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GARIS PANDUAN KEBANGSAAN
UNTUK MENJALANKAN UJIAN
KELAINAN, KESERAGAMAN DAN KESTABILAN

NATIONAL GUIDELINES
FOR THE CONDUCT OF TESTS
FOR DISTINCTNESS, UNIFORMITY AND STABILITY

KELAPA
COCONUT

(Cocos nucifera L.)

Nama Lain:
Alternative Names:

Nama Botani *Botanical Name*	Nama Tempatan *Local Name*	Nama Biasa *Common Name*
Cocos nucifera L.	Kelapa Nyiur	Kelapa *Coconut*

JABATAN PERTANIAN MALAYSIA
DEPARTMENT OF AGRICULTURE MALAYSIA

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JADUAL KANDUNGAN
TABLE OF CONTENTS

1.0 SUBJEK GARIS PANDUAN UJIAN
SUBJECT OF THESE TEST GUIDELINES

Garis Panduan ini digunakan bagi semua varieti *Cocos nucifera* L.

These Test Guidelines apply to all varieties of Cocos nucifera L.

2.0 BAHAN YANG DIPERLUKAN
MATERIAL REQUIRED

2.1 Pihak berkuasa kompeten memutuskan kuantiti dan kualiti bahan tanaman yang diperlukan bagi pengujian varieti serta bila dan di mana tempat bahan tanaman itu perlu diserahkan. Pemohon yang menyerahkan bahan dari negara selain dari Malaysia di mana ujian dijalankan mesti memastikan semua keperluan rasmi kastam dan keperluan fitosanitari dipatuhi.

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 Country other than Malaysia in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 Bahan seharusnya dibekalkan dalam bentuk buah baru bercambah.

The material is to be supplied in the form of recently germinated seednuts.

2.3 Kuantiti minimum bahan tanaman untuk dibekalkan pemohon seharusnya:

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

20 biji buah baru bercambah
20 recently germinated seednuts.

2.4 Bahan tanaman yang dibekalkan seharusnya kelihatan sihat, vigor dan tiada kesan kerosakan akibat daripada apa-apa perosak atau penyakit yang berbahaya.

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

2.5 Bahan tanaman tidak seharusnya melalui apa-apa rawatan yang mungkin menjejaskan ekspresi ciri varieti, melainkan pihak berkuasa kompeten membenarkan atau meminta rawatan itu dilakukan. Sekiranya bahan tanaman telah dirawat, butiran penuh tentang rawatan mestilah diberikan.

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.

3.0 KAEDAH PEMERIKSAAN
METHOD OF EXAMINATION

3.1. Bilangan Kitaran Pertumbuhan
Number of Growing Cycles

3.1.1 Tempoh minimum bagi ujian seharusnya dilakukan dalam dua (2) kitaran pertumbuhan.

The minimum duration of tests should normally be two (2) independent growing cycles.

3.1.2 Yang penting pokok mengeluarkan hasil buah yang memuaskan dalam setiap satu daripada dua kitaran tanaman.

In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.3 Dua kitaran pertumbuhan diperhatikan pada penanaman tunggal dan diperiksa dalam dua kitaran pertumbuhan yang berasingan.

The two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.

3.1.4 Kitaran pertumbuhan dianggap dari tempoh permulaan perkembangan bunga atau jambak bunga individu, diikuti pembentukan buah dan diakhiri dengan penuaian hasil buah dari bunga atau jambak bunga tersebut.

The growing cycle is considered to be the period ranging from the beginning of development of an individual flower or inflorescence, through fruit development and concluding with the harvesting of fruit from the corresponding individual flower or inflorescence.

3.2 Tempat Ujian
Testing Place

Biasanya ujian dijalankan di satu tempat. Jika ujian dijalankan lebih daripada satu tempat, garis panduan diberi dalam TGP/9 "*Examining Distinctness*."

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. Keadaan bagi Menjalankan Pemeriksaan
Conditions for Conducting the Examination

3.3.1 Ujian seharusnya dijalankan di bawah keadaan yang memastikan pertumbuhan adalah memuaskan bagi ekspresi ciri varieti berkaitan untuk tujuan pemeriksaan.

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 Reka Bentuk Ujian
Test Design

3.4.1 Setiap ujian seharusnya direka bagi menghasilkan sekurang-kurangnya 12 pokok, dimana perlu dibahagikan sekurang-kurangnya kepada dua (2) replikasi.

Each test should be designed to result in a total of at least 12 trees, which should be divided between at least 2 replicates.

3.4.2 Reka bentuk ujian seharusnya direka supaya pokok atau bahagian pokok boleh diasingkan untuk diukur atau dikira tanpa menjejaskan pemerhatian yang selanjutnya sehingga berakhirnya musim berbuah.

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 Ujian Tambahan
Additional Tests

Ujian tambahan untuk memeriksa ciri berkaitan boleh dibangunkan.

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

4.0 PENILAIAN KELAINAN, KESERAGAMAN DAN KESTABILAN
ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY

4.1 Kelainan
Distinctness

4.1.1 Syor Umum
General Recommendations

Amat penting bagi pengguna Garis Panduan Ujian ini untuk merujuk dokumen *General Introduction* sebelum membuat keputusan berkenaan dengan kelainan. Walau bagaimanapun, perkara berikut diberikan bagi huraian lebih lanjut atau penekanan dalam Garis Panduan Ujian ini.

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 Perbezaan yang Konsisten
Consistent Differences

Sekiranya perbezaan yang diperhatikan antara varieti amat jelas, satu kitaran pertumbuhan adalah mencukupi. Selain itu, dalam sesetengah keadaan sekiranya tidak terdapat perbezaan jelas yang mungkin disebabkan oleh faktor persekitaran, lebih daripada satu kitaran pertumbuhan diperlukan untuk memberikan kepastian bahawa perbezaan yang

diperhatikan antara varieti cukup konsisten. Satu cara untuk memastikan perbezaan dalam satu ciri yang diperhatikan dalam satu ujian penanaman cukup konsisten adalah dengan memeriksa ciri pada sekurang-kurangnya dua kitaran pertumbuhan yang bebas.

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 Perbezaan Jelas
Clear Differences

Menentukan sama ada perbezaan jelas dua varieti bergantung pada banyak faktor, dan seharusnya mengambil kira terutamanya jenis ekspresi ciri yang diperiksa, iaitu sama ada ciri itu diekspresikan dalam cara kualitatif, kuantitatif, atau pseudokualitatif. Justeru itu, penting bagi pengguna Garis Panduan Ujian ini untuk mengetahui syor yang terkandung dalam dokumen *General Introduction* sebelum membuat keputusan berkenaan dengan kelainan.

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 Bilangan Pokok/ Bahagian Pokok untuk diperiksa
Number of Plants /Parts of Plants to be Examined

Kecuali dinyatakan sebaliknya, untuk tujuan kelainan, semua pemerhatian seharusnya dilakukan ke atas 12 pokok atau bahagian pokok yang diambil setiap satu daripada 12 pokok itu dan setiap pemerhatian dilakukan pada semua pokok dalam ujian tanpa mengambil kira jenis ganjil. Bagi setiap pokok, bilangan sampel yang perlu diambil dari setiap bahagian adalah dua (2).

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 12 plants or parts taken from each of 12 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 Jenis Pemerhatian
Type of Observation

Kaedah pemerhatian ciri yang disyorkan di bawah untuk menunjukkan kelainan seperti dinyatakan dalam petunjuk kolum kedua Jadual Ciri (rujuk dokumen TGP/9 "*Examining distinctness"*, Seksyen 4 "*Observation of characteristics")*:

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: satu pengukuran ke atas sekumpulan pokok atau bahagian pokok;
single measurement of a group of plants or parts of plants;

MS: pengukuran bagi beberapa pokok atau bahagian pokok secara individu;
measurement of a number of individual plants or parts of plants;

VG: penilaian secara visual dengan satu pemerhatian ke atas sekumpulan pokok atau bahagian pokok;
visual assessment by a single observation of a group of plants or parts of plants;

VS: penilaian secara visual dengan memerhati setiap pokok atau bahagian pokok.
visual assessment by observation of individual plants or parts of plants.

Jenis pemerhatian: visual (V) atau pengukuran (M)
Type of observation: visual (V) or measurement (M)

Pemerhatian "visual" (V) adalah pemerhatian yang dilakukan berdasarkan kepada penilaian oleh pakar tanaman. Untuk tujuan dokumen ini, pemerhatian "visual" merujuk kepada pemerhatian deria oleh pakar merangkumi deria bau, rasa dan sentuhan. Pemerhatian visual juga merangkumi pemerhatian oleh pakar menggunakan beberapa rujukan (cth: diagram, varieti contoh, perbandingan bersebelahan) atau carta "non-linear" (cth: carta warna). Pengukuran (M) adalah pemerhatian secara objektif yang menggunakan kaedah penentu-ukur, skala linear cth: mengunakan pembaris, penimbang, meter warna, bilangan, pengiraan dan lain-lain.

"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 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.

Jenis pemerhatian: untuk sekumpulan tanaman (G) atau untuk tanaman tunggal (S)
Type of records: for a group of plants (G) or for single, individual plants (S)

Untuk tujuan kelainan, pemerhatian akan direkodkan sebagai rekod tunggal bagi sekumpulan tanaman atau sekumpulan bahagian tanaman (G), atau direkodkan sebagai rekod tunggal, setiap tanaman atau setiap bahagian tanaman (S). Dalam kebanyakan kes, "G" menunjukkan rekod tunggal untuk setiap varieti dan kaedah analisis statistik tidak perlu dijalankan pada setiap tumbuhan untuk penilaian kelainan.

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.

Dalam kes di mana terdapat lebih daripada satu kaedah pemerhatian dinyatakan dalam Jadual Ciri (cth: VG/MG), garis panduan untuk memilih kaedah yang bersesuaian dinyatakan di dalam dokumen TGP/9, seksyen 4.2.

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 Keseragaman
Uniformity

4.2.1 Amat penting bagi pengguna Garis Panduan Ujian ini merujuk dokumen UPOV TGP/1/3: *General Introduction* sebelum membuat keputusan berkenaan dengan keseragaman. Walau bagaimanapun, perkara berikut diberikan sebagai huraian lanjut atau sebagai penekanan kepada Garis Panduan Ujian ini.

It is of particular importance for users of these Test Guidelines to consult the UPOV document TGP/1/3: 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 Penilaian untuk kestabilan seharusnya berdasarkan pembiakan varieti secara kacukan pendebungaan seperti yang disyorkan dalam *General Introduction*.

The assessment of uniformity should be according to the recommendations for cross-pollinated varieties in the General Introduction.

4.2.3 Bagi penilaian keseragaman, piawaian populasi sebanyak 95% dan kebarangkalian penerimaan sekurang-kurangnya 1% hendaklah digunakan. Dalam kes saiz sampel 12 tanaman, 1 jenis ganjil dibenarkan.

For the assessment of uniformity, a population standard of 95% and an acceptance probability of at least 1 % should be applied. In the case of a sample size of 12 plants, 1 off-type is allowed.

4.3 Kestabilan
Stability

4.3.1 Secara praktikalnya, ujian kestabilan adalah jarang dijalankan bagi menghasilkan keputusan yang begitu pasti seperti keputusan ujian kelainan dan keseragaman. Namun begitu, pengalaman menunjukkan bahawa bagi kebanyakan jenis varieti, apabila sesuatu varieti terbukti seragam, ia boleh dianggap sebagai stabil.

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 Apabila sesuai atau jika terdapat keraguan, kestabilan boleh diuji, sama ada dengan menanam generasi selanjutnya, atau dengan menguji stok biji benih atau tanaman yang baru

untuk memastikan tanaman itu menunjukkan ciri yang sama seperti yang ditunjukkan oleh bahan yang dibekalkan sebelumnya.

Where appropriate, or in cases of doubt, stability may be further examined by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5.0 PENGELOMPOKAN VARIETI DAN PERANCANGAN & PELAKSANAAN UJIAN PENANAMAN
GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL

5.1 Pemilihan varieti yang diketahui umum untuk ditanam dalam ujian bersama-sama varieti calon dan cara varieti ini dibahagikan kepada kelompok bagi memudahkan penilaian kelainan, dibantu oleh penggunaan ciri pengelompokan.

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 Ciri pengelompokan ialah ciri yang keadaan ekspresinya telah didokumenkan walaupun dihasilkan di lokasi berlainan, boleh digunakan sama ada secara berasingan atau secara gabungan dengan ciri lain:

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) untuk memilih varieti yang diketahui umum yang boleh dikecualikan dalam ujian penanaman yang digunakan bagi memeriksa kelainan; dan
to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and

(b) untuk mengaturkan ujian penanaman supaya varieti yang serupa dikelompokkan bersama.
to organize the growing trial so that similar varieties are grouped together.

5.3 Yang berikut telah dipersetujui sebagai ciri pengelompokan yang sesuai:
The following have been agreed as useful grouping characteristics:

(a) Masa berbunga pertama (ciri 3)
Time of appearance of first inflorescence (Characteristics 3)

(b) Batang: tinggi (ciri 6)
Stem: height (characteristic 6)

(d) Buah muda: warna (ciri 26)
Young fruit: color (characteristic 26)

(e) Buah: bentuk (ciri 28)
Fruit: shape (characteristic 28)

(f) Biji: bentuk (ciri 30)
Nut: shape (characteristic 30)

5.4 Garis panduan bagi penggunaan ciri pengelompokan, dalam proses memeriksa kelainan, diberi dalam *General Introduction*.

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

6.0 PENGENALAN KEPADA JADUAL CIRI
INTRODUCTION TO THE TABLE OF CHARACTERISTICS

6.1 Kategori Ciri
Categories of Characteristics

6.1.1 Ciri Garis Panduan Ujian Nasional
National Test Guidelines Characteristics

Ciri Garis Panduan Ujian Nasional ini merupakan ciri yang digunapakai berdasarkan Garis Panduan Ujian Piawaian UPOV bagi pemeriksaan DUS dan diluluskan oleh Lembaga Varieti Tumbuhan bagi pemeriksaan DUS.

National Test Guidelines characteristics are those which are based on UPOV Standard Test Guidelines for examination of DUS and approved by the Plant Variety Board for examination of DUS.

6.1.2 Ciri Bertanda Asterisk
Asterisked Characteristics

Ciri bertanda asterisk (ditandakan dengan*) ialah ciri yang termasuk dalam Garis Panduan Ujian yang merupakan ciri penting bagi penyelarasan deskripsi varieti pada peringkat antarabangsa dan seharusnya selalu diperiksa untuk DUS, dan dimasukkan dalam deskripsi varieti, kecuali apabila keadaan ekspresi ciri yang sebelumnya atau keadaan persekitaran kawasan menjadikannya tidak sesuai.

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, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.*

6.2 Tahap Ekpresi dan Catatan yang Berkaitan
States of Expression and Corresponding Notes

6.2.1 Tahap ekspresi diberi bagi setiap ciri untuk menjelaskan ciri dan untuk menyelaraskan deskripsi. Setiap tahap ekspresi diperuntukkan catatan bernombor yang sepadan bagi memudahkan merekod data dan bagi penerbitan serta pertukaran deskripsi.

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 Dalam kes ciri kualitatif dan pseudo-kualitatif (lihat Bab 6.3), atau tahap ekspresi yang sesuai, adalah dinyatakan pada ciri. Walau bagaimanapun dalam kes di mana ciri yang mempunyai lima (5) atau lebih tahap, skala ringkas boleh digunakan untuk meminimakan saiz Jadual Ciri.

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 five (5) or more states, an abbreviated scale may be used to minimize the size of Table of Characteristics.

Sebagai contoh, dalam kes ciri kuantitatif dengan sembilan (9) tahap, pernyataan tahap ekspresi didalam garispanduan ujian boleh diringkaskan sebagai berikut:

For example, in the case of quantitative characteristics with nine (9) states, the presentation of states of expression in the test guidelines may be abbreviated as follows:

Keadaan/ *State*	Catatan/ *Note*
Kecil/ *Small*	3
Sederhana/ *Medium*	5
Besar/ *Large*	7

Walau bagaimanapun, kesemua sembilan (9) tahap ekspresi yang ada untuk mencirikan varieti perlu digunakan secara bersesuaian.

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

Keadaan/ *State*	Catatan/ *Note*
Sangat kecil/ *Very small*	1
Sangat kecil hingga kecil/ *Very small to small*	2
Kecil/ *Small*	3
Kecil hingga sederhana/ *Small to medium*	4
Sederhana/ *Medium*	5
Sederhana hingga besar/ *Medium to large*	6
Besar/ *Large*	7
Besar hingga sangat besar/ *Large to very large*	8
Sangat besar/ *Very large*	9

6.2.3. Penjelasan lanjut mengenai pernyataan tahap ekspresi dan nota ada diterangkan dalam dokumen TGP/7 “Development of Test Guidelines”.

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

6.3 Jenis Ekspresi
Types of Expression

Penjelasan tentang jenis ekspresi ciri (kualitatif, kuantitatif dan pseudokualitatif) diberi dalam *General Introduction*.

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

6.4 Varieti Contoh
Example Varieties

Di mana sesuai, varieti contoh diberi untuk menjelaskan keadaan ekspresi setiap ciri.

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Petunjuk
Legend

(*) Ciri bertanda asterisk – lihat Bab 6.1.2
Asterisked characteristic – see Chapter 6.1.2

QL Ciri kualitatif – lihat Bab 6.3
Qualitative characteristic – see Chapter 6.3
QN Ciri kuantitatif – lihat Bab 6.3
Quantitative characteristic – see Chapter 6.3
PQ Ciri pseudokualitatif – lihat Bab 6.3
Pseudo-Qualitative characteristic – see Chapter 6.3

MG: lihat bahagian 4.1.5
see section 4.1.5
MS: lihat bahagian 4.1.5
see section 4.1.5
VG: lihat bahagian 4.1.5
see section 4.1.5
VS: lihat bahagian 4.1.5
see section 4.1.5
(a)–(e) Lihat Penjelasan meliputi beberapa ciri dalam Bab 7.0.
See Explanations Covering Several Characteristics in Chapter 7.0.

(+) Lihat Penjelasan bagi ciri individu dalam Bab 8.0.
See Explanations for Individual Characteristics in Chapter 8.0.

7.0 PENJELASAN JADUAL CIRI
EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

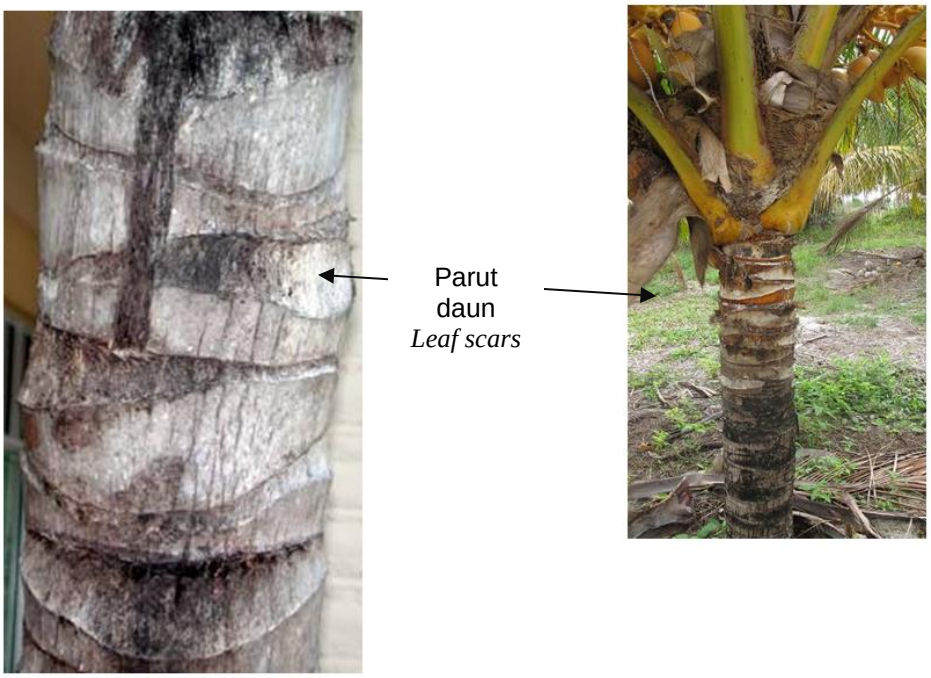
7.1 Penjelasan meliputi beberapa ciri
Explanations covering several characteristics

Ciri yang mengandungi petunjuk berikut dalam kolum kedua Jadual Ciri seharusnya diperiksa seperti yang dinyatakan di bawah ini:

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

(a) Pemerhatian pada batang seharusnya dilakukan apabila parut daun kesebelas muncul (rujuk gambar pokok yang mempunyai parut daun).

Observations on stem should be made when the eleventh leaf scar appears (see photo of a plant with leaf scars).



(b) Pemerhatian pada petiol, daun dan lai daun seharusnya dilakukan pada daun matang. Pemerhatian pada lai daun seharusnya dilakukan pada 2 lai daun yang bertentangan pada bahagian tengah rakis.

Observations on petiole, leaf and leaflet should be made on mature leaf. Observations on leaflets should be made on 2 opposite leaflets in the middle of the rachis.

(c) Pemerhatian pada pedunkel seharusnya dilakukan selepas kemunculan jambak bunga ke lima, apabila bunga betina adalah reseptif.

Observations on peduncle and inflorescence should be made after the appearance of the fifth inflorescence, when female flowers are receptive.

(d) Pemerhatian pada tandan, dan buah muda seharusnya dilakukan pada masa air kelapa sesuai diminum (pada umur buah 6 - 8bulan).

Observations on the bunch and young fruit should be made at the time of consumption as coconut water (at 6-8 months age fruit).

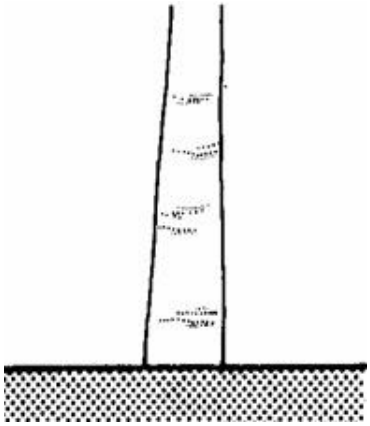
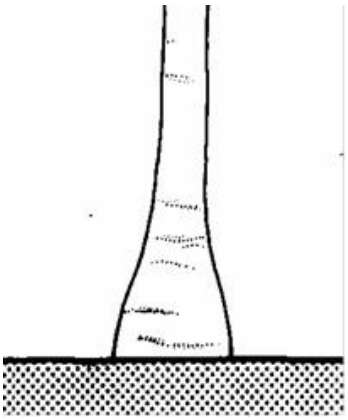
(e) Pemerhatian pada buah, biji, tempurung dan isi seharusnya dilakukan pada peringkat matang apabila warna buah bertukar perang atau kelabu sepenuhnya

Observations on the fruit, nut, shell and meat should be made at maturity when the fruit has turned fully brown or grey.

8.0 JADUAL CIRI
TABLE OF CHARACTERISTICS

BIL. ***NO.***		**CIRI** ***CHARACTERISTIC***	**KEADAAN** ***STATE***	**VARIETI CONTOH** ***EXAMPLE VARIETIES***	**CATATAN** ***NOTE***
1. (+) QN U:1	MS VG	Pokok muda: bilangan daun *Young plant: number of leaves*	sedikit *few* sederhana *medium* banyak *many*		3 5 7
Tamb. 1: Pokok muda: bilangan daun *Ad. 1: Young plant: number of leaves* Pemerhatian pada pokok muda seharusnya dilakukan 6 bulan selepas percambahan di nurseri *Young plant should be observed 6 months after germination at nursery.*					
2. (*) (+) QN U:2	VG	Pokok muda: masa daun pecah *Young plant: time of leaf splitting*	awal *early* sederhana *medium* lewat *late*		1 2 3
Tamb 2: Pokok muda: masa daun pecah *Ad. 2: Young plant: time of leaf splitting*  					

BIL. ***NO.***		**CIRI** ***CHARACTERISTIC***	**KEADAAN** ***STATE***	**VARIETI CONTOH** ***EXAMPLE VARIETIES***	**CATATAN** ***NOTE***
3. (*) (+) QN U:3	MG	Masa berbunga pertama *Time of appearance of first inflorescence*	awal *early* sederhana *medium* lewat *late*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) Matag Green (CN13) Tagnanan Gold (CN9)	3 5 7
Tamb. 3: Masa berbunga pertama *Ad. 3: Time of appearance of first inflorescence* Masa berbunga pertama seharusnya diperhatikan apabila 50% pokok telah mengeluarkan jambak bunga pertama. *The time of appearance of first inflorescence should be observed when 50% of the plants have emitted the first inflorescence.*					
4. (+) QL U:4	VG (a)	Batang: tapak gajah *Stem: bole*	tiada *absent* ada *present*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) Tagnanan Gold (CN9), MYLAG	1 9

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
Tamb. 4: Batang: tapak gajah *Ad. 4: Stem: bole*  1 tiada			 9 ada *present*		
5. (*) (+) QN U:5	MS/ VG (a)	Batang: ukur lilit tapak gajah *Stem: girth of bole*	kecil *small* sederhana *medium* besar *large*	 Rennel Tall Gold (CN12), West African Tall Green (CN2) Tagnanan Gold (CN9)	1 3 5
Tamb 5: Batang: ukur lilit tapak gajah *Ad. 5: Stem: girth of bole* Ukur lilit tapak gajah seharusnya diukur pada bahagian terlebar. *The girth of the bole should be assessed at its widest part.*					
6. (*) (+) QN U:6	MS/ VG (a)	Batang : tinggi *Stem: height*	pendek *short* sederhana *medium*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) Rennel Tall Gold (CN12)	3 5

BIL. ***NO.***		**CIRI** ***CHARACTERISTIC***	**KEADAAN** ***STATE***	**VARIETI CONTOH** ***EXAMPLE VARIETIES***	**CATATAN** ***NOTE***
			tinggi *tall*	Tagnanan Gold (CN9)	7
Tamb. 6: Batang: tinggi *Ad. 6: Stem: height* Tinggi batang seharusnya diukur dari pangkal hingga ke bahagian atas parut ke 11 [rujuk gambar 7.1 (a)]. *The stem height should be observed from the ground to the top of the 11th scar [see picture 7.1 (a)].*					
7. (*) (+) QN U:7	MS VG (a)	Batang: ukur lilit *Stem: girth*	sempit *narrow* sederhana *medium* lebar *broad*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) Rennel Tall Gold (CN12), West African Tall Green (CN2) Tagnanan Gold (CN9)	3 5 7
Tamb. 7: Batang: ukur lilit *Ad. 7: Stem: girth* Ukur lilit batang seharusnya diukur separuh dari bahagian pangkal hingga ke bahagian atas parut ke 11. *The stem girth should be measured halfway from the ground to the top of the 11th scar.*					
8. (+) QL	VG (b)	Petiol: kehadiran sayap *Petiole: presence of wings*	tiada *absent* ada *present*	 Kelapa Pandan (CN6)	1 9

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
Tamb. 8: Petiol: kehadiran sayap *Ad. 8: Petiole: presence of wings*  					
9. (+) QN U:14	MS VG (b)	Petiol: panjang *Petiole: length*	pendek *short* sederhana *medium* panjang *long*		3 5 7
Tamb. 9: Petiol: panjang *Ad. 9: Petiole: length* Panjang petiol seharusnya diukur dari bahagian pangkal petiol hingga ke lai daun pertama. *The petiole length should be observed from base to the most proximal leaflet of the rachis.*					
10. (+) QN U:16	MS VG (b)	Petiol: ketebalan keratan rentas *Petiole: thickness in cross section*	nipis *thin* sederhana *medium* tebal *thick*		3 5 7
11. (+) QN U:15	MS/ VG (b)	Petiol: lebar *Petiole: width*	sempit *narrow* sederhana *medium*		3 5

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
			lebar *broad*		7

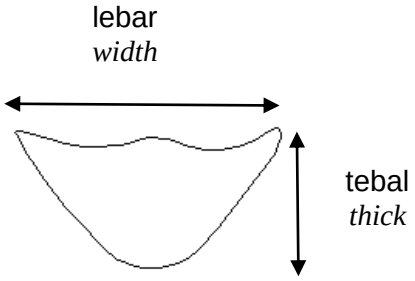
Tamb. 10: Petiol: ketebalan keratan rentas
Ad. 10: Petiole: thickness in cross section

Pemerhatian ketebalan petiol seharusnya dilakukan pada sisipan lai daun pertama.
The petiole thickness should be observed at the insertion of the first leaflet.

Tamb. 11: Petiol: lebar
Ad. 11: Petiole: width

Pemerhatian lebar petiol seharusnya dilakukan pada sisipan lai daun pertama.
The petiole width should be observed at the insertion of the first leaflet.

lebar
width



12. PQ U:17	VG (b)	Petiol: warna *Petiole: color*	kuning *yellow*	Malayan Yellow Dwarf (CN5)	1
			hijau *green*	Malayan Green Dwarf	2
			merah *red*	Malayan Red Dwarf (CN4)	3
			perang *brown*	Malayan Brown Dwarf	4

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
13. (*) (+) QN U:8	VG (b)	Daun: sifat daun bawah *Leaf: attitude of lower leaves*	menegak *upwards* mendatar *outwards* kebawah *downwords*	 Tagnanan Gold (CN9) Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5), West African Tall Green (CN2)	1 2 3

Tamb. 13: Daun: sifat daun bawah

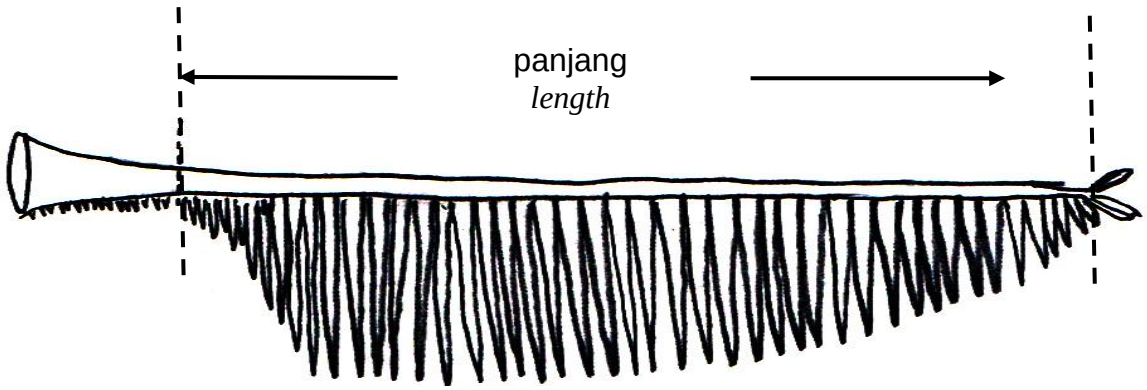
Ad. 13: Leaf: attitude of lower leaves

1
menegak
upwards

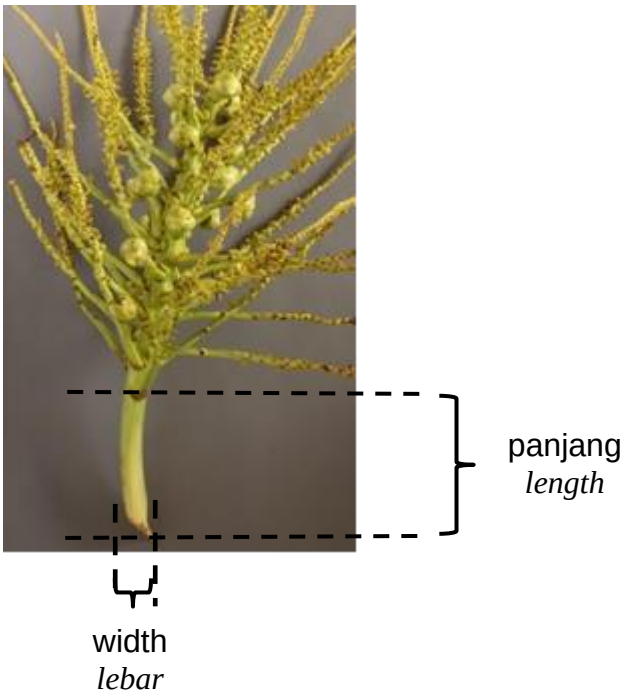
2
mendatar
outwards

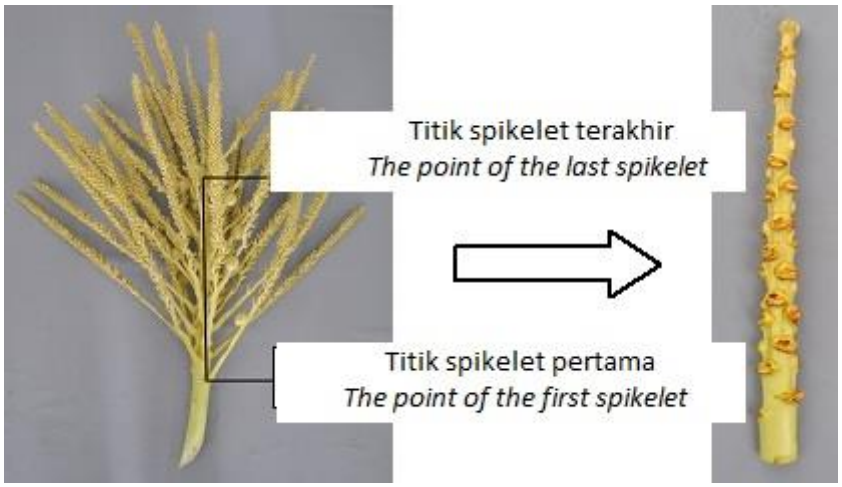
3
kebawah
downwards

14. (*) (+) QN U:9	MS VG (b)	Daun: panjang rakis *Leaf: length of rachis*	pendek *short* sederhana *medium* panjang *long*	Kelapa Pandan (CN6) Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) Rennel Tall Green (CN10)	3 5 7

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
Tamb. 14: Daun: panjang rakis *Ad. 14: Leaf: length of rachis* Panjang rakis seharusnya diukur dari lai daun pertama sehingga hujung rakis. *The length of the rachis should be assessed from the most proximal leaflet to the tip of the rachis.*  					
15. QN U:10	MS VG (b)	Daun: bilangan anak daun *Leaf: number of leaflets*	sedikit *few* sederhana *medium* banyak *many*	Malayan Yellow Dwarf (CN5) Rennel Tall Green (CN10) West African Tall Green (CN2)	3 5 7
16. (+) QN U:11	MS VG (b)	Anak daun: panjang *Leaflet: length*	pendek *short* sederhana *medium* panjang *long*	Kelapa Pandan (CN6) Rennel Tall Green (CN10)	3 5 7
Tamb. 16: Anak daun: panjang *Ad. 16: Leaflet: length* Panjang anak daun seharusnya diperhatikan pada anak daun di bahagian tengah rakis. *The length of a leaflet should be observed of a leaflet at the middle part of the rachis.*					

BIL. ***NO.***		**CIRI** ***CHARACTERISTIC***	**KEADAAN** ***STATE***	**VARIETI CONTOH** ***EXAMPLE VARIETIES***	**CATATAN** ***NOTE***
17. (+) QN U:12	MS VG (b)	Anak daun: lebar *Leaflet: width*	sempit *narrow* sederhana *medium* lebar *broad*		3 5 7
Tamb. 17: Anak daun: lebar *Ad. 17: Leaflet: width* Lebar anak daun seharusnya diperhatikan pada bahagian terlebar pada bahagian tengah rakis. *The width of leaflet should be observed at the widest point of a leaflet in the middle of the rachis*.					
18. QN U:13	VG (b)	Anak daun: keamatan warna hijau *Leaflet: intensity of green color*	cerah *light* sederhana *medium* gelap *dark*	 Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5),	1 2 3
19. (+) QN U:22	MS VG (c)	Jambak bunga: panjang pedunkel *Inflorescence : length of peduncle*	pendek *short* sederhana *medium* panjang *long*	Malayan Yellow Dwarf (CN5) West African Tall Green (CN2) Rennel Tall Green (CN10)	3 5 7
20. (+) QN U:23	MS VG (c)	Jambak bunga: lebar pedunkel *Inflorescence: width of peduncle*	sempit *narrow* sederhana *medium* lebar *broad*		3 5 7

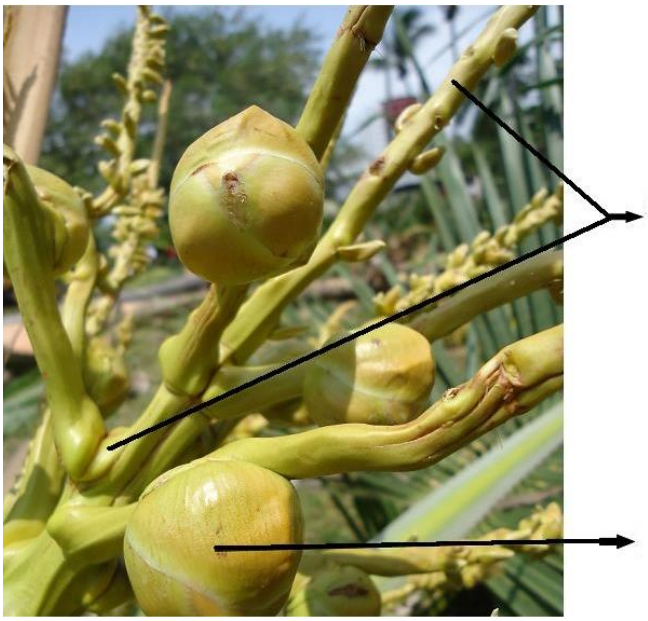
BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
Tamb. 19: Jambak bunga: panjang pedunkel *Ad. 19: Inflorescence : length of peduncle* Tamb. 20: Jambak bunga: lebar pedunkel *Ad. 20: Inflorescence: width of peduncle*  					
21. (+) QN U:21	MS/ VG (c)	Jambak bunga: panjang paksi tengah *Inflorescence: length of central axis*	pendek *short* sederhana *medium* panjang *tall*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) West African Tall Green (CN2)	3 5 7

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
Tamb. 21: Jambak bunga: panjang paksi tengah *Ad. 21: Inflorescence: length of central axis*  					
22. (+) QN U:18	MS VG (c)	Jambak bunga: bilangan spikelet *Inflorescence: number of spikelets*	sedikit *few* sederhana *medium* banyak *many*	Rennel Tall Green (CN10) West African Tall Green (CN2)	3 5 7
Tamb. 22: Jambak bunga: bilangan spikelet *Ad. 22: Inflorescence: number of spikelets* Bilangan spikelet dikira selepas diasingkan dari jambak bunga. *The number of spikelets is assessed by counting after removing them from the inflorescence.* 					

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
23. (*) (+) QN U:19	MS (c)	Jambak bunga: bilangan spikelet yang mempunyai bunga betina *Inflorescence: number of spikelets with female flowers*	sedikit *few* sederhana *medium* banyak *many*	 Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5) West African Tall Green (CN2)	3 5 7

Tamb. 23: Jambak bunga: bilangan spikelet yang mempunyai bunga betina
Ad. 23: Inflorescence: number of spikelets with female flowers

Bilangan spikelet yang mempunyai bunga betina dikira selepas diasingkan dari jambak bunga.
The number of spikelets with female flowers is assessed by counting after removing them from the inflorescence



24. (+) QN U:20	MS/ VG (c)	Jambak bunga: panjang spikelet yang mempunyai bunga betina pertama *Inflorescence: length of first spikelet with female flowers*	pendek *short* sederhana *medium*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	3 5

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
			panjang *long*	Rennel Tall Green (CN10)	7

Tamb. 24: Jambak bunga: panjang spikelet pertama yang mempunyai bunga betina
Ad. 24: Inflorescence: length of first spikelet with female flowers

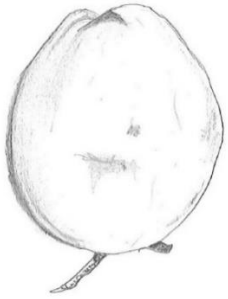
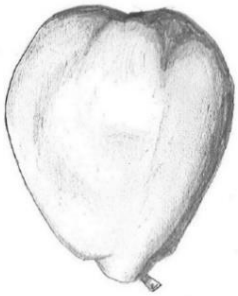
Panjang spikelet pertama yang mempunyai bunga betina seharusnya diukur dari pangkal jambak bunga.
The length of first spikelet with female flowers should be assessed from the base of the inflorescence.

25. QN U:24	MS VG (d)	Tandan: bilangan buah *Bunch: number of fruits*	sedikit *few* sederhana *medium* banyak *many*		3 5 7
26. (*) PQ U:25	VG (d)	Buah muda: warna *Young fruit: color*	kuning *yellow* hijau *green* *jingga* *orange* merah *red* perang *brown*		1 2 3 4 5

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
27. (+) QL U:26	VG (d)	Buah muda: aroma air kelapa *Young fruit: aroma of coconut water*	tiada *absent*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	1
			ada *present*	Kelapa Pandan (CN6)	9
Tamb. 27: Buah muda: aroma air kelapa *Ad. 27: Young fruit: aroma of coconut water* Aroma dinilai dengan menghidu air pada peringkat air sesuai untuk diminum. *The aroma is assessed by smelling the water at the maturity stage for consumption as water.*					
28. (*) (+) PQ U:27	VG (e)	Buah: bentuk *Fruit: shape*	ovat *ovate*	West African Tall Green (CN2)	1
			eliptik *elliptic*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	2
			bulat *circular*	Tagnanan Green (CN7)	3
			obovat *obovate*		4

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*

Tamb. 28: Buah: bentuk
Add. 28: Fruit: shape

lebar (nisbah panjang/ lebar)/ *ratio (length/width)*	← bahagian terlebar/ *broadest part* →		
	bawah tengah/ *below middle*	di tengah/ *at middle*	atas tengah/ *above middle*
→ sempit (tinggi)/ *narrow (high)*	 1 ovat *ovate*		
		 2 eliptik *elliptic*	 4 obovat *obovate*
← lebar (rendah)/ *broad (low)*		 3 bulat *circular*	

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*
29. (+) QL	VG (e)	Buah: kehadiran puting pada hujung buah *Fruit: presence of nipple at the tip*	tiada *absent* ada *present*	CARENI CARECA	1 9
Tamb. (29): Buah: kehadiran puting pada hujung buah *Ad. (29): Fruit: presence of nipple at the tip*   1 tiada *absent* 9 ada *present* puting *nipple*					
30. (*) (+) PQ U:28	VG (e)	Biji: bentuk *Nut: shape*	eliptik *elliptic* bulat *circular* oblat *oblate* obovat *obovate*	West African Tall Green (CN2) Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	1 2 3 4

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*

Tamb. 30: Biji: bentuk
Ad. 30: Nut: shape

lebar (nisbah panjang/ lebar)/ *ratio (length/width)*	← bahagian terlebar/ *broadest part* →	
	di tengah/ *at middle*	atas tengah/ *above middle*
→ sempit (tinggi)/ *narrow (high)*	 1 eliptik *elliptic*	
	 2 bulat *circular*	 4 obovat *obovate*
← lebar (rendah)/ *broad (low)*	 3 oblat *oblate*	

BIL. *NO.*		**CIRI** *CHARACTERISTIC*	**KEADAAN** *STATE*	**VARIETI CONTOH** *EXAMPLE VARIETIES*	**CATATAN** *NOTE*
31. (+) QN U:29	MS VG (e)	Tempurung: ketebalan *Shell: thickness*	nipis *thin* sederhana *medium* tebal *thick*	Malayan Yellow Dwarf (CN5) Rennel Tall Green (CN10) West African Tall Green (CN2)	1 2 3

Tamb. 31: Tempurung: ketebalan
Ad. 31: Shell: thickness

Ketebalan tempurung seharusnya diukur pada bahagian tengah biji.
The shell thickness should be measured at the middle part of the nut.

32. (*) (+) QN U:30	VG (e)	Isi: ketebalan *Meat: thickness*	nipis *thin* sederhana *medium* tebal *thick*	Malayan Yellow Dwarf (CN5) Rennel Tall Green (CN10) West African Tall Green (CN2)	1 2 3

BIL. *NO.*		CIRI *CHARACTERISTIC*	KEADAAN *STATE*	VARIETI CONTOH *EXAMPLE VARIETIES*	CATATAN *NOTE*

Tamb. 32: Isi: ketebalan
Ad. 32: Meat: thickness

Tebal isi seharusnya diukur pada bahagian tengah biji.
The meat thickness should be measured at the middle part of the nut.

9.0 RUJUKAN
LITERATURE

UPOV. 2016. Guidelines For The Conduct Of Tests For Distinctness, Uniformity And Stability: Coconut (TG/314/1) Geneva

Panduan Pengujian Individual Kebaruan, Keunikan, Keseragaman dan Kestabilan: Kelapa. Indonesia

W.M., Ribeiro, F.E., de V. Melo, M.F. 2009: Cultivares de coqueiro para produção de coco seco: coqueiro gigante vs híbridos. In: Cintra, F.L.D., Fontes, H.R., Passos, E.E.M., Ferreira, J.M.S., (Ed.). Fundamentos tecnológicos para a revitalização das áreas cultivadas com coqueiro gigante do Brasil. Aracaju: Embrapa Tabuleiros Costeiros,. 232p.

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Santos, G.A.; Batugal, P.A.; Othaman, A.; Baudouin, L.; Labouisse, J.P. (Ed.) Manual on standardized research techniques in coconut breeding. Rome, IT, IPGRI, 1993, p.irr

Wuidart, W., Rognon, F., 1978: L'analysis de composant de la noix de cocotier: Méthode de determination du coprah. Oléagineux, 33(5): 225-33.

10.0 SOAL SELIDIK TEKNIKAL
TECHNICAL QUESTIONNAIRE

BORANG SOAL SELIDIK TEKNIKAL
TECHNICAL QUESTIONNAIRE

untuk dilengkapi berkaitan dengan permohonan Hak Pembiak Baka Tumbuhan
to be completed in connection with an application for Plant Breeders' Rights

UNTUK KEGUNAAN RASMI
FOR OFFICIAL USE

Nombor Rujukan : ***Reference Number***	**Tarikh Permohonan** : *Application date* **(tidak boleh diisi oleh pemohon)** (*not to be filled in by the applicant*)

1. BAHAN UJIAN (Sila tandakan spesies yang berkaitan)
SUBJECT OF THE TECHNICAL QUESTIONNAIRE (please indicate the relevant species)

1.1 Nama Botani : ***Cocos nucifera* L.**
Botanical Name

1.2 Nama Biasa : **Kelapa**
Common name ***Coconut***

1.3 Nama Tempatan: **Kelapa, Nyiur**
Local name

2. PEMOHON
APPLICANT

Nama Pemohon :
_____
Applicant Name

Alamat :
_____
Address
_____

_____

No. Telefon :
_____
Telephone No.

No. Fax : _____
Fax No.

E-mail address : _____
Alamat e-mail

Pembiak Baka : _____
Breeder
(jika berlainan daripada pemohon)
(if different from applicant)

3. NAMA YANG DICADANGKAN DAN RUJUKAN PEMBIAK BAKA
PROPOSED DENOMINATION AND BREEDER'S REFERENCE

Nama yang dicadangkan _____ _____ _____
Proposed denomination **pilihan pertama** (*1st choice*) **pilihan kedua** (*2nd choice*) **pilihan ketiga** (*3rd choice*)

Rujukan pembiak baka _____
Breeder's reference

4. MAKLUMAT SKIM PEMBIAKBAKAAN DAN PEMBIAKAN VARIETI
INFORMATION ON THE BREEDING SCHEME AND PROPAGATION OF THE VARIETY

4.1 Skim pembiakbakaan
Breeding scheme

Varieti terhasil daripada :
Variety resulting from

4.1.1 Kacukan
Cross

(a) Kacukan kacuk terkawal (sila nyatakan varieti induk)
Crossing controlled cross (please state parent varieties)

(……) x (……)
induk betina induk jantan
female parent x male parent

(b) kacukan separuh diketahui (sila nyatakan varieti induk)
Partially known cross (please state parent varieties)
(……) x (……)
induk betina induk jantan
female parent x male parent

(c) kacukan tidak diketahui
Unknown cross

☐ Penemuan dan pembangunan (sila nyatakan di mana ditemui dan bagaimana dibangunkan)
Discovery and development (please state where and when discovered and how developed)

☐ Lain-lain (sila berikan butir-butir)
Other (please provide details)

4.2 Kaedah pembiakan varieti
Method of propagating the variety

4.2.1 Pembiakan vegetatif
Vegetative propagation

☐ keratan
cuttings

☐ pembiakan in vitro
in vitro propagation

☐ lain-lain (nyatakan kaedah)
other (state method)

4.2.2 Lain-lain (nyatakan dengan lebih lanjut)
Others (please provide details)

 # Pihak berkuasa mungkin membenarkan maklumat tertentu ini diberi dalam bahagian sulit Borang Soal Selidik Teknikal.
Authority may allow certain of this information to be provided in a confidential section of the Technical Questionnaire

5. CIRI VARIETI UNTUK DINYATAKAN

CHARACTERISTICS OF THE VARIETY TO BE INDICATED

Nombor dalam kurungan merujuk ciri yang sepadan dengan ciri dalam Garis Panduan Ujian; sila tandakan catatan yang paling sepadan.

The number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds.

Bil. *No.*	**Ciri** *Characteristic*	**Keadaan** *State*	**Varieti Contoh** *Example varieties*	**Catatan** *Note*
5.1 (3)	Masa berbunga pertama *Time of appearance of first inflorescence*	awal *early*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	3 [ ]
		sederhana *medium*	Matag Green (CN13)	5 [ ]
		lewat *late*	Tagnanan Gold (CN9)	7 [ ]
5.2 (6)	Batang : tinggi *Stem: height*	pendek *short*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	3
		sederhana *medium*	Rennel Tall Gold (CN12)	5
		tinggi *tall*	Tagnanan Gold (CN9)	7
5.3 (26)	Buah muda: warna *Young fruit: color*	kuning *yellow*		1
		hijau *green*		2
		jingga *orange*		3
		merah *red*		4
		perang *brown*		5

Bil. No.	**Ciri** *Characteristic*	**Keadaan** *State*	**Varieti Contoh** *Example varieties*	**Catatan** *Note*
5.4 (28)	Buah: bentuk *Fruit: shape*	ovat *ovate*	West African Tall Green (CN2)	1
		eliptik *elliptic*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	2
		bulat *circular*	Tagnanan Green (CN7)	3
		obovat *obovate*		4
5.5 (30)	Biji: bentuk *Nut: shape*	eliptik *elliptic*	West African Tall Green (CN2)	1
		bulat *circular*	Malayan Red Dwarf (CN4), Malayan Yellow Dwarf (CN5)	2
		oblat *oblate*		3
		obovat *obovate*		4

6. VARIETI SERUPA DAN PERBEZAAN DARIPADA VARIETI CALON

SIMILAR VARIETIES AND DIFFERENCES FROM THESE VARIETIES

Sila gunakan jadual dan kotak berikut untuk komen dan untuk memberikan maklumat berkenaan dengan bagaimana varieti yang anda pilih berbeza daripada varieti yang, sejauh yang anda ketahui, paling serupa. Maklumat ini boleh membantu pihak berkuasa pemeriksaan untuk menjalankan pemeriksaan kelainan dengan cara yang lebih cekap.

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.

Nama varieti yang serupa dengan varieti calon *Denomination(s) of variety(ies) similar to your candidate variety*	**Ciri varieti calon yang berbeza daripada varieti serupa** *Characteristic(s) in which your candidate variety differs from the similar variety(ies)*	**Terangkan ekspresi ciri bagi varieti serupa** *Describe the expression of the characteristic(s) for the similar variety(ies)*	**Terangkan ekspresi ciri bagi varieti calon** *Describe the expression of the characteristic(s) for your candidate variety*
Contoh *Example*	**cth. Warna bunga** *e.g. Flower color*	**cth. jingga** *e.g. orange*	**cth. merah jingga** *e.g. orange red*

Komen :
Comments

7. MAKLUMAT TAMBAHAN YANG BOLEH MEMBANTU DALAM PEMERIKSAAN VARIETI

ADDITIONAL INFORMATION WHICH MAY HELP IN THE EXAMINATION OF THE VARIETY

7.1 Selain maklumat yang diberi dalam bahagian 5 dan bahagian 6, adakah apa-apa ciri tambahan yang boleh membantu untuk membezakan varieti?
In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

☐ Ada *Yes* ☐ Tiada *No*

(Jika ada, berikan butir-butir)
(If yes, please provide details)

7.2 Adakah apa-apa keadaan khusus bagi menanam varieti atau menjalankan pemeriksaan?
Are there any special conditions for growing the variety or conducting the examination?

☐ Ada *Yes* ☐ Tiada *No*

(Jika ada, berikan butir-butir)
(If yes, please provide details)

7.3 Maklumat lain
Other information

7.4 Gambar berwarna yang mewakili varieti perlu disertakan bersama Borang Soal Selidik Teknikal ini.
A representative colour photograph of the variety should accompany the Technical Questionnaire.

 # Pihak berkuasa mungkin membenarkan maklumat tertentu ini diberi dalam bahagian sulit Borang Soal Selidik Teknikal.
Authority may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

8. KEBENARAN PENGELUARAN

AUTHORIZATION FOR RELEASE

8. (a) Adakah varieti memerlukan kebenaran sebelum pengeluaran di bawah undang-undang berhubung dengan perlindungan alam sekitar, kesihatan manusia dan kesihatan haiwan?
Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

☐ Ya *Yes* ☐ Tidak *No*

(b) Adakah kebenaran itu telah diperoleh?
Has such authorization been obtained?

☐ Ya
Yes

☐ Tidak
No

Jika jawapan kepada (b) ialah ya, sila kepilkan satu salinan kebenaran tersebut.
If the answer to (b) is yes, please attach a copy of the authorization.

9. MAKLUMAT BAHAN TANAMAN UNTUK DIPERIKSA ATAU DISERAH BAGI PEMERIKSAAN
INFORMATION ON PLANT MATERIAL TO BE EXAMINED OR SUBMITTED FOR EXAMINATION

9.1 Ekspresi satu ciri atau beberapa ciri varieti mungkin terjejas oleh faktor seperti haiwan perosak dan penyakit, rawatan kimia (contohnya bahan pembantut pertumbuhan atau pestisid), kesan kultur tisu,pokok penanti yang berlainan, sion yang diambil daripada fasa pertumbuhan pokok yang berlainan dan lain-lain.

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 Bahan tanaman tidak seharusnya melalui apa-apa rawatan yang menjejaskan ekspresi ciri varieti, kecuali pihak berkuasa yang kompeten telah membenarkan atau meminta rawatan sedemikian. Jika bahan tanaman telah melalui rawatan sedemikian, butir-butir penuh bagi rawatan mestilah diberikan. Berhubung dengan hal ini, sila tunjukkan di bawah ini, sepanjang yang anda ketahui, sekiranya bahan tanaman untuk diperiksa itu:

The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authority allows or requests 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) terdedah kepada mikroorganisma (contohnya virus, bakteria, fitoplasma)
Microorganisms (e.g. virus, bacteria, phytoplasma)

☐ Ya
Yes …….....

Sila berikan butir-butir bagi jawapan “ya” yang anda berikan.
Please provide details for where you have indicated "yes”

☐ Tidak
No

(b) menjalani rawatan kimia (contohnya bahan pembantut pertumbuhan, pestisid)
chemical treatment (e.g. growth retardant, pesticide)

☐ Ya
Yes …….....

Sila berikan butir-butir bagi jawapan “ya” yang anda berikan.
Please provide details for where you have indicated "yes”

☐ Tidak
No

(c) dijalankan kultur tisu
tissue culture

☐ Ya
Yes …….....

Sila berikan butir-butir bagi jawapan “ya” yang anda berikan.
Please provide details for where you have indicated "yes”

☐ Tidak
No

(d) disebabkan faktor lain
other factors

☐ Ya
Yes …….....

Sila berikan butir-butir bagi jawapan “ya” yang anda berikan.
Please provide details for where you have indicated "yes”

☐ Tidak
No

10. PENGESAHAN
DECLARATION

Saya dengan ini mengesahkan, sepanjang yang saya ketahui, bahawa maklumat yang diberi dalam borang ini adalah betul.
I hereby declare that, to the best of my knowledge, the information provided in this form is correct.

_____
Tandatangan
Signature

Nama pemohon : _____
Applicant's name

Tarikh : _____
Date

PENGHARGAAN
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(1) En. *(Mr.)* Christopher J. Biai (Jabatan Pertanian Malaysia/ *Department of Agriculture Malaysia* - DOA)

(2) En. *(Mr.)* Esa bin Sulaiman (Jabatan Pertanian Malaysia/ *Department of Agriculture Malaysia* - DOA)

(3) Dr. Ab. Rasip bin Ab. Ghani (Penasihat Teknikal PVP/ *Technical Advisor PVP*)

(4) Cik *(Ms.)* Lucyana Anak Dominic Ritay (Jabatan Pertanian Malaysia/ *Department of Agriculture Malaysia* - DOA)

(5) Pn. *(Mrs.)* Redza binti Pauzan (Jabatan Pertanian Malaysia/ *Department of Agriculture Malaysia* - DOA)

atas sumbangan pandangan yang membina dan komitmen tidak terhingga bagi menjayakan penghasilan Garis Panduan ini.

upon contribution of constructive opinion and endless commitment towards the success of the development of the Test Guidelines.

[Dokumen Tamat]
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