

EAPVPF

TG/ OIL PALM
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EAST ASIA PLANT VARIETY PROTECTION FORUM

OIL PALM

Elaeis guineensis Jacq.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:

<i>Botanical name</i>	<i>English</i>	Local Name		
<i>Elaeis guineensis</i> Jacq.	Oil Palm	Kelapa sawit Palm Nam Maan		

The purpose of these guidelines (“Test Guidelines”) is to fulfill the activities under the EAPVP Forum on harmonization of Test Guidelines.

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1.0 SUBJECT OF THESE TEST GUIDELINES

These Test Guidelines apply to all varieties of *Elaeis guineensis* Jacq.

2.0 MATERIAL REQUIRED

2.1. The competent authority decides 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 fruiting palms

2.3. The minimum quantity of plant material, to be supplied by the applicant, should be determined by the authority, being either

30 palms for seed propagated varieties

10 palms for vegetatively propagated varieties

(Seed propagated varieties of pisifera fruit form are to be determined by the authority)

2.4. The plant material supplied should be visibly healthy, not lacking in vigour, 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 allows or requests such treatment. If it has been treated, full details of the treatment must be given.

3.0 METHOD OF EXAMINATION

3.1. Number of Growing Cycles

The minimum duration of tests should normally be two growing cycles. The growing cycle is considered to be from female inflorescence anthesis to fruit ripening. The growing cycle will be at least six months.

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 UPOV Document TGP/9 "Examining Distinctness".

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.

3.3.2 Stage of development for the assessment

The optimum stage of development for the assessment of each characteristic is indicated by a number in the second column of the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.

3.3.3. Observation of colour by eye

Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part 1. These determinations should be made with the plant part placed against a white background.

3.4. Test Design

Each test should be designed to result in total of at least:-

- 30 palms for seed propagated varieties
- 10 palms for vegetatively propagated varieties
- Seed propagated varieties of pisifera are to be determined by the authority

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 test, for examining relevant characteristics, may be established.

4.0. 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

For seed propagated varieties

Unless otherwise indicated, for the purposes of distinctness, all observations should be made on 30 plants or parts taken from each of 30 plants. In the case of parts of plants, the number to be taken from each of the plants should be one.

For vegetative propagated varieties

Unless otherwise indicated, for the purposes of distinctness, all observations should be made on 9 plants or parts taken from each of 9 plants, disregarding any off-types plant. In the case of parts of plants, the number to be taken from each of the plants should be one.

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 judgement. 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 observation 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 ruler, weighing scales, colorimeter, dates, counts, etc.

Type of records: 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 Characteristic (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, for vegetative propagated varieties, a population standard of 1% and acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, one off-type are allowed.

4.2.3. For assessment of uniformity, for cross pollinated varieties, including mainly cross pollinated and synthetic varieties, generally exhibit wider variations within the variety than vegetatively propagated or self-pollinated varieties and inbred lines of hybrid varieties, and it is more difficult to determine off-types. Therefore, relative tolerance limits, for the range of variation, set by comparison with comparable varieties, or types already known. This means that the candidate variety should not be significantly less uniform than the comparable varieties. For more detailed information and guidance on setting standard for new types and species see document TGP/10, "Examining Uniformity" and TGP/13, "Guidance for New Types and Species"

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 examine by testing a new seed or a new plant stock it exhibits the same characteristics as those shown by the initial material supplied.

4.3.3. Where appropriate, or in cases of doubt, stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parental lines.

5.0 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:

- (i) Palm: canopy (Char. 1)
- (ii) Palm: height increment (cm/year) (Char. 3)
- (iii) Rachis: length (RL) (Char. 6)
- (iv) Petiole: colour (Char. 10)
- (v) Bunch: shape (Char. 18)
- (vi) Fruit: form (Char. 21)
- (vii) Fruit: colour (Char. 24)
- (viii) Fruit: weight (Char.26)
- (ix) Mesocarp: colour (Char.29)

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”.

6.0 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 qualitative and pseudo-qualitative characteristics (see Chapter 6.3), or relevant states of expression are presented in the characteristic. However, in the case of characteristic with 5 or more states and abbreviated scale may be used to minimize the size of Table of Characteristics. For example, in the case of quantitative characteristics 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, each 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 (Section 6.1.2)

QL Qualitative characteristic – see Chapter 6 (Section 6.3)

QN Quantitative characteristic – see Chapter 6 (Section 6.3)

PQ Pseudo-Qualitative characteristic – see Chapter 6 (Section 6.3)

MG, MS, VG, VS - see Chapter 4.1.5

(a) – { x } See Explanations on the Table of Characteristics in Chapter 8.1.

(+) See Explanations on the Table of Characteristics in Chapter 8.0.

7.0 TABLE OF CHARACTERISTICS

Char. No		Characteristics	Example Varieties	Note
1. (*) (+) QN	VG (a)	Palm: canopy upright spreading drooping		1 2 3
2. (+) QN	MS (a)	Palm: height short medium tall		3 5 7
3. (*) (+) QN	MS (a)	Palm: height increment (cm/year) low medium high	Dumpy, LaMé Kamerun, Yangambi Avros	3 5 7
4. (*) (+) QN	MS (a)	Palm: trunk diameter small medium large	LaMé Avros Dumpy, Yangambi	3 5 7
5. (*) (+) QL	VG (a)	Fronde: Presence of leaflet at the tip Absent Present	Dura Dumpy Others	1 9
6. (*) (+) QN	MS (a)	Rachis: length (RL) short medium long	LaMé Avros Dumpy	3 5 7
7. (*) (+) QN	MG (a)	Petiole : width narrow medium broad		3 5 7

Char. No		Characteristics	Example Varieties	Note
8. (*) (+) QN	MG (a)	Petiole : depth shallow medium deep		3 5 7
9. (+) QN	VG/ MS (a)	Petiole : density of spike sparse medium dense		3 5 7
10. (*) (+) PQ	VG (a)	Petiole: colour Brown Greenish brown Brownish green green		1 2 3 4
11. (*) (+) QN	MG/ MS (a)	Leaflet: length short medium long		3 5 7
12. (*) (+) QN	MG/ MS (a)	Leaflet: width narrow medium broad		3 5 7
13. (*) QN	MG (a)	Leaflet: number few medium many		3 5 7
14. (+) PQ	VG (a)	Leaflet : midrib color green yellow		1 2
15. (+) QN		Male inflorescence : length of stalk of the male inflorescence Short Medium Long		3 5 7

Char. No		Characteristics	Example Varieties	Note
16. (*) QN	MG/ MS (a)	Bunch : weight low medium high	 La Me Avros Yangambi 718	 3 5 7
17. (*) QN	MG/ MS (b)	Bunch : length of stalk short medium long		 3 5 7
18. (*) (+) PQ	VS (b)	Bunch: shape ovate cordiform circular		 1 2 3
19. (+) QN	VG (b)	Bunch: density of spines sparse medium dense		 3 5 7
20. (+) QN	VG (b)	Bunch: spine length short medium long	 Dumpy, Topaz 2, Topaz 3 Avros La Mé	 3 5 7
21. (*) (+) QL	VS (c)	Fruit: form dura tenera pisifera		 1 2 3
22. (+) PQ	VG (c)	Fruit: shape circular oblong obovate		 1 2 3

Char. No		Characteristics	Example Varieties	Note
23. (*) (+) QL	VG (c)	Fruit: mantled absent present		1 9
24. (*) (+) QL	VG (c)	Fruit: colour albescens virescens nigrescens		1 2 3
25. QL	VG (c)	Fruit: abscission absent present		1 9
26. (*) QN	MG (c)	Fruit: weight low medium high		3 5 7
27. (*) QN	MG (c)	Fruit: shell to fruit ratio (% by weight) low medium high		3 5 7
28. (*) QN	MG (c)	Fruit: mesocarp to fruit ratio(% by weight) low medium high		3 5 7
29. (*) PQ	VG (c)	Mesocarp: colour light yellow yellow orange dark orange		1 2 3 4

Char. No		Characteristics	Example Varieties	Note
30. (+) QN	MG (c)	Fruit: number of kernel per fruit one more than one		1 2
31. (*) (+) PQ	VG (c)	Nut: shape circular obovate		1 2
32. (*) QN	MG (c)	Nut: weight Low Medium high		3 5 7
33 (+) QN	MG (c)	Nut: length Short Medium long		3 5 7
34. (+) QN	MG (c)	Nut: width small medium large		3 5 7

8.0 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) Palm and frond: All measurements and observation on the tree and the frond should be made on at least 7 year old plants after field planting.
- (b) Bunch: All measurements and observation on the bunch should be made on the ripe fruit bunches at the same time as the measurement of the palm and the frond. Inspection shall be made at least twice over a period of one year. The duration between inspections shall be at least 3 months.
- (c) Fruit: All measurements and observation on the fruit should be made on the samples which are taken from five (5) newly harvested ripe bunches from five different palms. Ten (10) ripe **outer fruits** are taken from the top region of each bunch.

8.2. Explanation for individual characteristic

Ad. 1. Palm: canopy



1
upright



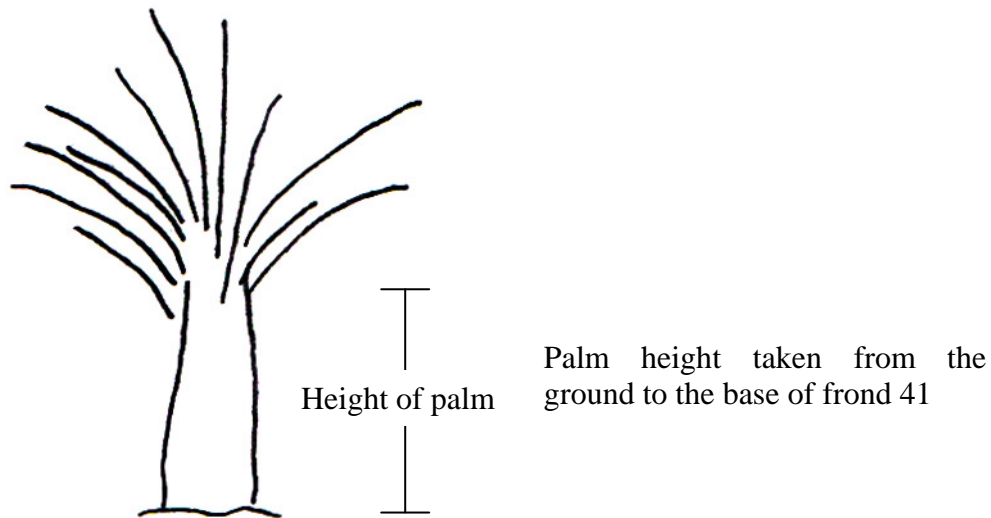
2
spreading



3
drooping

Ad. 2: Palm: height

Palm height is measured from ground level to the base of frond 41 (1st frond on 6th parastichy).



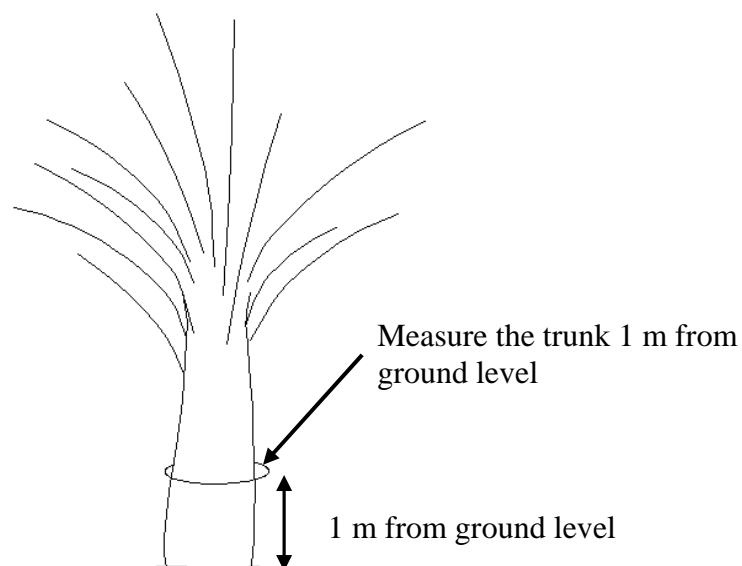
Ad. 3. Palm: height increment

Palm height increment is measured by dividing palm height (Ht) with palm age (t) after field planting minus 2 as follows:

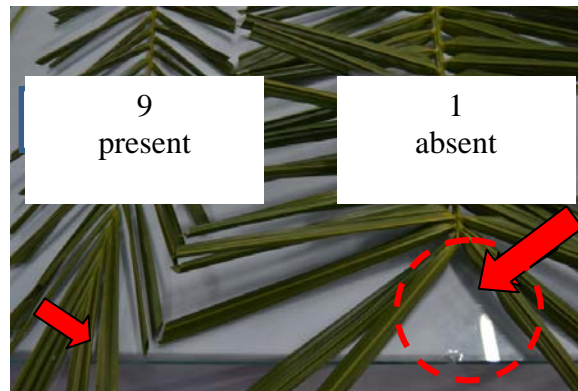
$$\text{Palm height increment} = \frac{\text{Ht (cm)}}{t - 2}$$

Ad. 4: Palm: trunk diameter

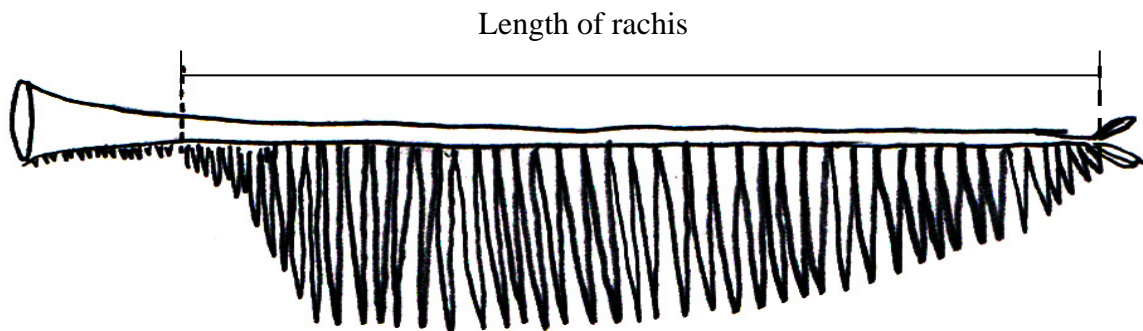
Trunk diameter is measured at 1 meter above the ground level



Ad. 5. Frond: presence of leaflet at the tip



Ad 6 : Rachis: length



Ad 7: Petiole : width

Ad 8 : Petiol : depth

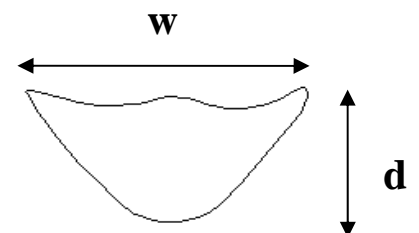


width



depth

$$\text{PCS} = \text{Petiole diameter width (w)} \times \text{Petiole diameter depth (d)}$$



Ad. 9: Petiole: density of spike

Assesment of spike density is to be taken at the region of 30cm after the lowest rudimentary leaflet of frond 17.



3
sparse



5
medium



7
dense

Ad. 10. Petiole: colour



1

brown



2

greenish
brown



3

brownish
green



4

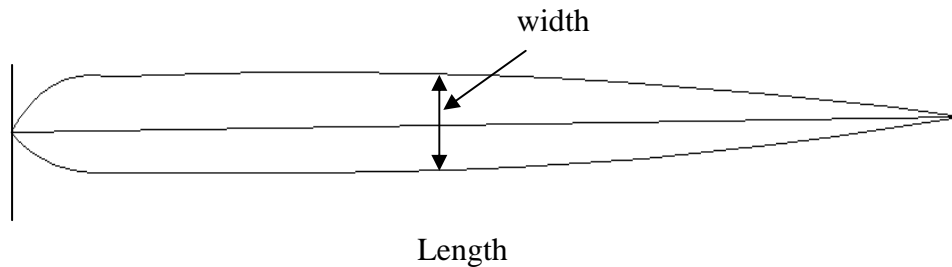
green

Ad. 11: Leaflet: length

Leaflet length is measured from the base to the tip of the leaflet. Three leaflets from each side of the rachis closest to the frond ligules are to be sampled from frond 17 during inspection.

Ad. 12: Leaflet: width

From Char. 9 samples, leaflet width is measured at the point where the leaflet is folded at equal length



Ad. 14. Leaflet: midrib colour



1

green



2

yellow

Ad. 15. Male inflorescence : length of the male inflorescence



**3
short**



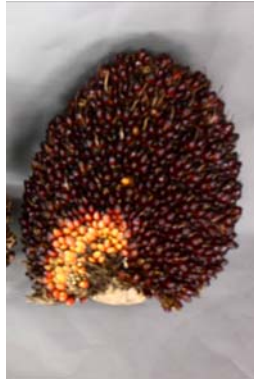
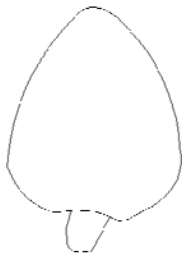
**5
medium**



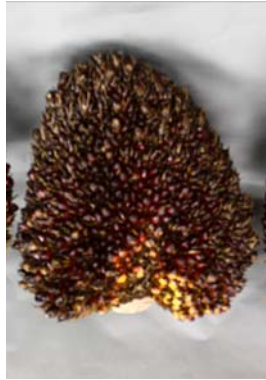
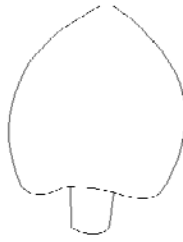
**7
long**

Explanation : Short = less than 30 cm.
Medium = 30 – 50 cm.
Long = more than 50 cm.

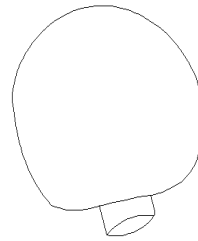
Ad. 18. Bunch: shape



1
ovate



2
cordiform

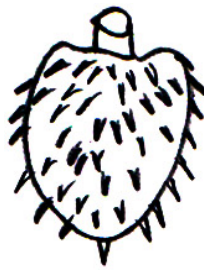


3
circular

Ad. 19. Bunch: density of spines



3
sparse



5
medium



7
dense



3
sparse



5
medium



7
dense

Ad. 20. Bunch: spine length



3
Short



5
Medium

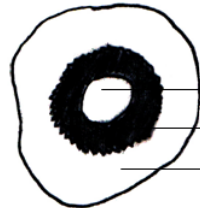


7
Long

Ad. 21. Fruit: form



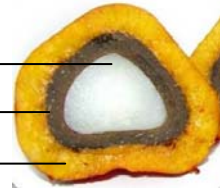
1
dura



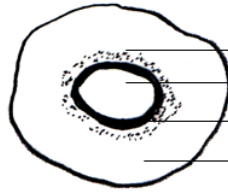
Kernel

Shell

Mesocarp



2
tenera

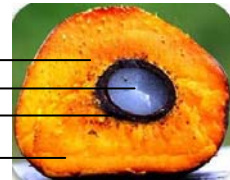


Fiber ring

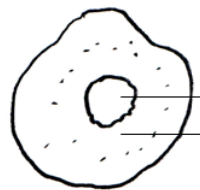
Kernel

Shell

Mesocarp



3
pisifera



Kernel

Mesocarp



1
Dura



2
Tenera



3
Pisifera

Ad. 22. Fruit: shape

Random sample of ten ripe outer fruits are taken from each newly harvested ripe bunch as per Section 2.5.



1
circular



2
oblong



3
obovate

Ad. 23. Fruit: mantled



1
absent

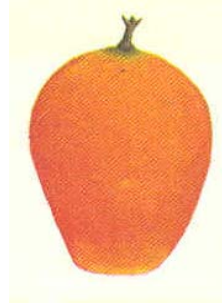


9
present

Ad. 24. Fruit: colour



1
nigrescens



2
virescens

Ad. 30. Fruit: number of kernel per fruit



1
one



2
more than one

Ad. 31. Nut: shape



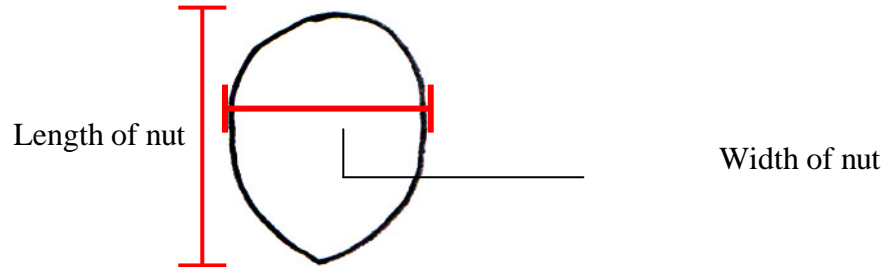
1
circular



2
obovate

Ad. 33. Nut: length

Ad. 34. Nut: width



9.0 Literature

- C.W.S. Hartley** (1967). Tropical Agriculture Series. *The Oil Palm (Elaeis guineensis* Jacq.). London: Longman and Green. 806p.
- R. H. V. Corley and P.H.B. Tinker** (2003). *The Oil Palm* (4th Edition). Blackwell Publishing, Incorporated. 592p.
- T. H. Fairhurst and Rolf Härdter** (2003). *Oil Palm: Management for Large and Sustainable Yields*. Potash & Phosphate Institute and International Potash Institute. First Edition 2003, pp. 13-26.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
<p style="text-align: center;">TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p> <p style="text-align: center;">In the case of hybrid varieties which are the subject of an application for plant breeders' rights, and where the parent lines are to be submitted as a part of the examination of the hybrid variety, this Technical Questionnaire should be completed for each of the parent lines, in addition to being completed for the hybrid variety.</p>		
<p>1. Subject of the Technical Questionnaire</p> <p>1.1 Latin name <input type="text" value="Elaeis guineensis Jacq"/></p> <p>1.2 Common name <input type="text" value="OIL PALM"/></p>		
<p>2. Applicant</p> <p>Name <input type="text"/></p> <p>Address <input type="text"/></p> <p>Telephone No. <input type="text"/></p> <p>Fax No. <input type="text"/></p> <p>E-mail address <input type="text"/></p> <p>Breeder (if different from applicant) <input type="text"/></p>		
<p>3. Proposed denomination and breeder's reference</p> <p>Proposed denomination (if available) <input type="text"/></p> <p>Breeder's reference <input type="text"/></p>		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4 .Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

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) totally unknown cross []

4.1.2 Mutation []
(please state parent variety)

.....

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

.....

4.1.4 Other []
(please provide details)

.....

.....

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

- | | | |
|-----|------------------------|--------|
| (a) | Self-pollination | [] |
| (b) | Cross-pollination | [] |
| | (i) population | [] |
| | (ii) synthetic variety | [] |
| (c) | Hybrid | [] |

In the case of hybrid varieties the production scheme for the hybrid should be provided on a separate sheet. This should providedetails of all the parent lines required for propagating the hybrid e.g.

Single Hybrid

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

Three-Way Hybrid

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

└──────────────────┘

(.....) x
(.....)
single hybrid used as female parent male parent

and should identify in particular:

- | | | |
|-----|--|--------|
| (a) | any male sterile lines | |
| (b) | maintenance system of male sterile lines | |
| (d) | Other | [] |
| | (Please provide detail) | |

Authority 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:
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 Palm: canopy		
(1)		
upright		1 []
spreading		2 []
drooping		3 []
5.2 Palm: height increment (cm/year)		
(3)		
low	Dumpy, LaMé	3 []
medium	Kamerun, Yangambi	5 []
high	Avros	7 []
5.3 Rachis: length (RL)		
(6)		
short	LaMé	3 []
medium	Avros	5 []
long	Dumpy	7 []
5.4 Petiole: colour		
(10)		
Brown		1 []
Greenish brown		2 []
Brownish green		3 []
green		4 []
5.5 Bunch: shape		
(18)		
ovate		1 []
cordiform		2 []
circular		3 []
5.6 Fruit: form		
(21)		
dura		1 []
tenera		2 []
pisifera		3 []

Characteristics	Example Varieties	Note
5.7 Fruit: colour (24)		
albescens		1 []
virescens		2 []
nigrescens		3 []
5.8 Fruit: weight (26)		
low		3 []
medium		5 []
high		7 []
5.9 Mesocarp: colour (29)		
light yellow		1 []
yellow		2 []
orange		3 []
dark orange		4 []

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

Please use the table, and space provided for comments, below 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 similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Bunch: shape</i>	<i>ovate</i>	<i>cordiform</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 Section 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 provide 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.

TECHNICAL QUESTIONNAIRE

Page {x} of {y}

Reference Number:

9. Information on plant material to be examined.

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]