional product information that is useful to know but does not alter how the market will view the fruit and so is usually not provided to the end buyer. e.g. Submission profiles, which the marketer can optionally use to decide what fruit gets sold first, but which does not necessarily affect the market's perception of the product.

These two groups are then further split into the individual categories. These categories enable the fruit to be described in quite high detail with basically 8 categories for Product Codes and 9 for Classification Codes. Tables 1 and 2 show the two groups and their existing categories used by ENZA. *See Appendix A for examples.*

Table 1 : Product Codes

| Description | Example (Descr , Code) | Notes |
|---------------------|--------------------------|---|
| Brand | Enza, EN | The branding used. The individual fruit label type Whether waxed or not How the fruit was grown No longer used, as it is really classification info. See 'Storage Type' in Table 2 |
| Variety | Royal Gala, 039 | |
| Size | 110, 110 | |
| Grade | High Grade, HG | |
| Pack Type | Enza Z Pack, 139 | |
| Marketing Attribute | ENZA, EN | |
| Packing Treatment | Normal, N | |
| Growing Method | Conventional, CN | |
| Storage Indicator | Normal, N | |

Table 2: Classification Codes

| Description | Example (Descr , Code) | Notes |
|-----------------------|--------------------------|--|
| Colour Band | 80% Block Colour, B80 | Not used by non-ENZA exporters |
| Customer Suitability | Marks & Spencers, MS | Not used by non-ENZA exporters |
| Market Access | UK/Europe, NENNN | Not used by non-ENZA exporters |
| Pallet Type | Z Pack Pallet, 640 | Not used by non-ENZA exporters Not used by non-ENZA exporters |
| Production Programme | IFP PCR not OK, IFPXX | |
| Problem / Risk | No Risk, N1 | |
| Part Pallet Indicator | Part Pallet, Y | |
| Submission Profile | Profile A, A | |
| Storage Type | Normal, N | |

The terms used for the categories may not suit other marketers (non-ENZA), so their actual use can be manipulated. e.g. It has been common for the 'Packing Treatment' category to be used to indicate 'Market' instead. Also, as shown in Table 2, a lot of the ENZA- specific categories have not been used by other exporters. This is reflected in the fields illustrated on the Generic Pallet Card included in Appendix F.

Codes for Computers:

As all these ways of describing a product are used within computer systems that handle shorter names more efficiently than longer ones, codes are used to refer to the characteristics. These codes range from the familiar such as 'Royal Gala' = '039' to the less obvious 'Enza Z Pack' = '139'.

Rules control the length of the codes for each category. e.g. A pallet type can have a three number code '640', while a submission profile code is a one letter 'A'. The rules are set by things like the room allowed on a pallet card or carton label field or how the codes are used internally within the software.

Even more confusing is that the ENZA SAP systems introduced another set of codes to refer to each 'Product Code' characteristic known as Hierarchy Codes. While most users never see these codes, they are mentioned as the ENZA compliant systems used in packhouse and coolstores must have them defined. Where possible it is recommended (and some systems may do this automatically) the standard code and the hierarchy code should be the *same*. This can place additional limits on the allowed code length, however.

Tables 3 and 4 show the rules regarding code length. For actual example codes, see Appendix A and B.

Table 3: Product Codes

| Description | Standard Code Length | Hierarchy Code Length | Maximum Length when using Common Codes |
|---------------------|----------------------|-----------------------|--|
| Brand | 2 | 2 | 2 |
| Variety | 3 | 3 | 3 |
| Size | 3 | 3 | 3 |
| Grade | 2 | 2 | 2 |
| Pack Type | 3 | 3 | 3 |
| Marketing Attribute | 2 | 3 | 2 |
| Packing Treatment | 1 | 1 | 1 |
| Growing Method | 1 | 1 | 1 |

Table 4: Classification Codes

| Description | Standard Code Length |
|-----------------------|----------------------|
| Colour Band | 4 |
| Customer Suitability | 2 |
| Market Access | 5 |
| Pallet Type | 3 |
| Production Programme | 5 |
| Problem / Risk | 2 |
| Part Pallet Indicator | 1 |
| Submission Profile | 1 |
| Storage Type | 1 |

Where possible codes used may be standardised, e.g. a size 150 is a size 150 no matter who sells it. In other categories the codes may need to be different. E.g. what one exporter refers to as High Grade, another may call Extra Fancy, or a certain variety could be given a different name and/or code.

Ideally codes should be as simple as possible to minimise errors and assist communication. If a product has a recurring theme then eliminate the repetition. For example, all products packed with the exporter 'First Light' could use just the "First Light" Brand code along with the standard codes 'Labelled' and 'Zpack', instead of generating extra codes for a First Light Brand, First Light Fruit Label and a First Light Box.

A shortened, 7 letter version of the main description for each characteristic is also maintained in the software systems E.g. Royal Gala = 'RylGala'. This is handy in areas like reports or on screens with limited

space where printing the code would mean little to anyone while printing the full name of up to 30 letters would take up too much room.

It is obviously much better if, once the codes required are decided upon, they can be distributed to all packhouses so common standards are maintained.

Materials:

Materials is another term for products. Any one particular material will have a unique combination of product codes. The technique of using a number to reference a product is standard among stock systems – evidence of which is easily found when you go shopping. Within an ENZA system material codes are a 5 digit number which refers to the particular product.

See Appendix C for an example material list while for those interested in the technical side, Appendix D is an explanation of how the combined description code of a material is made up.

If Material numbers are set up by individual packhouses they are likely to be inconsistent from packhouse to packhouse. This can cause problems when different numbers for the same product arrive at the coolstore/exporter level. Some systems simply will not cope with this and so Material numbers are a chief candidate to be provided by the exporter along with the packing requirements. Also, data such as the count and net weight required are related to a Material code ie what and how it was packed, so like ENZA these can also be specified in the exporters material/packing specifications.

One added advantage of using material codes is that they limit the combinations to what is needed. Say a particular combination is Royal Gala, 150, Zpack, Labels and has a material code 32111. The packer sets up to pack the fruit, accidentally setting a line of 165's up as well. With the system correctly set up there may not be an equivalent material for 165's (due to no market demand), and so it should raise some alarm bells.

Another reason for material code use is simply less paperwork. By this I mean the amount of space taken up to refer to a particular product. This is particularly important even with a seemingly unrelated area like the carton label. The barcode usually printed on a label conforms to an international EAN standard in which the space available for identifying the product is limited to 5 characters (not the 16 it could take using the product codes individually). While some exporters may not need to follow this label standard, the ability to provide track and trace on products is becoming more important in some markets.

Other Codes:

Various other codes are also used by the software systems. These include

- i) a code to uniquely identify each packhouse. This is quite important when payments for packaging etc. need to be made or audited. The existence of these codes can't be presumed from another source such as ENZA because if the packhouse doesn't pack any fruit for ENZA the packhouse will not have a code assigned.
- ii) a code to represent the exporter, such as ENZA = 'EN'. Imagine the situation where two exporters both use a generic box and are both known by the code as FR but in separate packhouses. On arrival of the product at a coolstore, one of them will most likely be assigned all of the fruit.

These 'other codes' ideally need to be defined by a group and then published. This should make sure they can be guaranteed unique and will not be used by someone else in the future.

Code distribution

Most software systems seem to allow for manual entry of the codes discussed, so at worst their details could be distributed as a printed report and entered by hand. At least two reasons suggest this should be avoided if possible:

- i) Errors can be introduced during their re-entry.
- ii) The sheer number of the material codes.

A better way would be to supply the codes in electronic form so that they can be read straight into the systems. ENZA's way of doing this is through its master data files which contain the codes in a specified format and which are downloaded from the Internet. While this is ideal, common standards on using this approach with other exporters has yet to be sorted out across all system providers.

Related Issues

Standards exist both formally and informally in other areas as well. The success of any deviation away from them will usually be dependent on the flexibility of the software providers used in the packhouses concerned.

Carton Labels :

Included in appendix E is an example of the ENZA Standard for Carton Labels. Other exporters may feel they require different information or perhaps argue they don't require a barcode. There are many technical issues surrounding the actual printing of the labels. Therefore any changes, such as a request to print grade information, are best talked over with software developers. I recommend, if possible, alterations only be as additions to what exists rather than requiring totally different formats.

Pallet Cards :

Appendix F shows the generic pallet card. It was designed in consultation with some exporters for the 2000 season. Intended to be provided by exporters, they include the exporter EAN number. In reality once a box of cards is loaded into a printer they are not usually changed, probably breaking all the EAN rules. As with the carton labels, some exporters may wish to use another type of pallet card. Again, extensive consultation should be undertaken before going down this track.

Conclusion :

The existing software used in New Zealand packhouses and coolstores is built around Enza specifications. If a new exporter wishes to utilise what already exists they should take into consideration what has been discussed in this document – further information, tools and examples of codes are available. There are great advantages in all talking the same 'language'. Lessen the confusion; lower the costs.

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Appendix A: Example Product Codes:

| | <i>Code</i> | <i>Description</i> | <i>Short Description</i> |
|----------------------------|-------------|----------------------|--------------------------|
| Brand | | | |
| | FL | First Light | FLight |
| Growing Method | | | |
| | N | Conventional | Convent |
| | C | Conversion Organic | ConvOrg |
| | F | Full Organic | FullOrg |
| | T | Transitional Organic | Transit |
| Grade | | | |
| | XF | Extra Fancy | XF |
| | PG | Premium Grade | PG |
| Marketing Attribute | | | |
| | LB | Labelled | Label |
| | UN | Unlabelled | None |
| Packing Treatment | | | |
| | E | Europe | Europe |
| | O | Other | Other |
| | U | USA | USA |
| Pack Type | | | |
| | 125 | RDT | RDT |
| | 139 | Z Pack | Z Pack |
| Size | | | |
| | 070 | Size 070 | 70 |
| | 080 | Size 080 | 80 |
| | 090 | Size 090 | 90 |
| | 100 | Size 100 | 100 |
| | 110 | Size 110 | 110 |
| | 120 | Size 120 | 120 |
| | 135 | Size 135 | 135 |
| | 150 | Size 150 | 150 |
| | 165 | Size 165 | 165 |
| | 180 | Size 180 | 180 |
| Variety | | | |
| | 002 | Granny Smith | Granny |
| | 003 | Sweet Splendour | SwtSplr |
| | 004 | Golden Delicious | GoldDel |
| | 005 | Pink Splendour | PinkSpl |
| | 035 | Braeburn | Braebrn |
| | 039 | Royal Gala | Royal G |
| | 063 | Fuji | Fuji |
| | 093 | Fiesta | Fiesta |

Appendix B: Example Classification Codes:

| <i>Code</i> | <i>Description</i> | <i>Short Description</i> |
|------------------------------|--------------------|--------------------------|
| Pallet Type | | |
| 600 | Pallet 60x40 | 60x40 |
| 640 | Z Pack Pallet | Z Pack |
| 650 | High Cube | HiCube |
| Part Pallet Indicator | | |
| N | Full Pallet | Full |
| Y | Part Pallet | Part |
| Submission Profile | | |
| A | A Profile | A |
| B | B Profile | B |
| C | C Profile | C |
| X | X Profile | X |
| Storage Type | | |
| N | Normal | Normal |
| C | CA | CA |

Appendix C: Example Material List:

| Trader | Material | Description | UOM | Group | Hierarchy | Market |
|--------|----------|---------------------------------------|-----|-------|-----------------|--------|
| FL | 00001 | NZ FL 035Braebrn 070 Z Pack N PG LBEN | 70 | 18.1 | FL035070139NPGE | LB |
| FL | 00002 | NZ FL 035Braebrn 070 Z Pack N PG UNEN | 70 | 18.1 | FL035070139NPGE | UN |
| FL | 00003 | NZ FL 035Braebrn 080 Z Pack N PG LBEN | 80 | 18.1 | FL035080139NPGE | LB |
| FL | 00004 | NZ FL 035Braebrn 080 Z Pack N PG UNEN | 80 | 18.1 | FL035080139NPGE | UN |
| FL | 00005 | NZ FL 035Braebrn 090 Z Pack N PG LBEN | 90 | 18.1 | FL035090139NPGE | LB |
| FL | 00006 | NZ FL 035Braebrn 090 Z Pack N PG UNEN | 90 | 18.1 | FL035090139NPGE | UN |
| FL | 00007 | NZ FL 035Braebrn 100 Z Pack N PG LBEN | 100 | 18.1 | FL035100139NPGE | LB |
| FL | 00008 | NZ FL 035Braebrn 100 Z Pack N PG UNEN | 100 | 18.1 | FL035100139NPGE | UN |
| FL | 00009 | NZ FL 035Braebrn 110 Z Pack N PG LBEN | 110 | 18.1 | FL035110139NPGE | LB |
| FL | 00010 | NZ FL 035Braebrn 110 Z Pack N PG UNEN | 110 | 18.1 | FL035110139NPGE | UN |
| FL | 00011 | NZ FL 035Braebrn 120 Z Pack N PG LBEN | 120 | 18.1 | FL035120139NPGE | LB |
| FL | 00012 | NZ FL 035Braebrn 120 Z Pack N PG UNEN | 120 | 18.1 | FL035120139NPGE | UN |
| FL | 00013 | NZ FL 035Braebrn 135 Z Pack N PG LBEN | 135 | 18.1 | FL035135139NPGE | LB |
| FL | 00014 | NZ FL 035Braebrn 135 Z Pack N PG UNEN | 135 | 18.1 | FL035135139NPGE | UN |
| FL | 00015 | NZ FL 035Braebrn 150 Z Pack N PG LBEN | 150 | 18.1 | FL035150139NPGE | LB |
| FL | 00016 | NZ FL 035Braebrn 150 Z Pack N PG UNEN | 150 | 18.1 | FL035150139NPGE | UN |
| FL | 00017 | NZ FL 035Braebrn 165 Z Pack N PG LBEN | 165 | 18.1 | FL035165139NPGE | LB |
| FL | 00018 | NZ FL 035Braebrn 165 Z Pack N PG UNEN | 165 | 18.1 | FL035165139NPGE | UN |
| FL | 00019 | NZ FL 039Royal G 070 Z Pack N PG LBEN | 70 | 18.1 | FL039070139NPGE | LB |
| FL | 00020 | NZ FL 039Royal G 070 Z Pack N PG UNEN | 70 | 18.1 | FL039070139NPGE | UN |
| FL | 00021 | NZ FL 039Royal G 080 Z Pack N PG LBEN | 80 | 18.1 | FL039080139NPGE | LB |
| FL | 00022 | NZ FL 039Royal G 080 Z Pack N PG UNEN | 80 | 18.1 | FL039080139NPGE | UN |
| FL | 00023 | NZ FL 039Royal G 090 Z Pack N PG LBEN | 90 | 18.1 | FL039090139NPGE | LB |
| FL | 00024 | NZ FL 039Royal G 090 Z Pack N PG UNEN | 90 | 18.1 | FL039090139NPGE | UN |
| FL | 00025 | NZ FL 039Royal G 100 Z Pack N PG LBEN | 100 | 18.1 | FL039100139NPGE | LB |
| FL | 00026 | NZ FL 039Royal G 100 Z Pack N PG UNEN | 100 | 18.1 | FL039100139NPGE | UN |
| FL | 00027 | NZ FL 039Royal G 110 Z Pack N PG LBEN | 110 | 18.1 | FL039110139NPGE | LB |
| FL | 00028 | NZ FL 039Royal G 110 Z Pack N PG UNEN | 110 | 18.1 | FL039110139NPGE | UN |
| FL | 00029 | NZ FL 039Royal G 120 Z Pack N PG LBEN | 120 | 18.1 | FL039120139NPGE | LB |
| FL | 00030 | NZ FL 039Royal G 120 Z Pack N PG UNEN | 120 | 18.1 | FL039120139NPGE | UN |
| FL | 00031 | NZ FL 039Royal G 135 Z Pack N PG LBEN | 135 | 18.1 | FL039135139NPGE | LB |
| FL | 00032 | NZ FL 039Royal G 135 Z Pack N PG UNEN | 135 | 18.1 | FL039135139NPGE | UN |
| FL | 00033 | NZ FL 039Royal G 150 Z Pack N PG LBEN | 150 | 18.1 | FL039150139NPGE | LB |
| FL | 00034 | NZ FL 039Royal G 150 Z Pack N PG UNEN | 150 | 18.1 | FL039150139NPGE | UN |
| FL | 00035 | NZ FL 039Royal G 165 Z Pack N PG LBEN | 165 | 18.1 | FL039165139NPGE | LB |
| FL | 00036 | NZ FL 039Royal G 165 Z Pack N PG UNEN | 165 | 18.1 | FL039165139NPGE | UN |

Note: The use of the UOM column for count and Group column for Pack Weight is currently unique to TASC Systems Software.

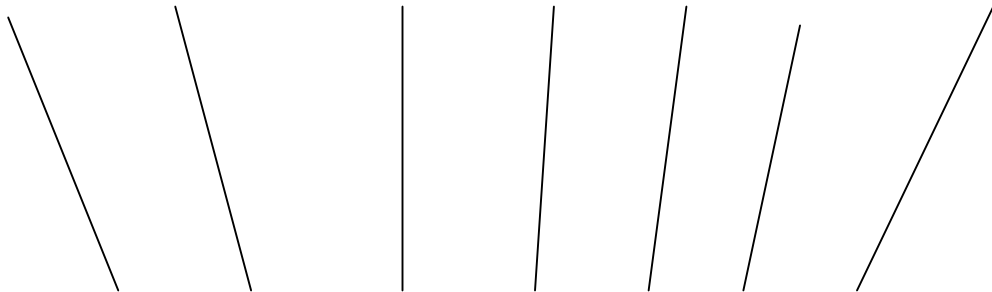
Appendix D: Explanation of Material Descriptions:

Material Product Descriptions

Description: - NZ FL 035Braebrn 080 ZPack N PG UNEN

| Country of Origin | Brand | Variety | Size | Pack Type | Growing Method | Grade | Marketing Attribute | Packing Treatment | Storage Indicator |
|-------------------|-----------|-------------------------------|-----------|-------------------|----------------|-----------|---------------------|-------------------|--------------------|
| 2 ch + sp | 2 ch + sp | 3 ch Code + 8 ch Name + sp | 3 ch + sp | 7 ch Name + sp | 2 ch + sp | 2 ch + sp | 2 ch | 1 ch | 1 ch always 'N' |

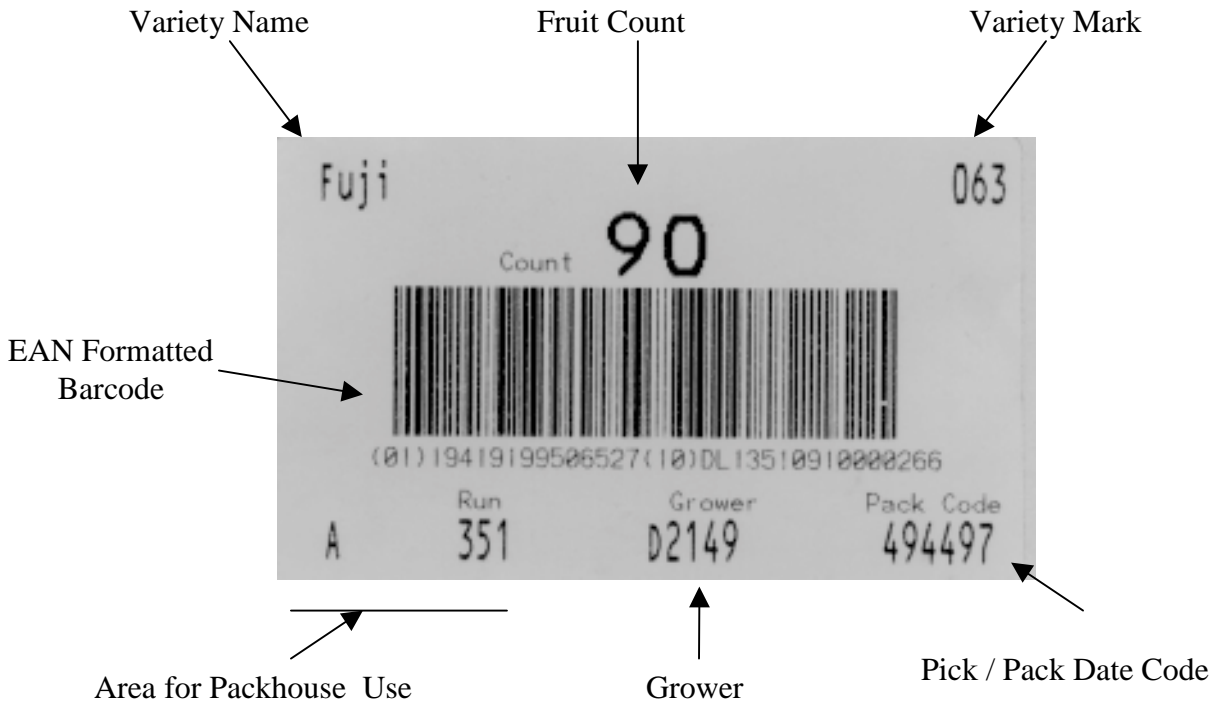
NZ ..FL ..035Braebrn ..080 ..Z Pack ..N ..PG ..UN..E..N



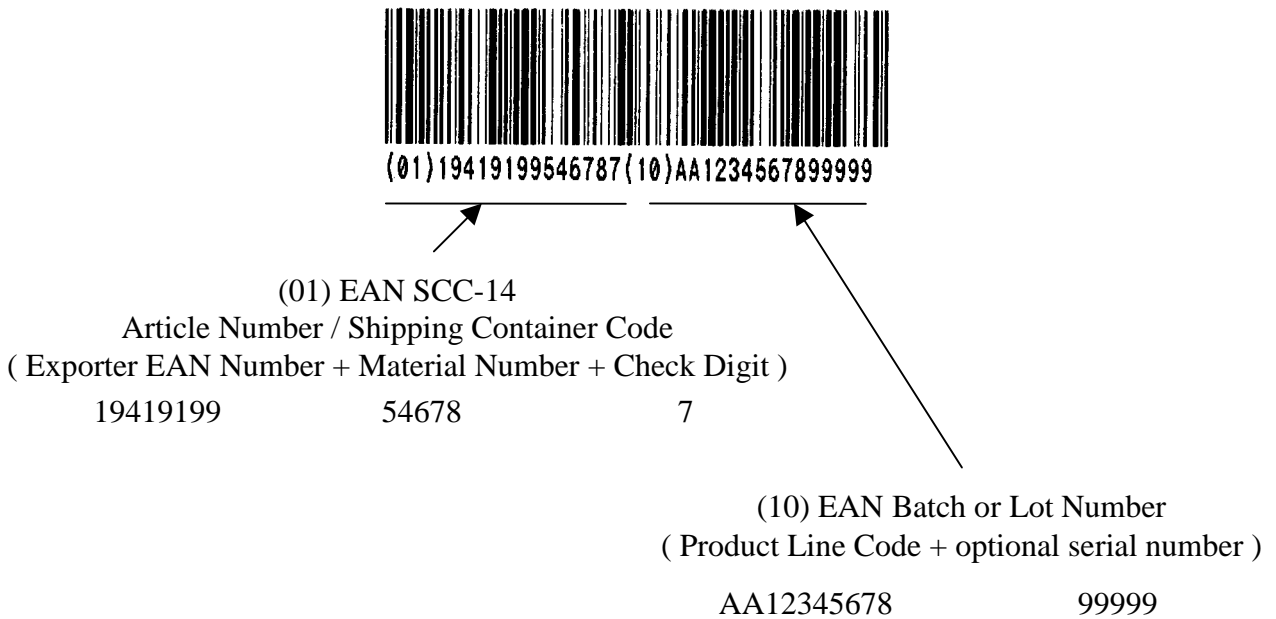
FL..035..080..139..N..PG..E

Hierarchy: - FL035080139NPGE

Appendix E: Current Carton Label Standard



Barcode Format



Appendix F: Current Generic Pallet Card



0039419734 000 080 001 5



0039419734 000 080 001 5



0039419734 000 080 001 5

Pallet Type

Part Pallet

Storage Indicator

Destination

Despatch Date

| Run No. | Material Number | Product Line Code | Registered MAF No. | Variety | Size | Packtype | Gross Weight | Case | Net Weight | Quantity | Pack Date | Grade | Ml |
|--------------|-----------------|-------------------|--------------------|---------|------|----------|--------------|------|------------|----------|-----------|-------|----|
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| | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | |

* Verify that the product described herein
conforms to the product standards applicable to the
material and product.

Packhouse Copy 

Coolstore Inwards Copy 

Coolstore Outwards Copy 

0039419734 000 080 001 5

0039419734 000 080 001 5

0039419734 000 080 001 5