

UPOV

TG/LEM-LIM(proj.3)

ORIGINAL: English

DATE: February 24, 2003

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT*CITRUS* L. – Group 3**LEMONS**

and

LIMES**GUIDELINES****FOR THE CONDUCT OF TESTS****FOR DISTINCTNESS, UNIFORMITY AND STABILITY**Alternative Names:

[*See the list of alternative names and corresponding subgroups on page 2*]

ASSOCIATED DOCUMENTS

These guidelines should be read in conjunction with document TG/1/3, “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants” (hereinafter referred to as the “General Introduction”) and its associated “TGP” documents.

Other associated documents:

CITRUS L. – GROUP 1: TG/MANDA*
CITRUS L. – GROUP 2: TG/ORANG*
CITRUS L. – GROUP 4: TG/GRA-PUM*
CITRUS L. – GROUP 5: TG/PONCI*

* Final relevant TG’s reference to be inserted in due time.

GROUP 3 – ALTERNATIVE NAMES AND CORRESPONDING SUBGROUPS **

| <i>Latin</i> | <i>Subgroup</i> | <i>English</i> | <i>French</i> | <i>German</i> | <i>Spanish</i> |
|--|-----------------|----------------|---------------|------------------------|----------------------------------|
| <i>Citrus assamensis</i> S. Dutta & S.C. Bhattach. | LEM | | | | |
| <i>Citrus aurantiifolia</i> (Christm.) Swingle | SAL | Mexican Lime | Limettier | Limette | Lima mexicana, Limón mexicano |
| <i>Citrus aurata</i> Risso | LEM | | | | |
| <i>Citrus balotina</i> Poit. & Turpin | LEM | | | | |
| <i>Citrus bergamia</i> Risso & Poit. | SAL | | | | |
| <i>Citrus davaoensis</i> (Wester) Tanaka | SAL | | | | |
| <i>Citrus duttae</i> Tanaka | LEM | | | | |
| <i>Citrus excelsa</i> Wester | SAL | | | | |
| <i>Citrus hyalopulpa</i> Tanaka | SAL | | | | |
| <i>Citrus jambhiri</i> Lush. | LEM (RLM) | Rough Lemon | Citronnier | Rauhshalige Zitrone | Limón rugoso |
| <i>Citrus javanica</i> Blume | SAL | | | | |
| <i>Citrus karna</i> Raf. | LEM | | | | |
| <i>Citrus latifolia</i> (Yu. Tanaka) Tanaka | SAL (LAL) | Acid Lime | Limettier | Persische Limette | Lima ácida |
| <i>Citrus limetta</i> Risso | LEM | | | | |
| <i>Citrus limettioides</i> Tanaka | SAL (SWL) | Sweet Lime | Limettier | Zitrone | Lima dulce |
| <i>Citrus limon</i> (L.) Burm. f. | LEM | Lemon | Citronnier | Zitrone | Limón |
| <i>Citrus limon</i> (L.) Burm. x <i>C. aurantifolia</i> (Christm.) Swing. | HLL | Lemonime | | | |
| <i>Citrus limonia</i> Osbeck | LEM | | | | |
| <i>Citrus longilimon</i> Tanaka | LEM | | | | |
| <i>Citrus longispina</i> Wester | SAL | | | | |
| <i>Citrus lumia</i> Risso & Poit. | LEM | | | | |
| <i>Citrus macrolimon</i> Tanaka | LEM | | | | |
| <i>Citrus megaloxycarpa</i> Lush. | LEM | | | | |
| <i>Citrus mellarosa</i> Risso | LEM | | | | |
| <i>Citrus meyeri</i> Yu. Tanaka | LEM | | | | |
| <i>Citrus montana</i> (Wester) Tanaka | SAL | | | | |
| <i>Citrus obversa</i> Hassk. | SAL | | | | |
| <i>Citrus ovata</i> Hassk. | SAL | | | | |
| <i>Citrus papaya</i> Hassk. | SAL | | | | |
| <i>Citrus peretta</i> Risso | LEM | | | | |
| <i>Citrus pseudolimon</i> Tanaka | LEM | | | | |
| <i>Citrus pseudolimonum</i> Wester | SAL | | | | |
| <i>Citrus pyriformis</i> Hassk. | LEM | | | | |

** These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Web Site (www.upov.int), for the latest information.]

| <i>Latin</i> | <i>Subgroup</i> | <i>English</i> | <i>French</i> | <i>German</i> | <i>Spanish</i> |
|-------------------------------|-----------------|----------------|---------------|---------------|----------------|
| <i>Citrus rissoi</i> Risso | LEM | | | | |
| <i>Citrus sarbati</i> Tanaka | LEM | | | | |
| <i>Citrus webberii</i> Wester | SAL | | | | |

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1. Subject of these Guidelines

1.1 The following Test Guidelines have been developed from the standard Citrus Test Guidelines template. In particular, the Table of Characteristics has been selected from the overall set of citrus characteristics presented in the Annex.

1.2 These Test Guidelines apply to all varieties of the following group of the genus *Citrus* L. (Rutaceae), and their hybrids:

Group 3. LEMONS AND LIMES AND THEIR HYBRIDS

See page 2 for the list of species and their subgroups.

1.3 In the case of hybrids between species within the genus *Citrus* L., the Test Guidelines to be used should be those for which the overall appearance of fruit is most suited. However, if the variety cannot be clearly distinguished from all varieties covered by other Test Guidelines, those other Test Guidelines should also be used to examine the variety.

1.4 In the case of hybrids between species within the genus *Citrus* L., even where the variety is clearly distinguishable from all other varieties covered by other Test Guidelines, it may still be necessary to use additional citrus characteristics to examine the variety. In these circumstances the characteristics from the Test Guidelines covering the parent species, or characteristics from the overall set of citrus characteristics, presented in the Annex, may be particularly useful.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of bud sticks of 6 to 10 mm in diameter (one year old), each cut just behind a typical fruit or, if required by the competent authorities, one-year-old grafted trees. In the case of rootstock varieties, rooted cuttings or polyembryonic seeds may be required in addition.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

10 bud sticks sufficient to establish 10 plants or,
if required by the competent authorities,
10 one-year-old grafted trees.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease. It should preferably not be obtained from *in vitro* propagation. If it has been produced by *in vitro* propagation this fact must be stated by the applicant.

2.5 The plant material must not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Duration of Tests*

The minimum duration of tests should normally be two independent growing cycles. For the purposes of these Test Guidelines, a growing cycle refers to the fruiting cycle.

3.2 *Testing Place*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

3.3 *Conditions for Conducting the Examination*

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. In particular, a satisfactory crop of fruit must be produced in at least two fruiting cycles. Where necessary for the examination of fruit varieties, a standard specified rootstock should be used for each group.

3.3.2 All observations should be made on plants of the same age not less than 3 years after planting. The age of the plants should be specified.

3.4 *Test Design*

3.4.1 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.4.2 Each test should be designed to result in a total of, at least, 5 plants.

3.5 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations determined by measuring or counting should be made on 5 plants or 2 parts taken from each of 5 plants.

3.6 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.1.2 Consistent Differences

The minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 *Uniformity*

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 5 plants no off-types are allowed.

4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Young leaf: presence of anthocyanin coloration (characteristic 5)
- (b) Fruit: length (characteristic 32)
- (c) Fruit: presence of neck (characteristic 37)
- (d) Fruit: presence of nipple (characteristic 42)
- (e) Fruit surface: predominant color (characteristic 49)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic. Each example variety is followed by the abbreviation of its subgroup in brackets.

6.5 *Legend*

- (*) Asterisked characteristic – see section 6.1.2
- (+) See Explanations on the Table of Characteristics in Chapter 8, Section 8.2
- QL Qualitative characteristic – see section 6.3
- QN Quantitative characteristic – see section 6.3
- PQ Pseudo-Qualitative characteristic – see section 6.3
- c#. Corresponding number of characteristic in the citrus overall table of characteristics
- (a)-(h) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

6.6 *Abbreviations*

See page 2 for the list of species and their subgroups.

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

| | English | français | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
|-------------------------|---|--|---|--|--|---------------|
| 1. | Ploidy | Ploïdie | Ploidie | Ploidía | | |
| QL | diploid | diploïde | diploid | diploide | | 2 |
| | triploid | triploïde | triploid | triploide | | 3 |
| c1. | tetraploid | tetraploïde | tetraploid | tetraploide | | 4 |
| 2. (*) (+) | Tree: growth habit | Arbre: port | Baum: Wuchstyp | Árbol: porte | | |
| PQ | upright | droit | aufrecht | erguido | Lisbon Frost (LEM) | 1 |
| | spreading | étalé | breitbuschig | abierto | Verna (LEM) | 2 |
| c2. | drooping | retombant | hängend | colgante | | 3 |
| 3. | Tree: density of spines | Arbre: densité des épines | Baum: Dichte der Stacheln | Árbol: densidad de las espinas | | |
| QN | absent or sparse | absentes ou éparses | fehlend oder locker | ausente o laxa | Colima 02 (SAL) | 1 |
| | intermediate | intermédiaires | mittel | media | | 2 |
| c3. | dense | denses | dicht | densa | | 3 |
| 4. | Tree: length of spines | Arbre: longueur des épines | Baum: Länge der Stacheln | Árbol: longitud de las espinas | | |
| QN | short | courtes | kurz | cortas | Eureka (LEM) | 3 |
| | medium | moyennes | mittel | medias | Fino (LEM) | 5 |
| c4. | long | longues | lang | largas | Chaparro (LEM) | 7 |
| 5. (*) (a) | Young leaf: presence of anthocyanin coloration | Jeune feuille: présence de pigmentation anthocyanique | Junges Blatt: Vorhandensein von Anthocyanfärbung | Hoja joven: presencia de pigmentación antocianica | | |
| QL | absent | absente | fehlend | ausente | Flor de Arancio (LEM) | 1 |
| c6. | present | présente | vorhanden | presente | Verna (LEM) | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|----------------|---|---|---|--|---|---------------|
| 6. (a) | Young leaf: intensity of anthocyanin coloration | Jeune feuille: intensité de la pigmentation anthocyanique | Junges Blatt: Intensität der Anthocyanfärbung | Hoja joven: intensidad de la pigmentación antocianica | | |
| QN | weak | faible | gering | débil | Tahiti (LAL) | 3 |
| | medium | moyenne | mittel | media | Verna (LEM) | 5 |
| c7. | strong | forte | stark | fuerte | | 7 |
| 7. (b) | Leaf blade: length (apical leaflet in case of compound leaf) | Limbe: longueur (foliole apicale en cas de feuille composée) | Blattspreite: Länge (apikales Teilblatt bei zusammengesetztem Blatt) | Limbo: longitud (foliolo atípico en caso de hoja compuesta) | | |
| QN | short | court | kurz | corto | Mexicana (SAL) | 3 |
| | medium | moyen | mittel | medio | Tahiti (LAL) | 5 |
| c10. | long | long | lang | largo | Fino (LEM) | 7 |
| 8. (b) | Leaf blade: width (as for 7) | Limbe: largeur (comme pour 7) | Blattspreite: Breite (wie für 7) | Limbo: anchura (como para 7) | | |
| QN | narrow | étroit | schmal | estrecho | Mexicana (SAL) | 3 |
| | medium | moyen | mittel | medio | Tahiti (LAL) | 5 |
| c11. | broad | large | breit | ancho | Fino (LEM) | 7 |
| 9. (b) | Leaf blade: ratio length/width (as for 7) | Limbe: rapport longueur/largeur (comme pour 7) | Blattspreite: Verhältnis Länge/Breite (wie für 7) | Limbo: relación longitud/anchura (como para 7) | | |
| QN | small | faible | klein | pequeño | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c12. | large | élevé | groß | grande | | 7 |
| 10. (b) | Leaf blade: shape in cross section (as for 7) | Limbe: forme en section transversale (comme pour 7) | Blattspreite: Form im Querschnitt (wie für 7) | Limbo: forma en sección transversal (como para 7) | | |
| QN | straight or weakly concave | droit ou légèrement concave | gerade oder leicht konkav | recto o ligeramente cóncavo | | 1 |
| | intermediate | intermédiaire | mittel | intermedio | | 2 |
| c17. | strongly concave | fortement concave | stark konkav | fuertemente cóncavo | | 3 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|----------------|---|---|---|--|---|---------------|
| 11. (b) | Leaf blade: twisting | Limbe: torsion | Blattspreite: Drehung | Limbo: torsión | | |
| QN | absent or weak | absente ou faible | fehlend oder gering | ausente o débil | Fino (LEM) | 1 |
| | intermediate | intermédiaire | mittel | media | Eureka (LEM) | 2 |
| c18. | strong | forte | stark | fuerte | | 3 |
| 12. (b) | Leaf blade: intensity of green color | Limbe: intensité de la couleur verte | Blattspreite: Intensi- tät der Grünfärbung | Limbo: intensidad del color verde | | |
| QN | light | claire | hell | claro | | 3 |
| | medium | moyenne | mittel | medio | Fino (LEM) | 5 |
| c20. | dark | foncée | dunkel | oscuro | | 7 |
| 13. (b) | Leaf blade: undulation of margin | Limbe: ondulation du bord | Blattspreite: Randwellung | Limbo: ondulación del borde | | |
| QN | absent or weak | absente ou faible | fehlend oder gering | ausente o débil | Fino (LEM) | 1 |
| | intermediate | intermédiaire | mittel | media | Eureka (LEM) | 2 |
| c22. | strong | forte | stark | fuerte | | 3 |
| 14. (b) | Leaf blade: incisions of margin | Limbe: incisions du bord | Blattspreite: Randeinschnitte | Limbo: incisiones del borde | | |
| PQ | absent | absentes | fehlend | ausentes | | 1 |
| | crenate | crénelées | gekerbt | crenadas | | 2 |
| c23. | dentate | dentelées | gezähnt | dentadas | | 3 |
| 15. (+) | Leaf blade: shape of apex | Limbe: forme de l'extrémité | Blattspreite: Form der Spitze | Limbo: forma del ápice | | |
| PQ | acuminate | acuminée | mit aufgesetzter Spitze | acuminado | | 1 |
| | acute | pointue | spitz | agudo | | 2 |
| | obtuse | obtuse | stumpf | obtuso | | 3 |
| c24. | rounded | arrondie | abgerundet | redondeado | | 4 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|--|---------|--|---|--|---|---------------|
| 16. (b) Leaf blade: emargination at tip (+) | | Limbe: échancrure à l'extrémité | Blattspreite: Einkerbung an der Spitze | Limbo: emarginado en la parte superior | | |
| QL | absent | absente | fehlend | ausente | | 1 |
| c25. | present | présente | vorhanden | presente | | 9 |
| 17. (b) Petiole: length | | Pétiole: longueur | Blattstiel: Länge | Pecíolo: longitud | | |
| QN | short | court | kurz | corto | | 3 |
| | medium | moyen | mittel | medio | Fino (LEM) | 5 |
| c26. | long | long | lang | largo | | 7 |
| 18. (b) Petiole: presence of wings | | Pétiole: présence d'ailes | Blattstiel: Vorhandensein von Flügeln | Pecíolo: presencia de alas | | |
| QL | absent | absentes | fehlend | ausentes | Colima 02 (SAL), Fino (LEM) | 1 |
| c27. | present | présentes | vorhanden | presentes | | 9 |
| 19. (b) <u>Varieties with petiole wings present only:</u> Petiole: width of wings | | <u>Seulement les variétés présentant des ailes au pétiole:</u> Pétiole: largeur des ailes | <u>Nur Sorten mit vorhandenen Flügeln am Blattstiel:</u> Blattstiel: Breite der Flügel | <u>Sólo variedades con alas presentes en el pecíolo:</u> Pecíolo: anchura de las alas | | |
| QN | narrow | étroites | schmal | estrechas | | 3 |
| | medium | moyennes | mittel | medias | | 5 |
| c28. | broad | larges | breit | anchas | | 7 |
| 20. (c) Flower bud: (d) presence of anthocyanin coloration | | Bouton floral: présence de pigmentation anthocyanique | Blütenknospe: Vorhandensein von Anthocyanfärbung | Yema floral: presencia de pigmentación antociánica | | |
| QL | absent | absente | fehlend | ausente | Flor de Arancio (LEM) | 1 |
| c29. | present | présente | vorhanden | presente | Verna (LEM) | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|-------------|--|--|---|---|---|---------------|
| 21. | (c) Flower bud: (d) intensity of anthocyanin coloration | Bouton floral: intensité de la pigmentation anthocyanique | Blütenknospe: Intensität der Anthocyanfärbung | Yema floral: intensidad de la pigmentación antociánica | | |
| QN | weak | faible | schwach | débil | Tahiti (LAL) | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c30. | strong | forte | stark | fuerte | Verna (LEM) | 7 |
| 22. | (c) Flower: diameter of calyx | Fleur: diamètre du calice | Blüte: Durchmesser des Kelches | Flor: diámetro del cáliz | | |
| QN | small | petit | klein | pequeño | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c31. | large | grand | groß | grande | | 7 |
| 23. | (c) Flower: length of petal | Fleur: longueur du pétale | Blüte: Länge des Blütenblattes | Flor: longitud del pétalo | | |
| QN | short | court | kurz | corto | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c32. | long | long | lang | largo | | 7 |
| 24. | (c) Flower: width of petal | Fleur: largeur du pétale | Blüte: Breite des Blütenblattes | Flor: anchura del pétalo | | |
| QN | narrow | étroit | schmal | estrecho | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c33. | broad | large | breit | ancho | | 7 |
| 25. | (c) Flower: ratio length/width of petal | Fleur: rapport longueur/largeur du pétale | Blüte: Verhältnis Länge/Breite des Blütenblattes | Flor: relación longitud/anchura del pétalo | | |
| QN | small | faible | klein | pequeño | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c34. | large | élevé | groß | grande | | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|---|---------------|---|---|--|---|---------------|
| 26. (c) Flower: length of stamens | | Fleur: longueur des étamines | Blüte: Länge der Staubfäden | Flor: longitud de los estambres | | |
| QN | short | courtes | kurz | cortos | | 3 |
| | medium | moyennes | mittel | medios | | 5 |
| c35. | long | longues | lang | largos | | 7 |
| 27. (c) Flower: basal union of stamens | | Fleur: union basale des étamines | Blüte: Vereinigung der Staubfäden an der Basis | Flor: unión basal de los estambres | | |
| QL | absent | absente | fehlend | ausente | Fino (LEM) | 1 |
| c36. | present | présente | vorhanden | presente | | 9 |
| 28. (c) Anther: color | | Anthère: couleur | Anthere: Farbe | Antera: color | | |
| PQ | white | blanc | weiß | blanco | | 1 |
| | light yellow | jaune clair | hellgelb | amarillo claro | | 2 |
| c38. | medium yellow | jaune moyen | mittelgelb | amarillo medio | Verna (LEM) | 3 |
| 29. (c) Anther: viable pollen | | Anthère: pollen viable | Anthere: keimfähiger Pollen | Antera: polen viable | | |
| QL | absent | absent | fehlend | ausente | Tahiti (LAL) | 1 |
| c39. | present | présent | vorhanden | presente | | 9 |
| 30. (c) Style: length | | Style: longueur | Griffel: Länge | Estilo: longitud | | |
| QN | short | court | kurz | corto | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c40. | long | long | lang | largo | | 7 |
| 31. Infructescence: clustering of fruits | | Fructification: formation de grappes | Fruchtstand: Früchte in Büscheln | Infructescencia: enracimado de los frutos | | |
| QL | absent | absente | fehlend | ausente | Fino (LEM) | 1 |
| c43. | present | présente | vorhanden | presente | Eureka (LEM) | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|----------------|---|---|--|---|---|---------------|
| 32. (*) | (e) Fruit: length | Fruit: longueur | Frucht: Länge | Fruto: longitud | | |
| QN | short | court | kurz | corto | Mexicana (SAL) | 3 |
| | medium | moyen | mittel | medio | Tahiti (LAL) | 5 |
| c44. | long | long | lang | largo | Eureka (LEM) | 7 |
| 33. (*) | (e) Fruit: diameter | Fruit: diamètre | Frucht: Durchmesser | Fruto: diámetro | | |
| QN | small | petit | klein | pequeño | Mexicana (SAL) | 3 |
| | medium | moyen | mittel | medio | Lunario Ambrojo (LEM) | 5 |
| c45. | large | grand | groß | grande | Fino (LEM) | 7 |
| 34. (*) | (e) Fruit: ratio length/diameter | Fruit: rapport longueur/diamètre | Frucht: Verhältnis Länge/Durchmesser | Fruto: relación longitud/diámetro | | |
| QN | small | faible | klein | pequeño | Tahiti (LAL) | 3 |
| | medium | moyen | mittel | medio | Fino (LEM) | 5 |
| c46. | large | élevé | groß | grande | Verna (LEM) | 7 |
| 35. (*) | (e) Fruit: position of broadest part | Fruit: position de la partie la plus large | Frucht: Position des breitesten Teils | Fruto: posición de la parte más amplia | | |
| QN | towards stalk end | vers l'extrémité pédunculaire | zum Stielende hin | hacia el extremo peduncular | | 1 |
| | at middle | au milieu | in der Mitte | en el medio | Fino (LEM) | 2 |
| c47. | towards distal end | vers la partie distale | zum distalen Ende hin | hacia el extremo distal | | 3 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|----------------|---|---|---|--|---|---------------|
| 36. (+) | (e) Fruit: general shape of proximal part (excluding neck, collar and depression at stalk end) | Fruit: forme générale de la partie proximale (à l'exclusion du col, de la collerette et de la dépression à l'extrémité pédonculaire) | Frucht: allgemeine Form des proximalen Teils (ohne Hals, Kragen und Einsenkung am Stielende) | Fruto: forma general de la parte proximal (excluido el cuello, el collar y la depresión del extremo peduncular) | | |
| PQ | flattened | aplatie | abgeflacht | aplanada | | 1 |
| | slightly rounded | légèrement arrondie | leicht abgerundet | ligeramente redondeada | | 2 |
| | strongly rounded | fortement arrondie | stark abgerundet | fuertemente redondeada | | 3 |
| c49. | tapered | effilée | spitz | afilada | | 4 |
| 37. (+) | (e) Fruit: presence of neck | Fruit: présence d'un col | Frucht: Vorhandensein eines Halses | Fruto: presencia de un cuello | | |
| QL | absent | absent | fehlend | ausente | Lunario (LEM) | 1 |
| c50. | present | présent | vorhanden | presente | Verna (LEM) | 9 |
| 38. (+) | (e) <u>Necked varieties only:</u> Fruit: length of neck | <u>Seulement les variétés dont le fruit présente un col:</u> Fruit: longueur du col | <u>Nur Sorten mit Fruchthals:</u> Frucht: Länge des Halses | <u>Sólo variedades con fruto con cuello:</u> Fruto: longitud del cuello | | |
| QN | short | court | kurz | corto | Fino (LEM) | 3 |
| | medium | moyen | mittel | medio | Lisbon Frost (LEM) | 5 |
| c51. | long | long | lang | largo | Verna (LEM) | 7 |
| 39. (+) | (e) <u>Only varieties without fruit neck:</u> Fruit: presence of depression at stalk end | <u>Seulement les variétés dont le fruit ne présente pas de col:</u> Fruit: présence d'une dépression à l'extrémité pédonculaire | <u>Nur Sorten ohne Fruchthals:</u> Frucht: Vorhandensein einer Einsenkung am Stielende | <u>Sólo variedades con fruto sin cuello:</u> Fruto: presencia de una depresión en el extremo peduncular | | |
| QL | absent | absente | fehlend | ausente | Lunario (LEM) | 1 |
| c53. | present | présente | vorhanden | presente | Messina (LEM) | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|-------------|---|---|--|--|---|---------------|
| 40. | (e) <u>Only varieties without fruit neck:</u> Fruit: depth of depression at stalk end | <u>Seulement les variétés dont le fruit ne présente pas de col:</u> Fruit: profondeur de la dépression à l'extrémité pédonculaire | <u>Nur Sorten ohne Fruchthals:</u> Frucht: Tiefe der Einsenkung am Stielende | <u>Sólo variedades con fruto sin cuello:</u> Fruto: profundidad de la depresión en el extremo peduncular | | |
| QN | shallow | peu profonde | flach | poco profunda | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c54. | deep | profonde | tief | profunda | | 7 |
| 41. | (e) <u>Fruit: general shape of distal part (excluding nipple, bulging of navel and depression at distal end)</u> | <u>Fruit: forme générale de la partie distale (à l'exclusion du mamelon, de la courbure du fruit secondaire et de la dépression à l'extrémité distale)</u> | <u>Frucht: allgemeine Form des distalen Teils (ohne Warze, Wölbung der sekundären Frucht und Einsenkung am distalen Ende)</u> | <u>Fruto: forma general de la parte distal (excluido el mamelón o pezón, el abultamiento del ombligo y la depresión en el extremo distal)</u> | | |
| QN | flattened | aplatie | abgeflacht | aplanada | Messina (LEM) | 1 |
| | slightly rounded | légèrement arrondie | leicht abgerundet | ligeramente redondeada | Eureka (LEM) | 2 |
| c64. | strongly rounded | fortement arrondie | stark abgerundet | fuertemente redondeada | Verna (LEM) | 3 |
| 42. | (e) <u>Fruit: presence of nipple</u> | <u>Fruit: présence d'un mamelon</u> | <u>Frucht: Vorhandensein einer Warze</u> | <u>Fruto: presencia de un mamelón o pezón</u> | | |
| QL | absent | absent | fehlend | ausente | Mexicana (SAL), Tahiti (LAL) | 1 |
| c68. | present | présent | vorhanden | presente | Verna (LEM) | 9 |
| 43. | (e) <u>Fruit: prominence of nipple</u> | <u>Fruit: proéminence du mamelon</u> | <u>Frucht: Herausragen der Warze</u> | <u>Fruto: prominencia del mamelón o pezón</u> | | |
| QN | weak | faible | gering | débil | Messina (LEM) | 3 |
| | medium | moyenne | mittel | medio | Fino (LEM) | 5 |
| c69. | strong | forte | stark | fuerte | Verna (LEM) | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|-------------|--|--|---|---|---|---------------|
| 44. | (e) Fruit: diameter of stylar scar | Fruit: diamètre de la cicatrice styloïde | Frucht: Durchmesser der Griffelnarbe | Fruto: diámetro de la cicatriz estilar | | |
| QN | small | petit | klein | pequeña | | 3 |
| | medium | moyen | mittel | media | | 5 |
| c73. | large | grand | groß | grande | | 7 |
| 45. | (e) Fruit: persistence of style | Fruit: persistance du style | Frucht: Persistenz des Griffels | Fruto: persistencia del estilo | | |
| PQ | none | aucune | fehlend | ninguna | | 1 |
| | partial | partielle | teilweise gegeben | parcial | | 2 |
| c75. | total | totale | vollständig gegeben | total | | 3 |
| 46. | (e) Fruit: presence of radial grooves at distal end | Fruit: présence de cannelures radiales à l'extrémité distale | Frucht: Vorhandensein radialer Furchen am distalen Ende | Fruto: presencia de acanaladuras radiales en el extremo distal | | |
| QL | absent | absentes | fehlend | ausentes | | 1 |
| c79. | present | présentes | vorhanden | presentes | | 9 |
| 47. | (e) Fruit: expression of radial grooves at distal end | Fruit: expression des cannelures radiales à l'extrémité distale | Frucht: Ausprägung der radialen Furchen am distalen Ende | Fruto: expresión de las acanaladuras radiales en el extremo distal | | |
| QN | weak | faible | gering | débil | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c80. | strong | forte | stark | fuerte | | 7 |
| 48. | (e) Fruit: color variegation | Fruit: panachure de la couleur | Frucht: Pana-chierung der Farbe | Fruto: variegación del color | | |
| QL | absent | absente | fehlend | ausente | | 1 |
| c81. | present | présente | vorhanden | presente | | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|-------------|--|---|---|--|---|---------------|
| 49. | (e) Fruit surface: (f) predominant color | Fruit: couleur prédominante à la surface | Fruchtoberfläche: Hauptfarbe | Superficie del fruto: color predominante | | |
| PQ | green | vert | grün | verde | | 1 |
| | yellow green | vert-jaune | gelbgrün | verde amarillento | Tahiti (LAL) | 2 |
| | light yellow | jaune clair | hellgelb | amarillo claro | Fino (LEM) | 3 |
| | medium yellow | jaune moyen | mittelgelb | amarillo medio | Canaria (SWL) | 4 |
| c82. | yellow orange | orange-jaune | gelborange | naranja amarillento | Variegado (LEM) | 5 |
| 50. | (e) Fruit surface: (*) (f) glossiness | Surface du fruit: brillance | Fruchtoberfläche: Glanz | Superficie del fruto: brillo | | |
| QN | absent or very weak | absente ou très faible | fehlend oder sehr gering | ausente o muy débil | | 1 |
| | weak | faible | gering | débil | Eureka (LEM) | 3 |
| | medium | moyenne | mittel | medio | | 5 |
| | strong | forte | stark | fuerte | | 7 |
| c85. | very strong | très forte | sehr stark | muy fuerte | | 9 |
| 51. | (e) Fruit surface: (f) roughness | Surface du fruit: rugosité | Fruchtoberfläche: Rauheit | Superficie del fruto: rugosidad | | |
| QN | smooth | lisse | glatt | lisa | Lunario (LEM) | 3 |
| | medium | intermédiaire | mittel | media | Fino (LEM) | 5 |
| c86. | rough | rugueuse | rauh | rugosa | Campisi (LEM) | 7 |
| 52. | (e) Fruit surface: size of (f) oil glands | Surface du fruit: taille des glandes à huile | Fruchtoberfläche: Größe der Öldrüsen | Superficie del fruto: tamaño de las glándulas de aceite | | |
| PQ | all more or less the same size | toutes plus ou moins de la même taille | alle mehr oder weniger gleich groß | todas más o menos del mismo tamaño | | 1 |
| c87. | larger ones interspersed by smaller ones | grandes et petites intercalées | größere vermischt mit kleineren | glándulas grandes intercaladas con otras más pequeñas | | 2 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|-------------|---|---|---|---|---|---------------|
| 53. | (e) Fruit surface: size of (f) larger oil glands | Surface du fruit: taille des glandes à huile les plus grosses | Fruchtoberfläche: Größe der größeren Öldrüsen | Superficie del fruto: tamaño de las glándulas de aceite más grandes | | |
| QN | small | petites | klein | pequeñas | | 3 |
| | medium | moyennes | mittel | medianas | | 5 |
| c88. | large | grosses | groß | grandes | | 7 |
| 54. | (e) Fruit surface: (f) conspicuousness of larger oil glands | Surface du fruit: netteté des glandes à huile les plus grosses | Fruchtoberfläche: Sichtbarkeit der größeren Öldrüsen | Superficie del fruto: visibilidad de las glándulas de aceite más grandes | | |
| QN | weak | faible | gering | débil | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c89. | strong | forte | stark | fuerte | | 7 |
| 55. | (e) Fruit surface: (f) presence of pitting and pebbling on oil glands | Surface du fruit: présence de dépression et de protubérance sur les glandes à huile | Fruchtoberfläche: Vorhandensein von Grübchen und Körnern an den Öldrüsen | Superficie del fruto: presencia de picado y granulado en las glándulas de aceite | | |
| PQ | pitting and pebbling absent | dépression et protubérance absentes | Grübchen und Körner fehlend | picado y granulado ausentes | | 1 |
| | pitting absent, pebbling present | dépression absente, protubérance présente | Grübchen fehlend, Körner vorhanden | picado ausente, granulado presente | | 2 |
| | pitting present, pebbling absent | dépression présente, protubérance absente | Grübchen vorhanden, Körner fehlend | picado presente, granulado ausente | | 3 |
| c90. | pitting and pebbling present | dépression et protubérance présentes | Grübchen und Körner vorhanden | picado y granulado presentes | | 4 |
| 56. | (e) <u>Varieties with</u> (f) <u>pitting only</u>: Fruit surface: density of pitting on oil glands | <u>Variétés avec dé-</u> <u>pression seulement</u>: Surface du fruit: densité de la dépres- sion sur les glandes à huile | <u>Nur Sorten mit</u> <u>Grübchen</u>: Frucht- oberfläche: Dichte der Grübchen an den Öldrüsen | <u>Sólo variedades con</u> <u>picado</u>: Superficie del fruto: densidad del picado en las glándulas de aceite | | |
| QN | sparse | éparse | locker | dispersa | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c91. | dense | dense | dicht | densa | | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|----------------|---|--|--|---|---|---------------|
| 57. (*) | (e) Fruit rind: thickness (f) | Écorce du fruit: épaisseur | Fruchtschale: Dicke | Corteza del fruto: espesor | | |
| QN | thin | fine | dünn | delgada | | 3 |
| | medium | moyenne | mittel | media | Messina (LEM), Mexicana (SAL) | 5 |
| c95. | thick | épaisse | dick | gruesa | Verna (LEM) | 7 |
| 58. (*) | (e) Fruit rind: oiliness (f) | Écorce du fruit: onctuosité | Fruchtschale: Öligkeit | Corteza del fruto: oleosidad | | |
| QN | dry | sèche | trocken | seca | | 3 |
| | medium | moyenne | mittel | mediana | | 5 |
| c98. | oily | grasse | ölig | oleosa | | 7 |
| 59. (*) | (e) Fruit: main color of (g) flesh | Fruit: couleur principale de la chair | Frucht: Hauptfarbe des Fleisches | Fruto: color principal de la pulpa | | |
| PQ | light green | vert clair | hellgrün | verde claro | Tahiti (LAL) | 1 |
| | light yellow | jaune clair | hellgelb | amarillo claro | Eureka (LEM) | 2 |
| c107. | medium pink | rose moyen | mittelrosa | rosa medio | Variegado (LEM) | 3 |
| 60. | (e) Fruit: filling of core (g) | Fruit : structure du cœur | Frucht: Ausfüllung des inneren Fruchtfleisches | Fruto: relleno del hueco central | | |
| QN | absent or very sparse | absente ou très lâche | fehlend oder sehr locker | ausente o muy laxo | | 1 |
| | sparse | lâche | locker | laxo | Messina (LEM) | 3 |
| | medium | intermédiaire | mittel | medio | Lunario (LEM) | 5 |
| | dense | dense | dicht | denso | Eureka (LEM) | 7 |
| c109. | very dense | très dense | sehr dicht | muy denso | Fino (LEM) | 9 |
| 61. | (e) Fruit: diameter of (g) core | Fruit: diamètre du cœur | Frucht: Durch- messer des inneren Fruchtfleisches | Fruto: diamètre del hueco central | | |
| QN | small | petit | klein | pequeño | Fino (LEM) | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c110. | large | grand | groß | grande | Santa Teresa (LEM) | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|--------------|---|--|--|---|---|---------------|
| 62. | (e) Fruit: presence of rudimentary segments (g) | Fruit: présence de segments rudimentaires | Frucht: Vorhandensein von unvollständigen Segmenten | Fruto: presencia de gajos rudimentarios | | |
| QN | absent or weak | nulle ou faible | null oder gering | nula o débil | | 1 |
| | intermediate | intermédiaire | mittel | intermedia | | 2 |
| c111. | strong | forte | stark | fuerte | | 3 |
| 63. | (e) Fruit: number of well developed segments (g) | Fruit: nombre de segments bien développés | Frucht: Anzahl gut entwickelter Segmente | Fruto: número de gajos bien desarrollados | | |
| QN | few | peu | gering | bajo | | 3 |
| | medium | moyen | mittel | medio | | 5 |
| c112. | many | beaucoup | groß | alto | | 7 |
| 64. | (e) Fruit: strength of segment walls (g) | Fruit: rigidité des parois des segments adjacents | Frucht: Festigkeit der Segmentwände | Fruto: firmeza de las paredes de los gajos | | |
| QN | weak | faible | schwach | débil | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c114. | strong | forte | stark | fuerte | | 7 |
| 65. | (e) Fruit: length of juice vesicles (g) | Fruit: longueur des vésicules de jus | Frucht: Länge der Saftbläschen | Fruto: longitud de las vesículas de jugo | | |
| QN | short | courtes | kurz | corta | | 3 |
| | medium | moyennes | mittel | media | | 5 |
| c115. | long | longues | lang | larga | | 7 |
| 66. | (e) Fruit: thickness of juice vesicles (g) | Fruit: épaisseur des vésicules de jus | Frucht: Dicke der Saftbläschen | Fruto: grosor de las vesículas de jugo | | |
| QN | thin | fines | dünn | delgadas | | 3 |
| | medium | moyennes | mittel | medianas | | 5 |
| c116. | thick | épaisses | dick | gruesas | | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|--------------|---|---|--|---|---|---------------|
| 67. | (e) Fruit: conspicuous-ness of juice vesicle walls (g) | Fruit: netteté des parois des vésicules de jus | Frucht: Sichtbarkeit der Saftbläschenwände | Fruto: visibilidad de las paredes de las vesículas de jugo | | |
| QN | low | faible | gering | baja | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c117. | high | forte | groß | alta | | 7 |
| 68. | (e) Fruit: coherence of juice vesicles (g) | Fruit: adhérence des vésicules de jus | Frucht: Zusammenhalt der Saftbläschen | Fruto: coherencia de las vesículas de jugo | | |
| QN | weak | faible | gering | débil | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c118. | strong | forte | stark | fuerte | | 7 |
| 69. | (e) Fruit: juiciness | Fruit: succulence | Frucht: Saftigkeit | Fruto: contenido de jugo | | |
| QN | low | faible | gering | baja | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c121. | high | élevée | hoch | alta | | 7 |
| 70. | (e) Fruit juice: total soluble solids | Jus du fruit: total de solides solubles | Fruchtsaft: Gehalt an löslicher Trockensubstanz | Jugo del fruto: sólidos solubles totales | | |
| QN | low | faible | niedrig | bajo | | 3 |
| | medium | moyen | mittel | mediano | | 5 |
| c122. | high | fort | hoch | alto | | 7 |
| 71. | (e) Fruit juice: acidity | Jus du fruit: acidité | Fruchtsaft: Säure | Jugo del fruto: acidez | | |
| QN | low | faible | gering | baja | | 3 |
| | medium | moyenne | mittel | media | | 5 |
| c123. | high | forte | stark | alta | | 7 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|--|--------------------|---|---|--|---|---------------|
| 72. (e) Fruit: strength of fibre | | Fruit: rigidité des fibres | Frucht: Festigkeit der Fasern | Fruto: vigor de la fibra | | |
| QN | weak | faible | schwach | débil | | 3 |
| | medium | moyenne | mittel | medio | | 5 |
| c124. | strong | forte | stark | fuerte | | 7 |
| 73. (e) Fruit: number of seeds (controlled manual self-pollination) | | Fruit: nombre de pépins (autopollinisation manuelle contrôlée) | Frucht: Anzahl Samen (manuell kontrollierte Selbstbefruchtung) | Fruto: número de semillas (autopollinización manual controlada) | | |
| QN | absent or very few | absents ou très peu nombreux | fehlend oder sehr gering | ausente o muy bajo | Colima 03 (SAL), Tahiti (LAL) | 1 |
| | few | peu nombreux | gering | bajo | | 3 |
| | medium | moyennement nombreux | mittel | medio | | 5 |
| | many | nombreux | groß | alto | | 7 |
| c125. | very many | très nombreux | sehr groß | muy alto | | 9 |
| 74. (e) Fruit: number of seeds (open pollination) | | Fruit: nombre de pépins (fécondation libre) | Frucht: Anzahl Samen (frei abblühend) | Fruto: número de semillas (polinización libre) | | |
| QN | absent or very few | absents ou très peu nombreux | fehlend oder sehr gering | ausente o muy bajo | Tahiti (LAL) | 1 |
| | few | peu nombreux | gering | bajo | Verna (LEM) | 3 |
| | moderate | modérément nombreux | mittel | moderado | | 5 |
| c126. | many | nombreux | groß | alto | Eureka (LEM) | 7 |
| 75. (h) (*) Seed: polyembryony | | Pépin: polyembryonnie | Samen: Polyembryonie | Semilla: poliembrionía | | |
| QL | absent | absente | fehlend | ausente | | 1 |
| c127. | present | présente | vorhanden | presente | Eureka (LEM) | 9 |

| | English | français | deutsch | español | Example Varieties Exemples Beispielsorten Variedades ejemplo | Note/ Nota |
|--------------------|--|---|---|---|---|---------------|
| 76. (*) | Flowering habit | Floraison | Blühverhalten | Tipo de floración | | |
| QL | flowering once | une seule | einmal blühend | una floración | Fino (LEM) | 1 |
| c135. | flowering more than once | plusieurs | mehr als einmal blühend | más de una floración | Lunario (LEM), Mexicana (SAL) | 2 |
| 77. (*) | Time of maturity of fruit for consumption | Époque de maturité du fruit pour la consommation | Zeitpunkt der Genußreife | Época de madurez del fruto para su consumo | | |
| QN | early | précoce | früh | temprana | Tahiti (LAL) | 3 |
| | medium | moyenne | mittel | media | Fino (LEM) | 5 |
| c136. | late | tardive | spät | tardía | Verna (LEM) | 7 |
| 78. (*) | Fruit: parthenocarpy | Fruit: parthénocarpie | Frucht: Parthenokarpie | Fruto: partenocarpia | | |
| QL | absent | absente | fehlend | ausente | | 1 |
| c137. | present | présente | vorhanden | presente | Tahiti (LAL) | 9 |
| 79. | Plant: self-incompatibility | Plante: auto-incompatibilité | Pflanze: Selbst-inkompatibilität | Planta: auto-incompatibilidad | | |
| QL | absent | absente | fehlend | ausente | | 1 |
| c138. | present | présente | vorhanden | presente | Tahiti (LAL) | 9 |

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a) Young leaf: Observations on the young leaf should be made on actively growing spring flush.
[Not applicable for Groups 1 (Mandarin) and 2 (Oranges).]

(b) Leaf: Observations on the leaf should be made on fully developed leaves on the middle third of the youngest spring flush branch sections not showing signs of active growth.

(c) Flower: Unless otherwise indicated, observations on the flower bud and the flower should be made on the terminal flower bud and flower, at the time of full flowering of the variety.

Observations on the open flower should be made on the first day of opening.

(d) Flower bud: Observations on the flower bud should be made when the petal tips are visible just before the opening of the bud.
[Not applicable for Groups 1 (Mandarin), 2 (Oranges) and 5 (Trifoliate Orange).]

(e) Fruit: Observations on the fruit should be made at the stage of optimum ripeness. The fruit should be tested weekly and harvested as soon as this stage has been reached.

All fruits for observation should be taken from the periphery of the tree and fruit misformed as a result of clustering should not be sampled.

(f) Fruit surface and fruit rind: Observations on the fruit surface and on the fruit rind should be made at the middle, between the base and apex of the fruit.

The observation on the oiliness of the fruit rind should be made, by peeling the fruit, within 3 to 7 days after harvesting.

(g) Fruit flesh: Observations on the flesh of the fruit should be made on a cross section through the middle of the fruit.

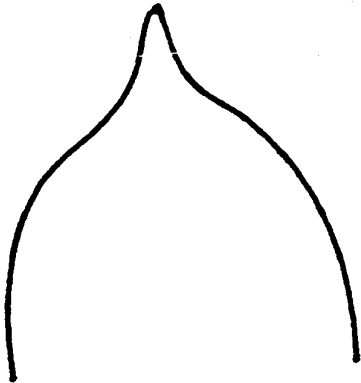
(h) Seed: Observations on the seed should be made on the fresh seed.

8.2 *Explanations for individual characteristics*

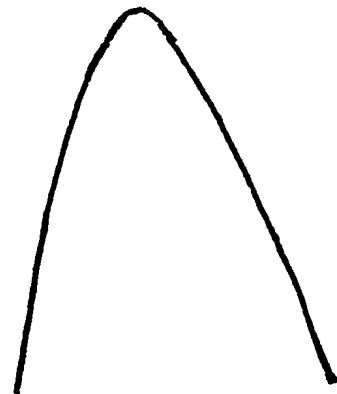
Ad. 2 (c2.): Tree: Growth habit

The observation on the growth habit of the tree should be made immediately after harvest.

Ad. 15 (c24.): Leaf blade: shape of apex



1
acuminate



2
acute

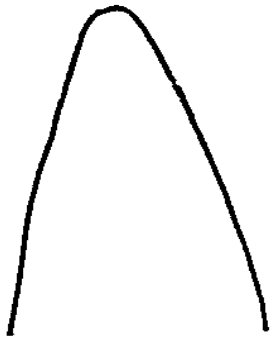


3
obtuse

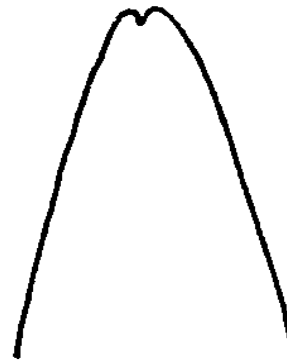


4
rounded

Ad. 16 (c25.): Leaf blade: emargination at tip



1
absent

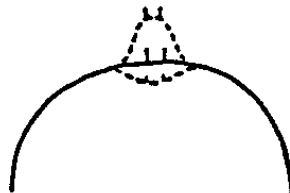


9
present

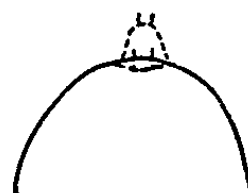
Ad. 36 (c49.): Fruit: general shape of proximal part (excluding neck, collar and depression at stalk end)



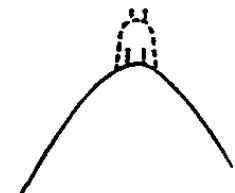
1
flattened



2
slightly rounded

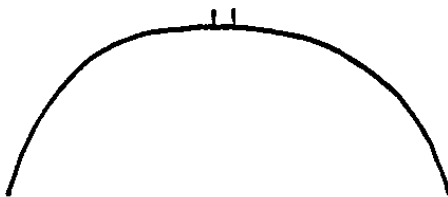


3
strongly rounded

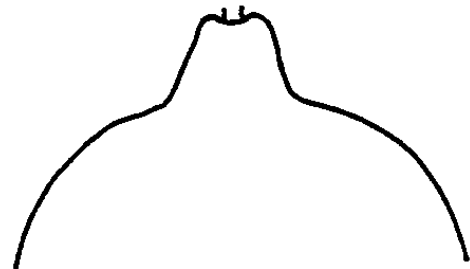


4
tapered

Ad. 37 (c50.): Fruit: presence of neck

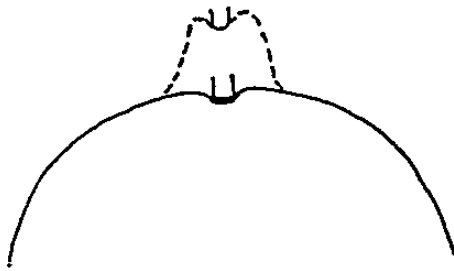


1
absent

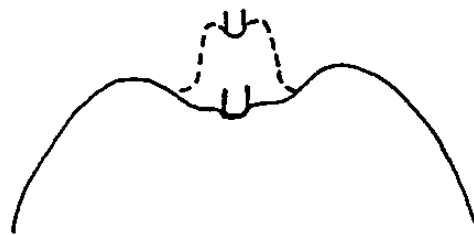


9
present

Ad. 39 (c53.): Only varieties without fruit neck: Fruit: presence of depression at stalk end



1
absent



9
present

Ad. 41 (c64.): Fruit: general shape of distal part (excluding nipple, bulging of navel and depression at distal end)



1
flattened



2
slightly rounded



3
strongly rounded

Ad. 42 (c68.): Fruit: presence of nipple



1
absent



9
present

LIST OF EXAMPLE VARIETIES FOR LEMONS AND LIMES

| Variety denomination | Subgroup | Associated indication |
|----------------------|----------|---------------------------|
| Bearss | LAL | Tahiti, Lima de Persia |
| Canaria | SWL | |
| Chaparro | LEM | |
| Colima 02 | SAL | |
| Colima 03 | SAL | |
| Eureka | LEM | |
| Campisi | LEM | Feminello Campisi |
| Flor de Arancio | LEM | Feminello Flor de arancio |
| Fino | LEM | |
| Lisbon Frost | LEM | |
| Lunario Ambrojo | LEM | |
| Messara | LEM | |
| Messina | LEM | |
| Mexicana | SAL | |
| Santa Teresa | LEM | |
| Variiegado | LEM | |
| Verna | LEM | |

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| | | |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

4. Information on the breeding scheme and propagation of the variety

4.1 Breeding Scheme

4.1.1 Variety resulting from:

- (a) controlled cross []
(please state parent varieties)
- (b) partially unknown cross []
(please state known parent variety(ies))
- (c) totally unknown cross []

4.1.2 Mutation []
(please state parent variety)

4.1.3 Discovery []
(please state where, when and how developed)

4.1.4 Other []
(please provide details)

4.2 Method of Propagating the Variety

| | | |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

| Characteristics | Example Varieties | Note |
|--|---------------------------------|------|
| 5.1 Young leaf: presence of anthocyanin coloration (5) | | |
| absent | Flor de Arancio (LEM) | 1[] |
| present | Verna (LEM) | 9[] |
| 5.2 Young leaf: intensity of anthocyanin coloration (6) | | |
| weak | Tahiti (LAL) | 3[] |
| medium | Verna (LEM) | 5[] |
| strong | | 7[] |
| 5.3 Fruit: length (32) | | |
| short | Mexicana (SAL) | 3[] |
| medium | Tahiti (LAL) | 5[] |
| long | Eureka (LEM) | 7[] |
| 5.4 Fruit: diameter (33) | | |
| small | Mexicana (SAL) | 3[] |
| medium | Lunario Ambrojo (LEM) | 5[] |
| large | Fino (LEM) | 7[] |
| 5.5 Fruit: presence of neck (37) | | |
| absent | Lunario (LEM) | 1[] |
| present | Verna (LEM) | 9[] |
| 5.6 Fruit: presence of nipple (42) | | |
| absent | Mexicana (SAL), Tahiti (LAL) | 1[] |
| present | Verna (LEM) | 9[] |

| | | |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

| | | | |
|---|-----------------|--|------|
| 5.7 Fruit surface: predominant color (49) | | | |
| green | | | 1[] |
| yellow green | Tahiti (LAL) | | 2[] |
| light yellow | Fino (LEM) | | 3[] |
| medium yellow | Canaria (SWL) | | 4[] |
| yellow orange | Variegado (LEM) | | 5[] |
| 5.8 Fruit: main color of flesh (59) | | | |
| light green | Tahiti (LAL) | | 1[] |
| light yellow | Eureka (LEM) | | 2[] |
| medium pink | Variegado (LEM) | | 3[] |
| 5.9 Time of maturity of fruit for consumption (77) | | | |
| early | Tahiti (LAL) | | 3[] |
| medium | Fino (LEM) | | 5[] |
| late | Verna (LEM) | | 7[] |
| 5.10 Fruit: parthenocarpy (78) | | | |
| absent | | | 1[] |
| present | Tahiti (LAL) | | 9[] |

6. Similar varieties and differences from these varieties

| Denomination(s) of variety(ies) similar to your candidate variety | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | Describe the expression of the characteristic(s) for the similar variety(ies) | Describe the expression of the characteristic(s) for your candidate variety |
|---|---|---|---|
| <i>(Example)</i> | <i>Fruit: main color of flesh</i> | <i>light green</i> | <i>light yellow</i> |
| | | | |
| | | | |
| | | | |

| | | |
|-------------------------|-----------------|-------------------|
| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|-------------------------|-----------------|-------------------|

7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [] No []

(If yes, please provide details)

7.2 Special conditions for the examination of the variety

7.2.1 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

7.2.2 If yes, please give details:

7.3 Other information

A representative color photograph of the variety should accompany the Technical Questionnaire

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to (b) is yes, please attach a copy of the authorization.

9. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature

[Annex follows]