

### **Peaches and nectarines**









### **Quality Standards**

- UE standards are based on UN/ECE text
- A new one was published in 2004, that modifies the 1999 one
- During this time only one modification was stated in 2003:
- "The peaches and nectarines must be sufficiently developed and display satisfactory ripeness."
- OCDE interpretation brochure is dated in 1979
- Its interpretation is still the official one and we have to refer to it.
- There are plans to update it



### **Novelties in the new standard**

- Minimum maturity requirements based on objective measurements
- For marking: identification of the seller established within the Community for the prepackages
- For marking: a) colour of the flesh; b) name of the variety (optional)
- Commercial specifications: minimal sugar content and maximum firmness (optional); new requirements in the sense that their measurement is compulsory, and their marking optional.



## **Definition of produce**

- Peaches and nectarines grown from varieties of Prunus persica Sieb and Zucca
- It includes a concise footnote to precise
- We can expand this note and precise that this definition includes:
  - peaches characterised by a velvety skin
  - nectarines characterised by a smooth skin
  - peaches and nectarines with attached stone (clingstone)
  - peaches and nectarines with anattached stone (freestone)
  - peaches and nectarines with white flesh
  - peaches and nectarines with yellow flesh
- We know clingstones peaches as PAVIAS, and
- We know clingstones nectarines as GRUÑONES



### **Diversion from definition**

- Close to this produce we can mention "plain peaches" and "plain nectarines"
- We call them "paraguayos" and "platerinas"
- They belong to Rosaceas family and to Prunus persica species as well
- Old times existence, but recent commercial presence
- White or yellow flesh, as well; plain shape
- High content of fresh juice and sweet flavour
- Usually you can find them in the French and Spanish market since last week of June until the end of July







### **Production**

- The main production area is the South of Europe, not regarding the away California in the US
- Italy, Spain, Greece and France in the UE
- Europech is a annual professional meeting held in Perpignan, South of France, where they give a forecast of the harvest of the year
- Alcarras is a town in the Northeast of Spain where Catalonia Qualitat (fruit producers organisation in Catalonia) organizes a parallel professional meeting connected to Europech
- I got the information and previous photos from Catalunya Qualitat



# **Production figures in 2006**

- 1.661.000 tons in Italy
- 1.168.000 tons in Spain
- 694.000 tons in Greece
- 405.000 tons in France
- 4 millions tons is the reference point the professionals consider suitable for the market conveniences

# Période de commercialisation des pêches Europêch et nectarines

|        | Avril | Mai    | Juin | Juillet | Aôut   | Septembre | Octobre | Novembre |  |
|--------|-------|--------|------|---------|--|-----------|---------|----------|--|
| Espagn | е     |        |      |         |  |           |         |          |  |
| Italie |       | l<br>I |      |         |  | l<br>I    |         |          |  |
| Grèce  |       |        |      |         | The state of the s |           |         | 2 45     |  |
| France | •     |        |      |         |  |           |         |          |  |

### Conclusion et perspectives Europêch'

- modification de la répartition variétale au profit des nectarines à chair jaune

| -  | 0  | N  |    |  |
|----|----|----|----|--|
| 4  | .0 | 60 |    |  |
| J  | В  | J  | В  |  |
| 70 | 30 | 75 | 25 |  |

- réorientation du calendrier variétal ...
  - nouveaux types de produits
  - gamme variétale et types de saveur

# Le verger de demain europêch

# Répartition par type de fruits

|           |      |      |      | *    |      |      |              |      |
|-----------|------|------|------|------|------|------|--------------|------|
| Pays      | ITA  | LIE  | GR   | ECE  | ESP  | AGNE | FRA          | NCE  |
|           | 1996 | 2006 | 1996 | 2006 | 1996 | 2006 | 1996         | 2006 |
| PECHE     | 63   | 50   | 71   | 72   |      | 45   | 62           | 45   |
| NECTARINE | 37   | 50   | 29   | 28   | 49   | 56   | 38           | 55   |
|           |      |      |      |      |      |      | Maria Salara |      |

# Predictions in Italy

- Less surface and better yielding, final result: slight decrease in production
- Peaches downwards, nectarines upwards, in production
- Emily-Romagna and the South, Sicily inclusive, are the main production areas

# Predictions in Spain

- 41 % Pavias, 32 % Nectarines, 24 % Peaches, 1 % paraguayos
- Pavias are very important in the processing field
- June and beginning of July, the main production period
- Increase in peaches and nectarines, while there is a decrease in apples and pears

### Predictions in Greece

- Macedonia is the main production area
- 24 % increase in production for this year
- Last year were affected by a decrease in production because of weather factors, what makes this year increase a recovery to normal figures

### Predictions in France

- Less surface, but relativily minor decrease in production
- French market in favour of white flesh
- No renovation in yellow flesh varieties and new varieties in white flesh
- June and first half of July, time of competition and confrontation with foreign offer

# Concept of quality I

- What professional search:
  - presentation
  - flavour
  - shelf life
  - firmness

# Concept of quality II

- Probably, quality is not the same concept for the buyer in big distribution than for the consumer
- The buyer in big distribution expects resistance for 15 days on the shelfs of the supermarket
- The consumer expects good flavour which would resist 2 or 3 days on the shelf, more juice, more sugar, certain level of acidity
- Small sizes give worse results
- Nectarines give better results

# Shape and developement

#### We can not admit:

- Effects of freezing
- Insects bites in the initial development
- Obstacles in the developement due to other branches
- "twins" fruits

There are varieties more prone to give defects of shape and developement

The Standard links the developement and the ripeness in the sense that the fruit could evolve as far as the desirable commercial maturity

### Colour

- The colour of skin and flesh depends on variety.
- Anyway, soil, culture, climate and other factors can affect its tone and intensity
- We have to take into account the fact that if maturity evolves after harvesting, the colour does not change

# Ripeness

- In climateric fruits, in which phisiology evolves after harvesting, the commercial maturity is a concept that comes before the consumption o phisiological ripeness
- If fruit is collected with consumption maturity, transport and commercial conditions have to be very special to prevent overripeness in destination

### Freshness and condition

- "Condition" is a freshness and ripeness factor that admits transport and handling until destination
- Overripen fruits are fruits that lost their condition and underripen fruits are fruits that will never reach the ripeness for consumption
- "Dryness" on peaches can be favoured by a low relative humidity and an excess in the flow of the air in the fridge storage

### **Bruises**

- Singular mention in the Standard:
  - "...must be carefully picked"
- This is due to the extreme fragility of this fruit
- This mention is singular because this is not a quality factor of the fruit in the inspection spot
- It wants to remind us how easily a careless handling can cause bruises that damage the flesh with a consequent negative evolution

### Intact fruits

- Fruits with open injuries, not scared, are not admitted, whatever the size of the injury, because it can be a point of contamination
- Fruits, damaged by hail, even if injuries are not open, are not admitted, for the fact that the flesh is damaged, prone to evolve negatively

### Skin defects

#### These can be due to:

- Rubbing of branches
- Insect attacks
- Scared injuries
- Weather conditions, like hail
- Excess of environement humidity, that could cause cracking during the ripeness process

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# Phisiological defects

 Fruits split is not admitted because this can be a factor of contamination

 "Twins" fruits are considered a defect of shape; if you put the two sides apart the consequent open injury makes them not admitted

## Maturity measurements

Objective measurement of developement and state of maturity:

- Refractometer index over 8 ° Brix
- Firmeness of the flesh measured by the penetrometer, lower than 6,5 Kg
- Measurements, taken according to the OECD Guidance on Objectives Tests

## Controversy

- Firmness maximum is driven to controversy
- Spain suggests modifications on it

 In order to show the lack of relationship between sugar content, ripeness and firmness of the flesh, next slide shows the results of sampling program put into effect at inspection level in Spain

#### INF.11 Sampling Programme SOIVRE 2005-2006

#### **Contribution from Spain**

#### Relationship between firmness > 6,5 and the subjective test.

| Dain I | Firman   | T4-    | 1 0        |
|--------|----------|--------|------------|
| Brix   | Firmness | Taste  | Appearance |
| 15,10  | C FO     | DIDE   | RIPE       |
| 10,00  |          | RIPE   | RIFE       |
| 14.00  | 6,50     |        |            |
|        | 6,50     |        | - LINIEIEE |
| 9,60   |          | RIPE   | UNRIPE     |
| 9,40   |          | RIPE   | UNRIPE     |
| 11,20  |          | RIPE   | RIPE       |
| 10,50  | 6,50     |        |            |
| 12,00  | 6,50     |        |            |
| 13,00  | 6,50     |        |            |
| 11,50  | 6,50     |        |            |
|        | 6,50     |        |            |
| 12,20  | 6,50     |        | - FUE      |
| 10,60  |          | RIPE   | RIPE       |
| 9,40   |          | RIPE   | RIPE       |
| 14,00  |          | RIPE   | RIPE       |
| 10,00  |          | UNRIPE | UNRIPE     |
| 13,10  |          | RIPE   | RIPE       |
| 13,00  |          | RIPE   | RIPE       |
| 15,70  |          | RIPE   | RIPE       |
| 14,30  |          | RIPE   | RIPE       |
| 13,35  | 6,52     |        |            |
| 12,30  | 6,53     |        |            |
| 12,67  |          | RIPE   | RIPE       |
| 9,90   |          | RIPE   | RIPE       |
| 9,30   |          | RIPE   | RIPE       |
| 14,30  |          | RIPE   | RIPE       |
| 11,00  |          | RIPE   | RIPE       |
| 13,60  |          | RIPE   | RIPE       |
| 16,90  |          | RIPE   | RIPE       |
| 15,50  |          | RIPE   | RIPE       |
| 10,00  |          | RIPE   | RIPE       |
| 11,30  | 6,70     |        |            |
| 10,20  | 6,70     | RIPE   | RIPE       |
| 14,84  | 6,72     |        |            |
| 11,94  | 6,73     |        |            |
| 11,38  | 6,76     |        |            |
| 13,70  | 6,80     | RIPE   | RIPE       |
| 14,50  | 6,80     | RIPE   | RIPE       |
| 10,40  | 6,80     | RIPE   | RIPE       |
| 11,00  | 6,80     | RIPE   | RIPE       |
| 10,90  | 6,80     | RIPE   | RIPE       |
| 12,00  | 6,80     | RIPE   | RIPE       |
| 13,50  | 6,80     |        |            |
| 17,40  | 6,80     | RIPE   | RIPE       |
| 13,50  | 6,80     |        |            |
| 9,00   | 6,80     | RIPE   | RIPE       |
| 13,50  | 6,80     | _      |            |
| 13,00  | 6,87     | RIPE   | RIPE       |
| 10,30  | 6,90     |        | RIPE       |
|        | _,00]    | _      | 1          |

| Brix                                      | Firmness                             | Taste  | Appearance |
|---|--------------------------------------|--------|------------|
|   |                                      |        | and colour |
| 9,90                                      | 6,90                                 | RIPE   | RIPE       |
| 18,40                                     | 6,90                                 | RIPE   | RIPE       |
| 12,70                                     | 6,90                                 | RIPE   | RIPE .     |
| 14,36                                     | 6,92                                 | RIPE   | RIPE       |
| 12,50                                     | 6,95                                 |        |            |
| 12,90                                     | 7,00                                 | RIPE   | RIPE       |
| 14,90                                     | 7,00                                 | RIPE   | RIPE       |
| 14,00                                     | 7,00                                 | RIPE   | RIPE       |
| 13,20                                     | 7,00                                 | RIPE   | RIPE       |
| 14,20                                     | 7,00                                 | RIPE   | RIPE       |
| 10,00                                     | 7,00                                 | RIPE   | RIPE       |
| 11,00                                     | 7,00                                 | RIPE   | RIPE       |
| 11,50                                     | 7,00                                 | RIPE   | RIPE       |
| 13,00                                     | 7,00                                 |        |            |
| 11,50                                     | 7,00                                 | RIPE   | RIPE       |
| 13,00                                     | 7,00                                 |        |            |
| 12,00                                     | 7,00                                 | RIPE   | RIPE       |
| 13,08                                     | 7,07                                 |        |            |
| 15,60                                     | 7,10                                 | RIPE   | RIPE       |
| 13,20                                     |                                      | RIPE   | RIPE       |
| 15,20                                     | 7,10                                 | RIPE   | RIPE       |
| 13,00                                     | 7,10                                 | RIPE   | RIPE       |
| 12,80                                     | 7,10                                 | RIPE   | RIPE       |
| 8,00                                      | 7,17                                 | UNRIPE | UNRIPE     |
| 14,37                                     | 7,19                                 |        |            |
| 13,70                                     |                                      | RIPE   | RIPE       |
| 14,00                                     | 7,20                                 | RIPE   | RIPE       |
| 13,48                                     | 7,22                                 | RIPE   | RIPE       |
| 13,72                                     | 7,26                                 |        |            |
| 16,40                                     | 7,30                                 | RIPE   | RIPE       |
| 17,40                                     | 7,30                                 | RIPE   | RIPE       |
| 16,20                                     |                                      | RIPE   | RIPE       |
| 13,18                                     | 7,30                                 |        |            |
| 14,30                                     | 7,37                                 | RIPE   | RIPE       |
| 13,90                                     |                                      | RIPE   | RIPE       |
| 12,50                                     | 7,50                                 | RIPE   | RIPE       |
| 10,00                                     | 7,50                                 | RIPE   | RIPE       |
| 12,00                                     | 7,50                                 | RIPE   | RIPE       |
| 15,65                                     | 7.50                                 |        |            |
|   | 7,59                                 |        |            |
| 11,70                                     |                                      | RIPE   | RIPE       |
|   | 7,60                                 | RIPE   | RIPE       |
| 11,70                                     | 7,60<br>7,68                         | RIPE   |            |
| 11,70<br>13,67<br>15,20<br>17,70          | 7,60<br>7,68<br>7,70                 |        | RIPE       |
| 11,70<br>13,67<br>15,20<br>17,70          | 7,60<br>7,68<br>7,70<br>8,00         | RIPE   |            |
| 11,70<br>13,67<br>15,20                   | 7,60<br>7,68<br>7,70<br>8,00<br>8,17 | RIPE   | RIPE       |
| 11,70<br>13,67<br>15,20<br>17,70<br>13,37 | 7,60<br>7,68<br>7,70<br>8,00         | RIPE   | RIPE       |

## Complementary arguments

- New varieties that tend to a higher firmness of the flesh as a quality factor, provided ripeness is right according to other measurements
- I have attended a presentation of variety research from the "Instituto Sperimentaly per la Frutticultura ISF in Rome, Italy"
- The series Ghiaccio, white flesh and white skin, was presented as giving unique characteristics, like,
  - 30 days on the tree, with no change
    - 30 days in due storage, with no change
    - 19 º Brix
    - very special flavour
    - exceptionally very firm flesh

# Complementary arguments

Series Kalos, as the most recent researched variety

Very nice appearance and colour

Very firm flesh

Very sweet



















