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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

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*Acca sellowiana* (Berg) Burret

## GUIDELINES

## FOR THE CONDUCT OF TESTS

## FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from New Zealand**to be considered by the**Technical Working Party for Fruit Crops at its forty-third session,  
to be held in Beijing, from July 30 to August 3, 2012*

Alternative Names:\*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Acca sellowiana</i> (Berg) Burret	Feijoa, Pineapple Guava	Feijoa	Feijoa	Feijoa

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

## ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

\* 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 Website ([www.upov.int](http://www.upov.int)), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Acca sellowiana* (Berg) Burret.

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 one year old trees. The trees can be cutting grown or grafted on a rootstock as specified by the testing authority.

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

8 trees.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should 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 *Number of Growing Cycles*

3.1.1 The minimum duration of tests should normally be two growing cycles. In particular, it is essential that the trees produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.2 The growing cycle is considered to be the duration of a single growing season, beginning with vegetative growth, continuing through flowering, active vegetative growth and fruit development and concluding after the harvest of fruit.

3.2 *Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 *Conditions for Conducting the Examination*

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.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 8 plants

3.4.2 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.

3.5 *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 differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

###### 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.

###### 4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 7 plants or parts taken from each of 7 plants and any other observations made on all plants in the test, disregarding any off-type plants. In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 2.

###### 4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 "Examining Distinctness", Section 4 "Observation of characteristics"):

- MG: single measurement of a group of plants or parts of plants
- MS: measurement of a number of individual plants or parts of plants
- VG: visual assessment by a single observation of a group of plants or parts of plants
- VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

"Visual" observation (V) is an observation made on the basis of the expert's judgment. For the purposes of this document, "visual" observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

#### 4.2 *Uniformity*

4.2.1 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:

4.2.2 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 8 plants, 1 off-type is 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 further examined, either by growing a further generation, or by testing a new seeds or 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 are 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) Tree: growth habit (1)
- (b) Leaf blade: variegation on upper side (14)
- (c) Fruit: weight (19)
- (d) Fruit: shape (23)
- (e) Fruit: color of skin (30)
- (e) Fruit: texture of skin (31)
- (f) Time of beginning of harvest (37)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 "Examining Distinctness".

### 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

6.2.1 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.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 "Development of Test Guidelines".

## 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.

6.5 *Legend*

- (\*) Asterisked characteristic – see Chapter 6.1.2
- QL Qualitative characteristic – see Chapter 6.3
- QN Quantitative characteristic – see Chapter 6.3
- PQ Pseudo-qualitative characteristic – see Chapter 6.3
  
- MG, MS, VG, VS – see Chapter 4.1.5
  
- (a)-(d) See Explanations on the Table of Characteristics in Chapter 8.1
  
- (+) See Explanations on the Table of Characteristics in Chapter 8.2

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

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>1. VG</b>	<b>Tree: growth habit</b>					
<b>(*)</b>						
<b>(+)</b>						
<b>PQ</b>	upright				Apollo, Marion	1
	semi upright				Kakapo, Unique	2
	spreading				Pounamu	3
	drooping					4
<b>2. VG</b>	<b>Tree: vigor</b>					
<b>(+)</b>						
<b>QN</b>	weak				Unique	3
	medium				Opal Star	5
	strong				Apollo, Gemini	7
<b>3. VG</b>	<b>Current seasons shoot: length of internode</b>					
<b>(*)</b>						
<b>(+)</b>						
<b>QN</b>	very short					1
	short				Unique	3
	medium				Marion	5
	long				Triumph	7
	very long					9
<b>4. VG/ MS</b>	<b>Leaf blade: length</b>					
<b>(*)</b>						
<b>QN</b>	<b>(a)</b> very short					1
	short				Opal Star, Unique	3
	medium				Apollo, Pounamu	5
	long				Kakariki	7
	very long					9

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>5. VG/ MS (*)</b>	<b>Leaf blade: width</b>					
<b>QN (a)</b>	very narrow					1
	narrow				Marion	3
	medium				Opal Star, Unique	5
	broad				Anatoki	7
<b>6. VG/ MS (*) (+)</b>	<b>Leaf blade: ratio length/width</b>					
<b>QN (a)</b>	rounded				Unique	1
	slightly elongated				Opal Star	2
	moderately elongated				Apollo, Marion	3
	strongly elongated				Pounamu	4
	very strongly elongated				Gemini	5
<b>7. VG (*) (+)</b>	<b>Leaf blade: shape</b>					
<b>PQ (a)</b>	ovate					1
	elliptic					2
	oblong					3
	obovate					4
<b>8. VG (*) (+)</b>	<b>Leaf blade: position of broadest part</b>					
<b>QN (a)</b>	towards the base				Opal Star	1
	in the middle				Marion, Unique	2
	towards the apex				Triumph	3
<b>9. VG (*) (+)</b>	<b>Leaf blade: shape of apex</b>					
<b>PQ (a)</b>	broad acute				Gemini	1
	obtuse				Apollo	2
	rounded				Marion	3
	truncate					4
	retuse					5

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
<b>10.</b>	<b>VG</b>	<b>Leaf blade: shape of base</b>				
	<b>(+)</b>					
<b>PQ</b>	<b>(a)</b>	cuneate			Marion	1
		acute			Gemini, Kakapo	2
		obtuse			Unique	3
		rounded				4
<b>11.</b>	<b>VG</b>	<b>Leaf blade: profile in cross section</b>				
	<b>(+)</b>					
<b>QN</b>	<b>(a)</b>	concave				1
		flat				2
		convex				3
<b>12.</b>	<b>VG</b>	<b>Leaf blade: longitudinal twisting</b>				
<b>QL</b>	<b>(a)</b>	absent				1
		present				9
<b>13.</b>	<b>VG</b>	<b>Leaf blade: main color of upper side</b>				
	<b>(*)</b>					
	<b>(+)</b>					
<b>VG</b>	<b>(a)</b>	light green				1
		medium green			Opal Star	2
		dark green			Apollo	3
		grey green			Marion	4
<b>14.</b>	<b>VG</b>	<b>Leaf blade: variegation on upper side</b>				
	<b>(*)</b>					
<b>QL</b>	<b>(a)</b>	absent				1
		present				9
<b>15.</b>	<b>VG</b>	<b>Leaf blade: color of lower side</b>				
<b>PQ</b>	<b>(a)</b>	whitish				1
	<b>(+)</b>	green				2
		greyish				3

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>16.</b>	<b>VG/ MS</b>	<b>Flower: diameter</b>				
<b>QN</b>	<b>(b)</b>	small			Unique	1
		medium			Gemini	2
		large			Kawatiri	3
<b>17.</b>	<b>MG</b>	<b>Flower: petal color of upper side</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>PQ</b>	<b>(b)</b>	RHS Color Chart (indicate reference number)				
<b>18.</b>	<b>VG/ MG</b>	<b>Flower: number of stamens</b>				
<b>(+)</b>						
<b>QN</b>	<b>(b)</b>	few			Anatoki	1
		medium			Kakariki	2
		many			Kaiteri	3
<b>19.</b>	<b>VG</b>	<b>Fruit: weight</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>QN</b>	<b>(c)</b>	very low				1
		low			Opal Star	3
		medium			Pounamu	5
		high			Anilvinkoru	7
		very high				9
<b>20.</b>	<b>VG</b>	<b>Fruit: length</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>QN</b>	<b>(c)</b>	very short				1
		short				3
		medium			Opal Star, Pounamu	5
		long			Apollo, Unique	7
		very long			Kakapo	9
<b>21.</b>	<b>VG</b>	<b>Fruit: diameter</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>QN</b>	<b>(c)</b>	small			Kakapo	3
		medium			Gemini, Opal Star	5
		large				7

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>22.</b>	<b>VG</b>	<b>Fruit: ratio length/diameter</b>				
(*)						
(+)						
<b>QN</b>	<b>(c)</b>	rounded				1
		slightly elongated			Unique	3
		moderately elongated			Apollo, Opal Star	5
		strongly elongated			Kakapo, Triumph	7
<b>23.</b>	<b>VG</b>	<b>Fruit: shape</b>				
(*)						
(+)						
<b>QN</b>	<b>(c)</b>	ovate			Pounamu	1
		circular				2
		elliptic			Opal Star	3
		oblong				4
		rhombic				5
		obovate			Gemini, Kakapo	6
		oblanceolate				7
<b>24.</b>	<b>VG</b>	<b>Fruit: longitudinal symmetry</b>				
<b>QN</b>	<b>(c)</b>	symmetric or slightly asymmetric			Opal Star, Unique	1
		moderately asymmetric			Apollo	2
		strongly asymmetric			Triumph	3
<b>25.</b>	<b>VG</b>	<b>Fruit: slope of shoulder at stalk end</b>				
(*)						
(+)						
<b>QN</b>	<b>(c)</b>	weak			Opal Star	1
		medium			Kakapo, Pounamu	2
		strong			Anilvinkoru, Apollo	3
<b>26.</b>	<b>VG</b>	<b>Fruit: point of attachment of stalk</b>				
(*)						
<b>QN</b>	<b>(c)</b>	depressed			Gemini, Marion, Unique	1
		flat			Opal Star	2
		raised			Apollo	3

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>27. VG</b>	<b>Fruit: shape of stalk scar</b>					
<b>(+)</b>						
<b>PQ</b>	<b>(c)</b>	elliptic				1
		oblong			Unique, Opal Star	2
		circular			Marion	3
<b>28. VG</b>	<b>Fruit: attitude of sepals</b>					
<b>(*)</b>						
<b>QN</b>	<b>(c)</b>	erect			Kakapo, Opal Star	1
		semi erect			Marion, Unique	2
		horizontal			Apollo, Pounamu	3
<b>29. VG</b>	<b>Fruit: splitting of calyx</b>					
<b>QN</b>	<b>(c)</b>	absent or very weak			Marion	1
		weak			Apollo	3
		medium			Unique, Kakapo	5
		strong				7
		very strong			Pounamu	9
<b>30. VG</b>	<b>Fruit: color of skin</b>					
<b>(*)</b>						
<b>PQ</b>	<b>(c)</b>	light green			Unique	1
		medium green			Apollo, Opal Star	2
		dark green			Anilvinkoru, Kakapo	3
		grey green			Marion	4
<b>31. VG</b>	<b>Fruit: texture of skin</b>					
<b>(*)</b>						
<b>QN</b>	<b>(c)</b>	smooth or very slightly rough			Opal Star	1
		slightly rough			Marion, Kakapo	3
		moderately rough			Apollo, Triumph	5
		very rough			Unique	7
<b>32. VG</b>	<b>Fruit: longitudinal grooving</b>					
<b>(+)</b>						
<b>QN</b>	<b>(c)</b>	absent or weak			Apollo, Pounamu	1
		medium			Kakapo	2
		strong				3

	English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>33.</b>	<b>VG</b>	<b>Fruit: color of outer pericarp</b>				
<b>(*)</b>						
<b>PQ</b>	<b>(d)</b>	white			Kakapo	1
		yellowish white			Gemini, Unique	2
		yellow			Opal Star	3
<b>34.</b>	<b>VG</b>	<b>Fruit: width of locules relative to fruit</b>				
<b>(*)</b>						
<b>(+)</b>						
<b>QN</b>	<b>(d)</b>	very small			Triumph	1
		small			Kakapo, Pounamu	3
		medium			Unique	5
		large				7
<b>35.</b>	<b>VG</b>	<b>Fruit: color of locules</b>				
<b>(*)</b>						
<b>PQ</b>	<b>(d)</b>	opaque			Opal Star	1
		whitish			Marion, Pounamu	2
		pinkish				3
		greyish				4
<b>36.</b>	<b>VG</b>	<b>Fruit: appearance of core</b>				
<b>(+)</b>						
<b>QN</b>	<b>(d)</b>	solid				1
		solid to fleshy			Opal Star, Pounamu	2
		fleshy			Gemini, Kakapo	3
<b>37.</b>	<b>VG</b>	<b>Time of beginning of harvest</b>				
<b>(*)</b>						
<b>QN</b>		very early			Kaiteri, Waitui	1
		early			Unique	3
		medium			Apollo, Gemini	5
		late			Kakapo, Opal Star	7
		very late			Triumph	9

English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>38. VG</b>					
<b>(*)</b>					
<b>(+)</b>					
<b>QN (d)</b>	fully self fertile			Unique	1
	partially self fertile			Apollo	2
	self sterile			Opal Star	3

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) All observations on the leaf should be made on the middle third of a one year old shoot.
- (b) All observations on flowers should be made when approximately 50% of flowers on a tree are open
- (c) All observations on fruit should be made at harvest.
- (d) All observations on fruit should be made when ripe for eating.

8.2 *Explanations for individual characteristics*

Ad. 1: Tree: growth habit

The growth habit is observed at the end of the growing season after fruit harvest

Ad. 2: Tree: vigor

The vigor of the tree should be considered as the overall abundance of vegetative growth.

Ad. 3: Current seasons shoot: length of internode

The length of the internode is observed on the middle third on a current season shoot

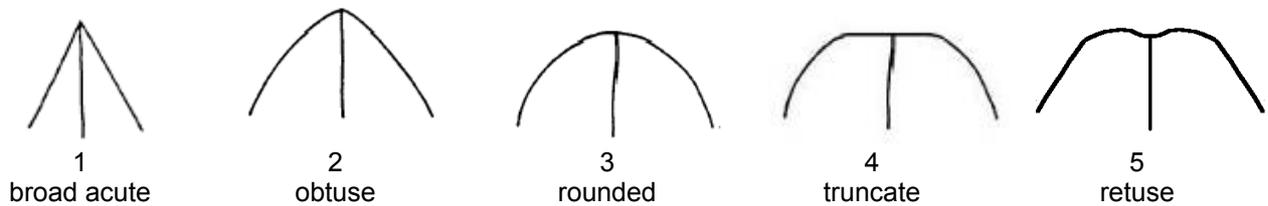
Ad. 6 Leaf blade: ratio length/width

Ad. 7 Leaf blade: shape

Ad. 8 Leaf blade: position of broadest part

← Broadest part →			
	Towards the base	At middle	Towards the apex
Strongly elongated ○		 3 oblong	
↑ length/width ratio		 2 elliptic	
Slightly elongated	 1 ovate		 4 obovate

Ad. 9: Leaf blade: shape of apex



Ad.10: Leaf blade: shape of base



1  
cuneate



2  
acute



3  
obtuse



4  
rounded

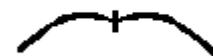
Ad. 11 Leaf blade: profile in cross section



1  
concave



2  
flat



3  
convex

Ad. 13: Leaf blade: main color of upper side

The main color is determined by the color which makes up the largest surface area.

Ad.15: Leaf blade: color of lower side

The color of the lower side includes any pubescence that may be present.

Ad. 17 Flower: petal color of upper side

The observation is made on the color covering the largest surface area of the petal

Ad. 18: Flower: number of stamens



1  
few



2  
medium



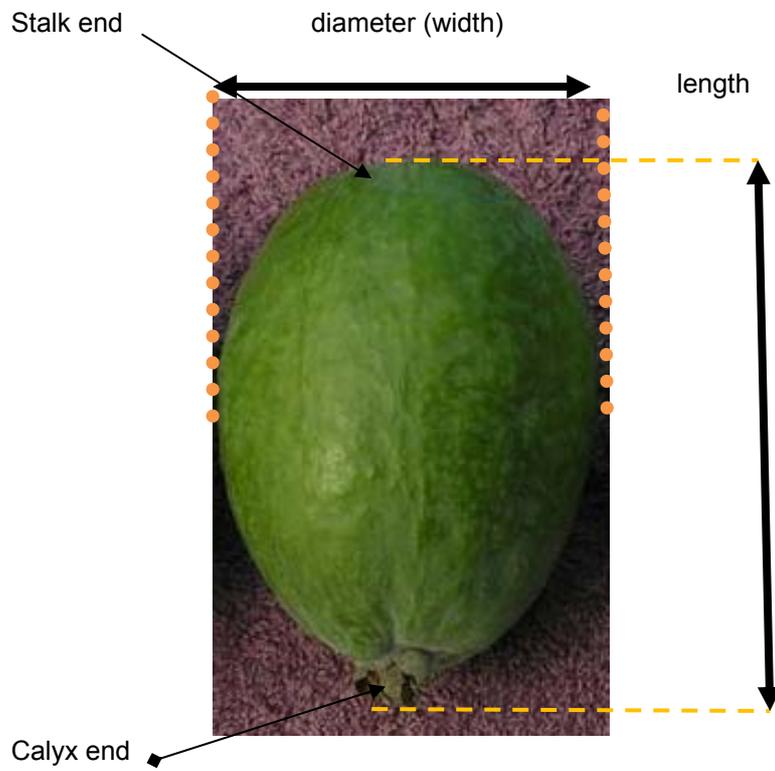
3  
many

Ad.19: Fruit: weight

Fruit weight is determined by a sample size of 35 harvested fruits, 5 each from seven trees.

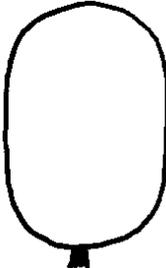
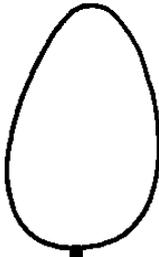
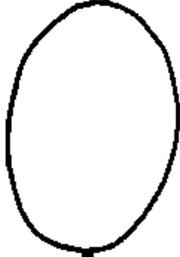
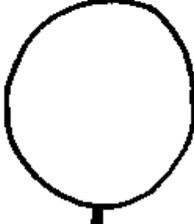
Ad.20: Fruit: length

Ad.21: Fruit: diameter



Ad. 22: Fruit: ratio length/diameter

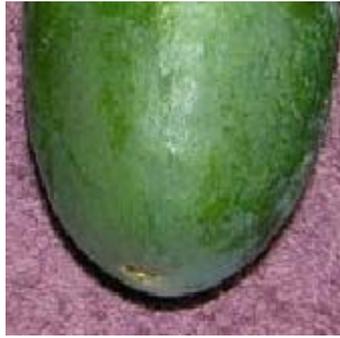
Ad. 23: Fruit: shape

← broadest part →				
		below the middle	at middle	above middle
strongly elongated	0		To be added  5 rhombic	To be added  7 oblanceolate
moderately elongated			 2 oblong	
length/width ratio ↑		 1 ovate	 3 elliptic	 6 obovate
Rounded ←			 4 circular	

Ad. 25 Fruit: slope of shoulder at stalk end



1  
weak



2  
medium



3  
strong

Ad. 27 Fruit: shape of stalk scar



1  
elliptic



3  
circular

2  
oblong

Ad. 32 Fruit: longitudinal grooving



1  
absent or weak

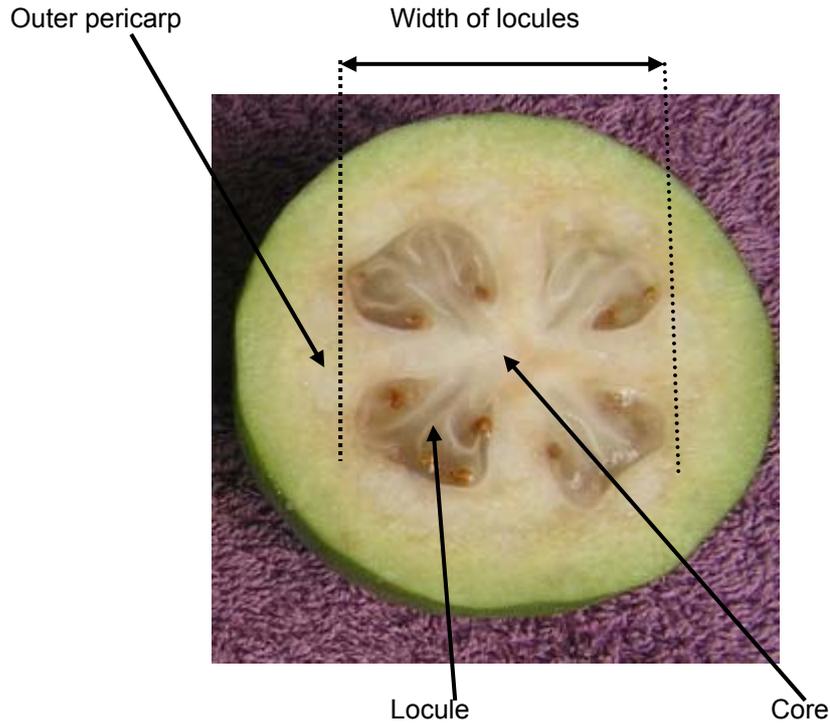


2  
medium

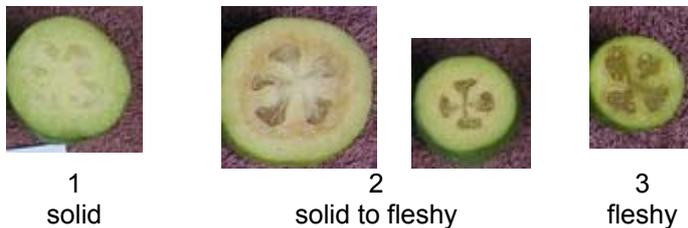


3  
strong

Ad. 34 Fruit: width of locules relative to fruit



Ad. 36 Fruit: appearance of core



Ad. 38 Pollination type

Pollination type is assessed by bagging 5 to 10 flowers per tree to prevent cross pollination and determining the number of bagged flowers, if any, that produce fully developed fruit.

Fully self-fertile = >70% fruit set.

Partially self-fertile = approximately 50% fruit set

Self-sterile = < 30% fruit set

9. Literature

Thorp G. and Bielecki R. 2002: Feijoas: Origins, Cultivation and Uses, Horticulture and Food Research Institute of New Zealand and David Bateman Ltd, Auckland

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1 Botanical name	<input type="text" value="Acca sellowiana (Berg) Burret"/>	
1.2 Common name	<input type="text" value="Acca, Feijoa"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

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

4.1 Breeding scheme

4.1.1 Crossing

(a) controlled cross [ ]  
(please state parent varieties)

(.....) x (.....)  
female parent male parent

(b) partially known cross [ ]  
(please state known parent variety(ies))

(.....) x (.....)  
female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]  
(please state parent variety)

.....

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

.....

4.1.4 Other [ ]  
(please provide details)

.....

# Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2 Method of propagating the variety

4.2.1 Vegetative propagation

- (a) cuttings [ ]
- (b) grafting onto seedling rootstock [ ]
- (c) *in vitro* propagation [ ]
- (d) other (state method) [ ]

4.2.2 Other [ ]  
(please provide details)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
<b>5.1 Tree: growth habit (1)</b>		
upright	Apollo, Marion	1[ ]
semi upright	Kakapo, Unique	2[ ]
spreading	Pounamu	3[ ]
drooping		4[ ]
<b>5.2 Leaf blade: variegation on upper side (14)</b>		
absent		1[ ]
present		9[ ]
<b>5.3 Fruit: weight (19)</b>		
very low		1[ ]
very low to low		2[ ]
low	Opal Star	3[ ]
low to medium		4[ ]
medium	Pounamu	5[ ]
medium to high		6[ ]
high	Anilvinkoru	7[ ]
high to very high		8[ ]
very high		9[ ]
<b>5.4 Fruit: shape (23)</b>		
ovate	Pounamu	1[ ]
circular		2[ ]
elliptic	Opal Star	3[ ]
oblong		4[ ]
rhombic		5[ ]
obovate	Gemini, Kakapo	6[ ]
oblanceolate		7[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
<b>5.5 Fruit: color of skin (30)</b>		
light green	Unique	1[ ]
medium green	Apollo, Opal Star	2[ ]
dark green	Anilvinkoru, Kakapo	3[ ]
grey green	Marion	4[ ]
<b>5.6 Fruit: texture of skin (31)</b>		
smooth or very slightly rough	Opal Star	1[ ]
slightly rough	Marion, Kakapo	2[ ]
moderately rough	Apollo, Triumph	3[ ]
very rough	Unique	4[ ]
<b>5.7 Time of beginning of harvest: (37)</b>		
very early	Kaiteri, Waitui	1[ ]
very early to early		2[ ]
early	Unique	3[ ]
early to medium		4[ ]
medium	Apollo, Gemini	5[ ]
medium to late		6[ ]
late	Kakapo, Opal Star	7[ ]
late to very late		8[ ]
very late	Triumph	9[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

*Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.*

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 <b>similar</b> variety(ies)	Describe the expression of the characteristic(s) for the characteristic(s) for <b>your</b> candidate variety
<i>Example</i>	<i>Fruit: weight</i>	<i>low</i>	<i>medium</i>

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#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 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

(a) pot plant [ ]

(b) garden plant [ ]

(c) other [ ]

(please provide details)

.....

A representative color image 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.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should 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 the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- |   |         |        |
|---|---------|--------|
| (a) Microorganisms (e.g. virus, bacteria, phytoplasma)    | Yes [ ] | No [ ] |
| (b) Chemical treatment (e.g. growth retardant, pesticide) | Yes [ ] | No [ ] |
| (c) Tissue culture  | Yes [ ] | No [ ] |
| (d) Other factors   | Yes [ ] | No [ ] |

Please provide details for where you have indicated "yes".

.....

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

Applicant's name

Signature

Date

[End of document]