



Descriptors for **Cherimoya** (*Annona cherimola* Mill.)



CHERLO 



CHARACTERIZATION

7. Plant descriptors

Preferably characterize (i) at two years after establishment in the field (sapling, only at tree, leaf and, if possible, flower level), (ii) at five years (adult plant, at plant, leaf, flower and, if possible, fruit level), and (iii) at eight years (fully mature plant, at full fructification stage). The use of the Royal Horticultural Society (RHS) Colour Chart codes is recommended, if available, for all colour descriptors. Observations should be recorded only on well developed trees that have not been pruned.

List of minimum highly discriminating descriptors for cherimoya

Number	Name
7.2.1	Leaf blade shape
7.2.4	Leaf length
7.2.5	Leaf width
7.3.6	Petal length
7.3.7	Petal width
7.4.6	Weight of ripe fruit
7.4.10	Exocarp type
7.4.11	Exocarp weight
7.4.16	Weight of all fresh seeds per fruit
7.4.17	Number of seeds
7.4.23	Contents of soluble solids in the pulp
7.4.24	Titrated acidity
7.5.5	Seed tenacity within its epithelium

7.3 Fruit

All observations should be recorded when fruit are fully ripened, unless otherwise specified. Measurements should be made on 10 well developed representative fruits at harvest time.

7.4.1 Location of fructification

- 1 Base of the crown
- 2 Middle of the crown
- 3 Top of the crown

7.4.2 Fruit shape

See Fig. 9.

- 1 Round
- 2 Oblate
- 3 Cordate
- 4 Broadly cordate
- 5 Oval
- 99 Other (specify in descriptor **7.6 Remarks**)

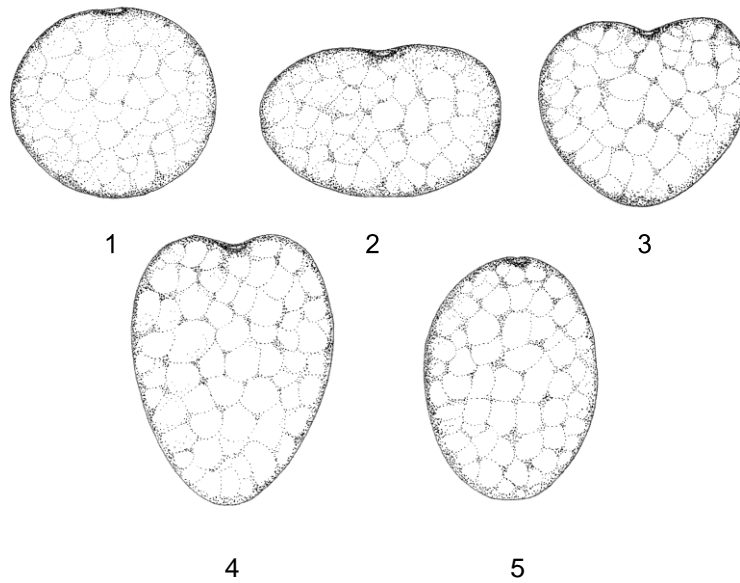


Fig. 9. Fruit shape

7.4.3 Fruit length [mm]

7.4.4 Fruit diameter [mm]

Measure at the broadest point of the fruit.

7.4.5 Uniformity in fruit size

- 0 No
- 1 Yes

7.4.6 Weight of ripe fruit [g]

7.4.7 Fruit symmetry

See Fig. 10.

- 0 No

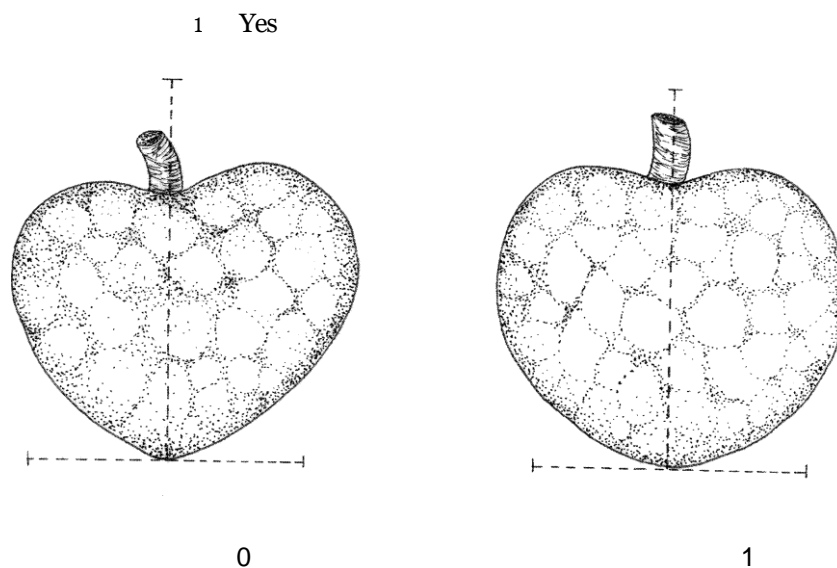


Fig. 10. Fruit symmetry

7.4.8 Peduncle length [mm]

7.4.9 Peduncle diameter [mm]

7.4.10 exocarp type

See Fig. 11 (Schroeder 1945).

- | | |
|----------------------|-------------------------------------|
| 1 <i>Laevis</i> | (smooth) |
| 2 <i>Impressa</i> | (slight depressions) |
| 3 <i>Umbonata</i> | (small protrusions) |
| 4 <i>Tuberculata</i> | (medium protrusions) |
| 5 <i>Mamillata</i> | (large protrusions) |
| 99 Other type | (specify in descriptor 7.6) |

Remarks)

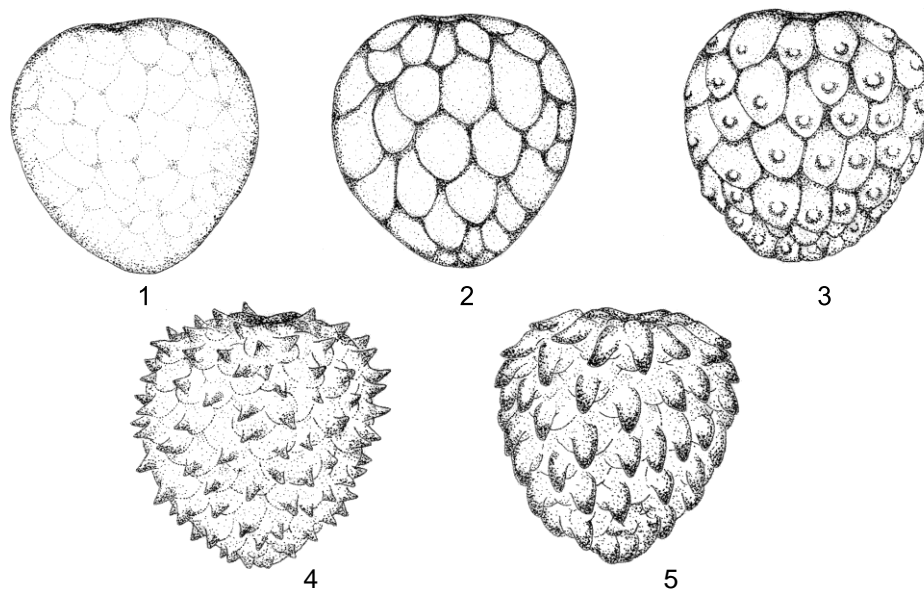


Fig. 11. Exocarp type

7.4.11 exocarp weight [g]

Peel weight of the fully ripened fruit.

7.4.12 exocarp colour

If possible, use colour codes from the Royal Horticultural Society. If these are not available, use the following colour codes:

- 1 Light green
- 2 Green
- 3 Dark green
- 4 Yellowish green
- 5 Yellow
- 6 Brownish green
- 7 Brown
- 99 Other (specify in descriptor **7.6 Remarks**)

7.4.13 thickness of the exocarp [mm]

7.4.14 Resistance to penetrometer [N/cm²]

Measure in fully ripened fruits, at four points of the equator and on the apex.

7.4.15 Resistance to abrasion

Record the resistance of fruit peel to abrasion, by thumb friction.

- 1 Mild
- 2 Moderate
- 3 Strong

7.4.16 Weight of all fresh seeds per fruit [g]

Measure at extraction from the fruit.

7.4.17 number of seeds

Number of seeds per fruit.

7.4.18 Pulp colour

If possible, use colour codes from the Royal Horticultural Society. If these are not available, use the following colour codes:

- 1 White
- 2 Cream
- 99 Other (specify in descriptor **7.6 Remarks**)

7.4.19 Pulp texture

- 1 Watery
- 2 Creamy
- 3 Granular
- 4 Hard
- 5 Hard areas in the pulp
- 99 Other (specify in descriptor **7.6 Remarks**)

7.4.20 Pulp fibre content

- 0 Absent
- 1 Low
- 2 High

7.4.21 Pulp taste

- 1 Bad
- 2 Average
- 3 Good

7.4.22 Pulp oxidation

Observe five minutes after cutting the fruit.

- 0 No oxidation
- 1 Poorly oxidized
- 2 Oxidized
- 3 Very oxidized

7.4.23 Contents of soluble solids in the pulp [° Brix]

Measure at full production and at the moment of consumption ripeness. Average of 10 healthy, representative fruits.

7.4.24 titrated acidity [meq / 100 g]

Measure at full production and at the time of consumption ripeness. Measured in milliequivalents/100 g pulp, titrated with NaOH, 0.1N and phenolphthalein.

7.5 Seed

Recorded on five healthy seeds per fruit in 10 healthy, representative fruits.

7.5.1 Weight of fresh seed [g]

Measure at extraction from the fruit.

7.5.2 seed coat colour

If possible, use colour codes from the Royal Horticultural Society. If these are not available, use the following colour codes:

- 1 Grey
- 2 Dark brown
- 3 Black
- 99 Other (specify in descriptor **7.6 Remarks**)

7.5.3 seed length [mm]

7.5.4 seed width [mm]

Recorded at the seed's widest point.

- 1 Cloaked
- 2 Semi-cloaked
- 3 Loose

Lampiran 2. Metode pengambilan data lingkungan di Kabupaten Sleman




No	Uraian Data	Metode	Keterangan
a.	Lokasi Pengambilan Data	Ditetapkan dengan Google Maps	
	1) Latitude	Diukur menggunakan GPS	
	2) Longitude	Diukur menggunakan GPS	
	3) Altitude	Diukur menggunakan GPS	
b.	Suhu	Menggunakan Thermometer	
c.	Kelembaban	Menggunakan Hygrometer	
d.	Intensitas Cahaya Matahari	Diukur menggunakan Lux Meter	
e.	Vegetasi Sekitar Tanaman	Dilakukan pengamatan manual	
f.	Tekstur Tanah	Diamati menggunakan metode <i>estimating soil texture by feel</i> (USDA)	1. Bahan organik tinggi; 2. Tanah liat; 3. Liat berdebu; 4. Debu; 5. Debu berpasir; 6. Pasir; 7. Lempung berpasir; 8. Lempung; 9. Tanah berbatu
g.	pH Tanah	Menggunakan pH Meter	pH tanah diukur disekitar tanaman kepel
h.	Curah Hujan	Menggunakan Data Sekunder	BMKG/GPS

Lampiran 3. Data lokasi tanaman kepel di Kabupaten Sleman DIY

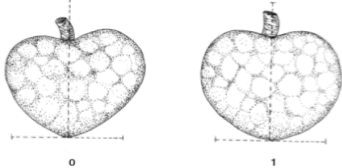

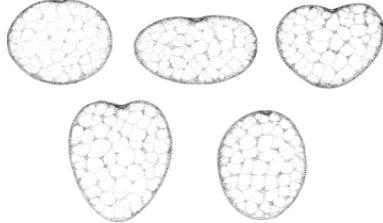
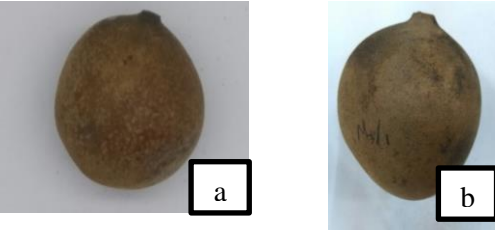
Kode Tanaman	Foto	Alamat
A4		Jl. Kabupaten 115, Ngawean, Trihanggo, Gamping, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55291 7°45'12.7"S 110°20'50.2"E https://maps.google.com/?q=- 7.753515,110.347290&hl=in&gl=id
C3		Surikan, Sumberadi, Mlati, Sleman Kabupaten, Daerah Istimewa Yogyakarta 55288 7°42'47.9"S 110°20'10.2"E https://goo.gl/maps/Pw4RVLgmgMT2
C5		Sumberadi, Mlati, Sleman Kabupaten, Daerah Istimewa Yogyakarta 55288 7°42'46.0"S 110°20'10.9"E https://goo.gl/maps/r33aBxrXuqS2
D1		Margomulyo, Seyegan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55561 7°43'25.5"S 110°18'39.2"E https://goo.gl/maps/SMj8zouzZBC2
D3		Somorai, Margoagung, Seyegan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55561 7°42'19.1"S 110°18'49.5"E https://goo.gl/maps/CK1po7mXE9k





E1		<p>Jl. Gedongan-Tempel, Balongan, Sendangrejo, Minggir, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55562 7°43'08.3"S 110°16'09.1"E https://goo.gl/maps/XF7WepFThMJ2</p>
F2		<p>Gang Nakulo, Kalai Duren III, Sumberagung, Moyudan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55563 7°46'39.2"S 110°14'44.2"E https://goo.gl/maps/Bi1C29RrxwK2</p>
G1		<p>Jalan Merbabu No.1, Jaran, Tridadi, Kec. Sleman, Kabupaten Sleman, Daerah Istimewa Yogyakarta 7°43'13.8"S 110°21'34.4"E https://goo.gl/maps/kHAff5Hj5tn</p>
G2		<p>Jl. Cendrawasih 1, Beran Lor, Tridadi, Kec. Sleman, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55511 7°42'50.9"S 110°21'23.3"E https://goo.gl/maps/4fLg9dBPY7N2</p>
G3		<p>Jl. Letkol Subadri, Ngangkrik, Triharjo, Kec. Sleman, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55514 7°41'59.6"S 110°20'19.0"E https://goo.gl/maps/vwJpvMi2LAs</p>

H1		Universitas Gadjah Mada, Jl. Bhinneka Tunggal Ika, Sagan, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281 7°46'20.4"S 110°22'41.1"E https://goo.gl/maps/vkumjb9fFvK2
H2		FIK UNY, Depok, Karang Malang, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281 7°46'33.9"S 110°22'56.1"E https://goo.gl/maps/YJFDEeHCsS52
H3		Universitas Pembangunan Nasional, Krodan, Maguwoharjo, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281 7°45'43.8"S 110°24'34.7"E https://goo.gl/maps/Nh5siLvRBkN2
H4		Universitas Pembangunan Nasional, Krodan, Maguwoharjo, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281 7°45'44.6"S 110°24'33.5"E https://goo.gl/maps/H2UZjDsiVvj
I1		Jalan Raya Solo Km 12,5, Karang Kalasan, Tirtomartani, Kalasan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55571 7°46'25.2"S 110°27'47.9"E https://goo.gl/maps/Y2m7KcX4akN2

I2		Jalan Timur Pasar Tulung, Sentono, Tamanmartani, Kalasan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55571 7°44'10.6"S 110°28'53.2"E https://goo.gl/maps/SLkpcSsP2
J2		Klero, Sumberharjo, Prambanan, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55572 7°48'40.3"S 110°29'52.3"E https://goo.gl/maps/yTw9wrrNMp82
M1		Masjid Nur Illahi, Gg. Merak, Sedan, Sariharjo, Ngaglik, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55581 7°44'52.5"S 110°22'37.5"E https://goo.gl/maps/jYif9nTxJrv
M3		Skolastikat SCJ, Ngabean Kulon, Sinduharjo, Ngaglik, Kabupaten Sleman, Daerah Istimewa Yogyakarta 7°44'33.3"S 110°23'27.3"E https://goo.gl/maps/xtK372dsMfA2

Lampiran 4. Perbandingan antara buah cherimoya dan buah kepel

Parameter	Panduan Buah Cherimoya	Buah Kepel
a. Lokasi buah	<ol style="list-style-type: none"> 1. Di bagian atas mahkota 2. Dibagian tengah mahkota 3. Dibagian bawah mahkota 	Di bagian batang
b. Simetri buah	 <p>0 Tidak 1 Ya</p>	 <p>(0) Tidak simetri</p>
c. Bentuk buah	<ol style="list-style-type: none"> 1. Bulat 2. Datar 3. Berbentuk Hati 4. Berbentuk Hati Panjang 5. Lonjong 	 <p>a) bulat ; (b) lonjong</p>

<p>d. Tipe kulit buah</p>	<ol style="list-style-type: none"> 1. <i>Laevis</i> (Halus) 2. <i>Impressa</i> (Sedikit tonjolan) 3. <i>Umbonata</i> (Tonjolan kecil) 4. <i>Tuberculata</i> (Tonjolan sedang) 5. <i>Mamillata</i> (Tonjolan besar) 	 <p>Halus (<i>laevis</i>)</p>
<p>e. Warna kulit buah</p>	<ol style="list-style-type: none"> 1. Hijau muda 2. Hijau 3. Hijau tua 4. Hijau Kekuningan 5. Kuning 6. Hijau Kecoklatan 7. Coklat 	 <p>7,5YR 5/4 Coklat</p>
<p>f. Jumlah biji</p>		 <p>(1) (2) (3) (4) (5) (6)</p>
<p>g. Warna daging buah</p>	<p>Krem Kuning Kuning Kunyit</p>	 <p>2,5Y 8/4 2,5Y 8/8 2,5Y 7/8</p> <p>krem kuning kuning kunyit</p>

Lampiran 5. Data kesamaan dan perbedaan karakteristik morfologi tanaman kepel klaster 1 di Kabupaten Sleman

Kode	Kesamaan								
	Simetri Buah	Panjang Buah/Skorin g	Bentuk Buah	Lebar Buah/Skoring	Tipe Kulit	Berat Biji/Skoring	Jumlah biji	Rasa Daging	Warna Kulit
A4	Tidak simetri	52,15 (2)	Bulat	45,62 (1)	Halus	2,69 (1)	4	Manis	Coklat
M1	Tidak simetri	50,76 (2)	Bulat	46,19 (1)	Halus	2,89 (1)	4	Manis	Coklat
G3	Tidak simetri	56,38 (2)	Bulat	45,31 (1)	Halus	2,86 (1)	3	Manis	Coklat
H2	Tidak simetri	53,99 (2)	Bulat	42,98 (1)	Halus	3,20 (1)	4	Manis	Coklat
I2	Tidak simetri	53,96 (2)	Bulat	43,15 (1)	Halus	3,01 (1)	4	Manis	Coklat

Lampiran 5. Data kesamaan dan perbedaan karakter morfologi tanaman kepel klaster 1 di Kabupaten Sleman (lanjutan)

Kecamatan	Perbedaan										
	Tebal Buah/ Skoring	Panjang Biji/ Skoring	Wana Daging	Lebar Biji	Tebal Biji/ Skoring	Berat Buah/ Skoring	Diameter Biji/ skoring	Tebal Daging/ skoring	Tingkat Kematangan / skoring	Diameter Buah/ skoring	Tekstur Daging
Gmping 4	46,33 (2)	25,33 (2)	Kuning	15,52 (1)	10,61 (1)	65,79 (2)	12,84 (1)	7,14 (4)	22,96 (1)	45,97 (1)	Lembut
Ngaglik 1	48,51 (3)	25,60 (2)	Kuning	15,76 (1)	11,43 (2)	61,13 (2)	13,59 (2)	7,43 (1)	27,60 (2)	47,35 (2)	Lembut
Sleman 3	47,77 (2)	25,98 (2)	Krem	16,53 (2)	10,60 (1)	68,89 (3)	13,57 (2)	5,84 (3)	26,38 (2)	46,54 (1)	Berair
Depok 2	50,62 (3)	24,04 (1)	Kuning	16,75 (2)	12,38 (4)	64,65 (2)	14,57 (2)	4,37 (2)	31,56 (3)	46,80 (3)	Berair
Kalasan 2	48,30 (2)	24,74 (1)	Kuning	16,66 (2)	11,68 (2)	53,77 (2)	14,17 (1)	4,30 (4)	30,60 (3)	45,73 (2)	Berair

Lampiran 6. Data kesamaan dan perbedaan karakter morfologi tanaman kepel klaster 2 di Kabupaten Sleman

Kecamatan	Kesamaan								Perbedaan			
	Simetri Buah	Tipe Kulit	Warna Kulit	Bentuk Buah	Lebar Buah/ Skoring	Tekstur Daging	Berat Buah/ Skoring	Wana daging	Panjang Biji/Skoring	Panjang Buah/Skoring	Tebal Buah/ Skoring	Berat Biji/ Skoring
Mlati 3	Tidak simetri	Halus	Coklat	Bulat	48,20 (1)	Berair	80,64 (3)	Kuning	28,46 (4)	60,06 (3)	50,17 (3)	3,69 (2)
Mlati 5	Tidak simetri	Halus	Coklat	Bulat	45,48 (1)	Berair	71,15 (3)	Kuning	26,21 (2)	59,12 (3)	48,38 (2)	3,50 (2)
Seyegan 1	Tidak simetri	Halus	Coklat	Bulat	47,73 (1)	Berair	78,56 (3)	Kuning	27,84 (4)	59,70 (3)	50,68 (3)	3,54 (2)
Depok 1	Tidak simetri	Halus	Coklat	Bulat	48,19 (1)	Berair	74,04 (3)	Kuning	25,47 (2)	62,17 (3)	53,38 (4)	3,28 (1)

Lampiran 6. Data kesamaan dan perbedaan karakter morfologi tanaman kepel klaster 2 di Kabupaten Sleman (lanjutan)

Kecamatan	Perbedaan							
	Jumlah biji	Lebar Biji	Tebal Biji/Skoring	Diameter Biji/skoring	Tebal Daging/skoring	Tingkat kematangan/skoring	Diameter Buah/skoring	Rasa Daging
Mlati 3	4	17,16 (2)	11,74 (2)	14,44 (2)	5,24 (2)	25,84 (2)	49,18 (3)	Manis
Mlati 5	5	17,88 (3)	12,19 (3)	14,83 (2)	5,77 (3)	32,94 (4)	46,93 (3)	Manis
Seyegan 1	4	17,39 (3)	11,39 (2)	14,39 (2)	4,10 (1)	28,42 (2)	49,20 (3)	Hambar
Depok 1	5	17,47 (3)	12,28 (3)	14,87 (3)	4,02 (1)	26,62 (2)	50,78 (3)	Manis

Lampiran 7. Data kesamaan dan perbedaan karakter morfologi tanaman kepel klaster 4 di Kabupaten Sleman

Kecamatan	Kesamaan						Perbedaan	
	Simetri Buah	Tipe Kulit	Warna Kulit	Rasa Daging	Wana daging	Bentuk Buah	Tekstur Daging	Lebar Biji
Moyudan 2	Tidak simetris	Halus	Coklat	Manis	Kuning	Bulat	Lembut	16,34 (1)
Ngaglik 3	Tidak simetris	Halus	Coklat	Manis	Kuning	Bulat	Berair	17,77 (3)
Sleman 1	Tidak simetris	Halus	Coklat	Manis	Kuning	Bulat	Berair	18,00 (3)
Depok 4	Tidak simetris	Halus	Coklat	Manis	Kuning	Bulat	Berair	18,64 (4)
Sleman 2	Tidak simetris	Halus	Coklat	Manis	Kuning	Bulat	Berair	17,58 (3)



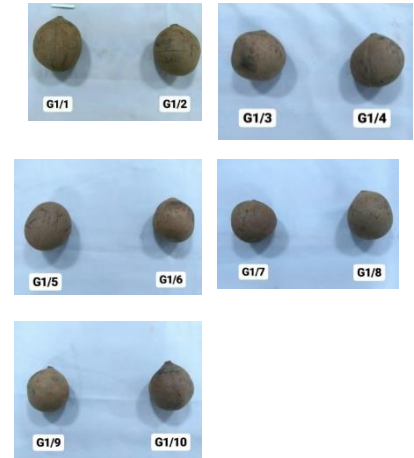

Kecamatan	Perbedaan										
	Tebal Daging	Tebal Biji/ Skoring	Diameter Biji	Lebar Buah/ Skoring	Tingkat Kematangan	Berat Biji/ Skoring	Panjang Biji/ Skoring	Jumlah biji	Panjang Buah/ Skoring	Tebal Buah/ Skoring	Berat Buah/ Skoring
Moyudan 2	5,00 (2)	12,36 (3)	14,36 (3)	52,92 (2)	22,48 (1)	3,29 (1)	27,73 (3)	4	66,41 (4)	57,35 (4)	95,53 (4)
Ngaglik 3	4,03 (1)	11,97 (4)	14,58 (4)	55,87 (2)	24,24 (1)	3,90 (2)	29,19 (4)	5	70,22 (4)	56,93 (4)	96,42 (4)
Sleman 1	4,83 (2)	12,47 (4)	15,24 (4)	48,91 (1)	26,63 (2)	4,24 (3)	29,21 (4)	4	60,56 (3)	52,13 (3)	87,67 (4)
Depok 4	4,65 (2)	12,88 (4)	15,80 (4)	49,57 (2)	34,89 (4)	4,20 (3)	29,21 (4)	4	57,56 (3)	52,17 (3)	76,75 (3)
Sleman 2	4,66 (2)	12,37 (4)	14,98 (3)	51,02 (2)	23,79 (1)	4,18 (3)	28,90 (4)	5	64,64 (4)	52,13 (3)	94,75 (4)

Lampiran 8. Data kesamaan dan perbedaan karakter morfologi tanaman kepel klaster 6 di Kabupaten Sleman




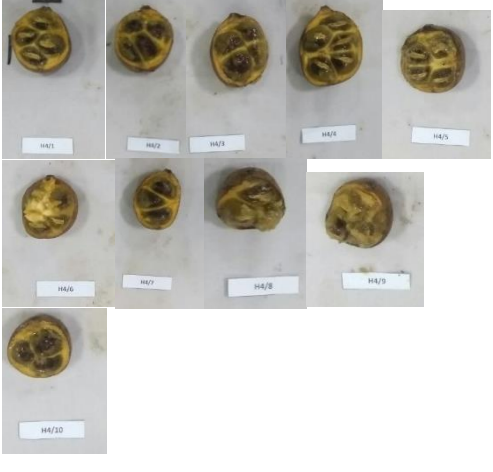
Kecamatan	Kesamaan										
	Bentuk Buah	Simetri Buah	Tipe Kulit	Warna Kulit	Panjang Buah/ Skoring	Tebal Buah/ Skoring	Berat Buah/ Skoring	Rasa Daging	Tekstur Daging	Berat Biji/ Skoring	Panjang Biji/ Skoring
	Seyegan 3	Bulat	Tidak Simetri	Halus	Coklat	48,17 (1)	43,44 (1)	48,72 (1)	Manis	Berair	2,93 (1)
Depok 3	Bulat	Tidak Simetri	Halus	Coklat	50,17 (1)	41,87 (1)	49,85 (1)	Manis	Berair	3,65 (1)	24,56 (1)
Prambanan 2	Bulat	Tidak Simetri	Halus	Coklat	43,87 (1)	39,58 (1)	39,33 (1)	Manis	Berair	3,35 (1)	23,33 (1)

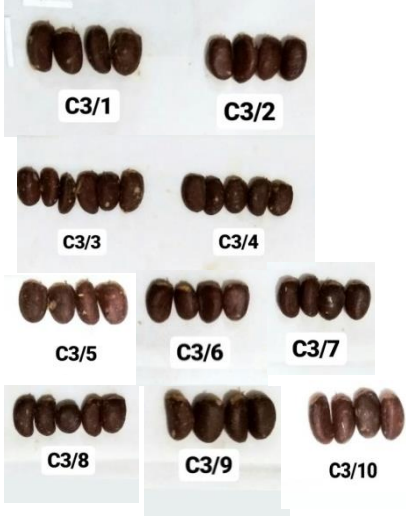


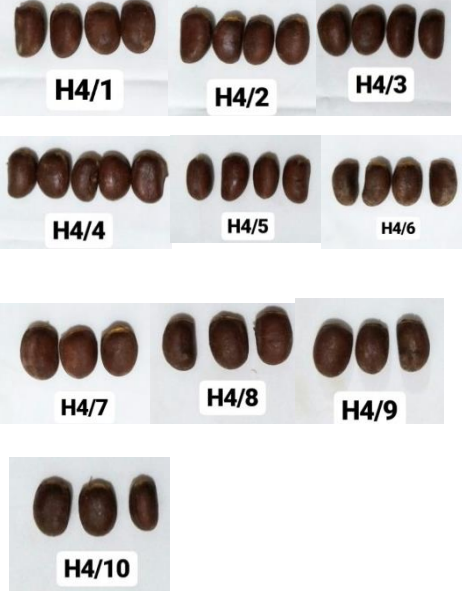
Kecamatan	Perbedaan									
	Wana daging	Jumlah biji	Lebar Biji	Tebal Skoring	Biji/ Diameter Biji	Tebal Daging	Lebar Buah/ Skoring	Tingkat Kematangan	Diameter Buah	
	Seyegan 3	Kuning	3	17,08 (2)	12,32 (3)	14,71 (3)	4,50 (2)	42,04 (1)	29,31 (3)	42,74 (1)
Depok 3	Krem	3	17,83 (3)	12,71 (4)	15,27 (3)	4,33 (2)	44,24 (1)	31,69 (3)	43,05 (1)	
Prambanan 2	Kuning	2	18,20 (4)	12,47 (4)	15,33 (4)	3,26 (1)	70,61 (4)	26,47 (2)	55,11 (4)	

Lampiran 9. Tampilan morfologi buah kepel yang berkerabat dekat di Kabupaten Sleman

Morfologi buah	Mlati (3)	Seyegan (1)
Bagian luar buah		
	Sleman (1)	Depok (4)
		

Lanjutan Lampiran 9. Tampilan morfologi buah kepelyang berkerabat dekat di Kabupaten Sleman

Morfologi buah	Mlati (3)	Seyegan (1)
Bagian dalam buah		
	Sleman (1)	Depok (4)
		

Morfologi buah	Mlati (3)	Seyegan (1)
Bagian biji buah	 <p>C3/1 C3/2 C3/3 C3/4 C3/5 C3/6 C3/7 C3/8 C3/9 C3/10</p>	 <p>D1/1 D1/2 D1/3 D1/4 D1/5 D1/6 D1/7 D1/8 D1/9 D1/10</p>
	Sleman (1)	Depok (4)
	 <p>G1/1 G1/2 G1/3 G1/4 G1/5 G1/6 G1/7 G1/8 G1/9 G1/10</p>	 <p>H4/1 H4/2 H4/3 H4/4 H4/5 H4/6 H4/7 H4/8 H4/9 H4/10</p>