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# LAMPIRAN

**Lampiran 1.** Data Pengamatan Warna Kulit, Batang, Akar, Propagul, Bunga, Daun, Bentuk dan Kelurusan Batang Provenansi Polman

Pohon		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Warna Kulit		Abu-abu cerah	Abu-abu cerah	Abu-abu cerah	Abu-abu cerah	Abu-abu cerah	Abu-abu cerah	Coklat keabu-abuan	Coklat keabu-abuan	Abu-abu cerah	Abu-abu cerah
Warna Batang		Merah kehitaman	Merah	Merah	Merah	Hitam kemerahan	Merah kehitaman	Merah pudar	Merah	Merah gelap	Merah gelap
Warna Akar		Kuning kemerahan	Coklat	Kuning kecoklatan	Coklat tua	Kuning kecoklatan	Merah kekuningan	Coklat	Kuning kemerahan	Coklat	Kuning
Warna Propagul	Warna Buah	Olive	Olive	-	Olive	Olive	Olive	Olive	Olive	Olive	-
	Warna Hipokotil	-	-	-	Abu-abu olive gelap	Olive	Olive	Coklat kekuningan gelap	Olive	-	-
Warna Bunga		Kuning olive	-	Kuning olive	-	-	Kuning olive	Kuning olive	-	Kuning olive	-
Daun	WPAD	Abu-abu olive	Abu-abu olive gelap	Abu-abu olive gelap	Abu-abu olive gelap	Abu-abu olive gelap	Olive	Olive	Olive	Olive	Abu-abu olive
	WPBD	Olive	Abu-abu olive	Abu-abu olive	Abu-abu olive	Abu-abu olive	Kuning	Kuning	Kuning	Kuning	Kuning
	Bentuk Daun	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical
	BLUD	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate
	BLPD	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate
	BTD	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire
Batang	Bentuk Batang	teres	teres	teres	Teres	teres	teres	teres	teres	teres	teres
	Kelurusan Batang	lurus	lurus	lurus	Lurus	lurus	lurus	miring	lurus	lurus	miring

**Lampiran 2.** Data Pengamatan Warna Kulit, Batang, Akar, Propagul, Bunga, Daun, Bentuk dan Kelurusan Batang Provenansi Majene

Pohon		MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9	MJ10
Warna Kulit		Coklat keabu-abuan	Coklat olive keabu-abuan	Coklat keabu-abuan	Coklat keabu-abuan	Coklat keabu-abuan	Coklat olive keabu-abuan	Coklat olive keabu-abuan	Coklat keabu-abuan	Coklat keabu-abuan	Coklat keabu-abuan
Warna Batang		Merah	Merah	Merah	Merah	Merah	Merah	Merah	Merah	Coklat kemerahan gelap	Merah gelap
Warna Akar		Kuning	Kuning	Kuning kemerahan	Kuning	Kuning kemerahan	Kuning kecoklatan	Kuning	Kuning kecoklatan	Kuning	Kuning
Warna Propagul	Warna Buah	-	olive	-	-	-	-	olive	-	olive	-
	Warna Hipokotil	-	olive	-	-	-	-	-	-	olive	-
Warna Bunga		Kuning olive	Kuning olive	Kuning olive	Kuning olive	Kuning olive	-	-	-	Kuning olive	Kuning olive
Daun	WPAD	Olive	Abu-abu olive	Abu-abu olive	Olive	Abu-abu olive	Olive	Olive	Abu-abu olive	Olive	Olive
	WPBD	Kuning olive	Kuning olive	Olive	Olive	Kuning olive	Kuning olive	Kuning olive	Kuning olive	Kuning olive	Kuning olive
	Bentuk Daun	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical
	BLUD	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate
	BLPD	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate
	BTD	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire
Batang	Bentuk Batang	teres	teres	teres	teres	teres	teres	teres	teres	teres	teres
	Kelurusan Batang	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak	bercabang banyak



**Lampiran 3.** Data Pengamatan Warna Kulit, Batang, Akar, Propagul, Bunga, Daun, Bentuk dan Kelurusan Batang Provenansi Mamuju

Pohon		MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9	MM10
Warna Kulit		Coklat keabu-abuan gelap	Abu-abu gelap	Coklat olive keabu-abuan	Coklat olive keabu-abuan	Coklat olive keabu-abuan	Coklat keabu-abuan gelap	Abu-abu gelap	Putih kemerahmudaan	Abu-abu gelap	Hitam
Warna Batang		Merah gelap	Merah gelap	Merah	Merah	Coklat Kemerahan	Merah	Merah	Merah	Merah	Coklat Kemerahan
Warna Akar		Hitam	Hitam kemerahan	Abu-abu terang	Hitam	Coklat kemerahan gelap	Coklat kemerahan gelap	Abu-abu kemerahmudaan	Abu-abu kemerahmudaan	Coklat kemerahan gelap	Merah muda
Warna Propagul	Warna Buah	olive	-	-	-	-	-	-	-	-	-
	Warna Hipokotil	olive	-	-	-	-	-	-	-	-	-
Warna Bunga		-	-	-	-	-	-	-	-	-	-
Daun	WPAD	Olive abu-abu gelap	Olive	Olive	Olive	Abu-abu gelap	Olive	Abu-abu gelap	Olive abu-abu gelap	Abu-abu olive	Abu-abu olive
	WPBD	Olive	Kuning Olive	Olive pucat	Kuning Olive	Olive	Kuning Olive	Olive	Olive	Olive pucat	Kuning Olive
	Bentuk Daun	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical	Elliptical
	BLUD	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate	Apiculate
	BLPD	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate	Cuneate
	BTD	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire	Entire
Batang	Bentuk Batang	teres	teres	teres	teres	teres	teres	teres	teres	teres	teres
	Kelurusan	bengkok	lurus	lurus	lurus	miring	miring	lurus	bengkok	bengkok	miring

**Lampiran 4.** Data Rata-rata Nilai Kuantitatif Bakau Hitam *Rhizophora mucronata*

Karakter yang diamati	Provenansi			Rata-rata
	Polman	Majene	Mamuju	
Ttot (m)	6.48	5.88	5.23	5.86
Tbc (m)	1.72	1.23	2.22	1.72
Proporsi ttot-tbc (%)	21.68	22.15	44.89	29.57
Diameter (m)	0.12	0.11	0.2	0.14
Volume pohon (m3)	0.06	0.04	0.12	0.07
Panjang akar (cm)	90.9	203.2	110.5	134.87
Berat propagul (g)	25.67	48.21	55.8	43.23
Panjang buah (cm)	5.11	4.74	5.32	5.06
Panjang hipokotil (cm)	16.83	37.42	45.75	33.33
Berat awal daun (g)	4.25	2.61	3.65	3.50
Berat akhir daun (g)	2.48	1.67	2.25	2.13
Panjang daun (cm)	14.64	11.02	12.62	12.76
Lebar daun (cm)	7.23	5.43	5.44	6.03
Tebal daun (mm)	0.42	0.41	0.47	0.43
Proyeksi Tajuk (m)	1.73	2.86	2.08	2.22

**Lampiran 5.** Data Kuantitatif Bakau Hitam *Rhizophora mucronata*

Pohon		Ttot (m)	Tbc (m)	Keliling (cm)	Keliling (m)	Diameter (m)	LBDS (m <sup>2</sup> )	Volume Pohon (m <sup>3</sup> )
Polewali Mandar	1	5.52	1	37	0.37	0.12	0.01	0.04
	2	6.69	2.6	42	0.42	0.13	0.01	0.07
	3	7.04	1.3	45	0.45	0.14	0.02	0.08
	4	7.2	1.8	46	0.46	0.15	0.02	0.08
	5	7.53	2.3	44	0.44	0.14	0.02	0.08
	6	7.95	3.6	36	0.36	0.11	0.01	0.06
	7	4.76	1.3	25	0.25	0.08	0.00	0.02
	8	5.81	1	28	0.28	0.09	0.01	0.03
	9	7.77	1.3	42	0.42	0.13	0.01	0.08
	10	4.52	1	36	0.36	0.11	0.01	0.03
	<b>Rata-rata</b>	<b>6.48</b>	<b>1.72</b>	<b>38.10</b>	<b>0.38</b>	<b>0.12</b>	<b>0.01</b>	<b>0.06</b>
Majene	1	4.87	1.1	27	0.27	0.09	0.01	0.02
	2	4.9	1.4	30	0.3	0.10	0.01	0.02
	3	7.23	0.7	38	0.38	0.12	0.01	0.06
	4	7.02	0.97	41	0.41	0.13	0.01	0.06
	5	5.1	1.3	38	0.38	0.12	0.01	0.04
	6	6.08	1.4	36	0.36	0.11	0.01	0.04
	7	6.83	1.7	31	0.31	0.10	0.01	0.04
	8	4.26	1.7	30	0.3	0.10	0.01	0.02
	9	7.58	1	28	0.28	0.09	0.01	0.03
	10	4.92	1	36	0.36	0.11	0.01	0.04
	<b>Rata-rata</b>	<b>5.88</b>	<b>1.23</b>	<b>33.50</b>	<b>0.34</b>	<b>0.11</b>	<b>0.01</b>	<b>0.04</b>
Mamuju	1	7.2	3.5	80	0.8	0.25	0.05	0.26
	2	7.8	2.7	55	0.55	0.18	0.02	0.13
	3	6.5	3	62	0.62	0.20	0.03	0.14
	4	4.5	2.1	91	0.91	0.29	0.07	0.21
	5	4	2.7	69	0.69	0.22	0.04	0.11
	6	4	1.1	56	0.56	0.18	0.02	0.07
	7	3.8	1.7	60	0.6	0.19	0.03	0.08
	8	3.5	1.3	57	0.57	0.18	0.03	0.06
	9	4.2	2.3	48	0.48	0.15	0.02	0.05
	10	6.8	1.8	43	0.43	0.14	0.01	0.07
	<b>Rata-rata</b>	<b>5.23</b>	<b>2.22</b>	<b>62.10</b>	<b>0.62</b>	<b>0.20</b>	<b>0.03</b>	<b>0.12</b>

**Lampiran 6.** Data Kuantitatif Kulit Bakau Hitam *Rhizophora mucronata*

Pohon		Kulit				
		Berat Awal (g)	Berat Akhir (g)	Volume (ml)	Berat Jenis (g/cm <sup>3</sup> )	Kadar Air (%)
Polewali Mandar	1	1.41	0.99	3.9	0.25	42.92
	2	2.15	1.58	3.9	0.41	35.87
	3	2.55	1.84	2.5	0.74	38.47
	4	1.06	0.72	2.1	0.34	47.46
	5	1.66	1.14	3.5	0.33	45.35
	6	3.85	1.97	4.7	0.42	95.30
	7	1.72	1.12	4	0.28	53.50
	8	1.12	0.73	2.5	0.29	53.68
	9	1.14	0.79	2.9	0.27	44.48
	10	0.89	0.62	2.1	0.30	43.81
	<b>Rata-rata</b>	<b>1.75</b>	<b>1.15</b>	<b>3.21</b>	<b>0.36</b>	<b>50.08</b>
Majene	1	0.64	0.38	1.8	0.21	68.42
	2	0.96	0.69	1.5	0.46	39.13
	3	3.6	2.16	5.8	0.37	66.67
	4	1.63	1.14	2.5	0.46	42.98
	5	1.7	1.13	7	0.16	50.44
	6	1.54	0.83	3	0.28	85.54
	7	1.55	1.1	4	0.28	40.78
	8	1.62	1.07	3.5	0.31	51.40
	9	0.41	0.37	14.3	0.03	10.81
	10	1.66	1.09	1.5	0.73	52.29
	<b>Rata-rata</b>	<b>1.53</b>	<b>1.00</b>	<b>4.49</b>	<b>0.33</b>	<b>50.85</b>
Mamuju	1	7.26	5.74	8	0.72	26.48
	2	1.44	1.1	3.5	0.31	30.91
	3	2.23	1.69	4.3	0.39	31.95
	4	2.67	1.94	4	0.49	37.63
	5	2.25	1.6	4	0.40	40.63
	6	6.13	3.4	7.2	0.47	80.29
	7	1.79	1.42	3.2	0.44	26.06
	8	1.92	1.46	3	0.49	31.51
	9	1.46	0.91	3.5	0.26	60.44
	10	0.71	0.51	3	0.17	39.22
	<b>Rata-rata</b>	<b>2.79</b>	<b>1.98</b>	<b>4.37</b>	<b>0.41</b>	<b>40.51</b>

**Lampiran 7.** Data Kuantitatif Batang Bakau Hitam *Rhizophora mucronata*

Pohon		Batang				
		Berat Awal (g)	Berat Akhir (g)	Volume (ml)	Berat Jenis (g/cm <sup>3</sup> )	Kadar Air (%)
Polewali Mandar	1	8.29	4.21	9	0.47	96.93
	2	3.41	2.41	5.8	0.42	41.46
	3	14.34	7.27	13.1	0.55	97.25
	4	9.00	4.67	7.5	0.62	92.78
	5	6.56	3.58	6.8	0.53	83.35
	6	5.06	3	6.5	0.46	68.67
	7	8.40	4.58	10	0.46	83.51
	8	10.73	5.79	11	0.53	85.28
	9	6.61	3.84	6.9	0.56	72.04
	10	5.11	3.13	6.5	0.48	63.37
	<b>Rata-rata</b>	<b>7.75</b>	<b>4.25</b>	<b>8.31</b>	<b>0.51</b>	<b>78.46</b>
Majene	1	4.34	2.87	5.5	0.52	51.22
	2	4.78	2.77	6	0.46	72.56
	3	8.36	4.83	13	0.37	73.08
	4	5.11	2.79	12	0.23	83.15
	5	4.22	2.44	6	0.41	72.95
	6	5.99	3.1	4.2	0.74	93.23
	7	3.29	2.48	4.2	0.59	32.66
	8	4.27	2.52	5.5	0.46	69.44
	9	4.64	2.75	8	0.34	68.73
	10	4.87	2.49	10	0.25	95.58
	<b>Rata-rata</b>	<b>4.99</b>	<b>2.90</b>	<b>7.44</b>	<b>0.44</b>	<b>71.26</b>
Mamuju	1	7.97	4.27	8.2	0.52	86.65
	2	6.61	4	6	0.67	65.25
	3	7.72	4.96	8	0.62	55.65
	4	1.74	1.38	3	0.46	26.09
	5	3.45	2.59	4.8	0.54	33.20
	6	7.68	4.67	7.8	0.60	64.45
	7	8.03	4.8	8.2	0.59	67.29
	8	6.16	3.73	8	0.47	65.15
	9	8.44	4.9	10.5	0.47	72.24
	10	6.23	3.43	9.2	0.37	81.63
	<b>Rata-rata</b>	<b>6.40</b>	<b>3.87</b>	<b>7.37</b>	<b>0.53</b>	<b>61.76</b>

**Lampiran 8.** Data Kuantitatif Akar Bakau Hitam *Rhizophora mucronata*

Pohon		Akar				
		Berat Awal (g)	Berat Akhir (g)	Volume (ml)	Berat Jenis (g/cm <sup>3</sup> )	Kadar Air (%)
Polewali Mandar	1	10.54	5.58	10.5	0.53	88.89
	2	4.06	2.74	5	0.55	48.18
	3	7.33	3.68	9.5	0.39	99.18
	4	4.08	2.67	6	0.45	52.81
	5	15.59	8.09	13.5	0.60	92.71
	6	10.23	5.44	9	0.60	88.05
	7	2.92	1.57	3.9	0.40	85.99
	8	23.56	12.23	36	0.34	92.64
	9	5.2	3.2	5.8	0.55	62.50
	10	12.2	6.54	13.9	0.47	86.54
	<b>Rata-rata</b>	<b>9.57</b>	<b>5.17</b>	<b>11.31</b>	<b>0.49</b>	<b>79.75</b>
Majene	1	18.16	9.17	14.5	0.63	98.04
	2	13.02	6.72	7	0.96	93.75
	3	3.04	1.98	5	0.40	53.54
	4	23.38	11.93	30	0.40	95.98
	5	18.91	9.95	20.5	0.49	90.05
	6	12.63	6.68	11	0.61	89.07
	7	27.4	13.78	27	0.51	98.84
	8	4.92	2.78	10	0.28	76.98
	9	7.27	4.33	11.5	0.38	67.90
	10	13.38	6.81	13	0.52	96.48
	<b>Rata-rata</b>	<b>14.21</b>	<b>7.41</b>	<b>14.95</b>	<b>0.52</b>	<b>86.06</b>
Mamuju	1	4.96	2.81	9.7	0.29	76.51
	2	4.62	3.32	10.8	0.31	39.16
	3	4.33	3.06	6.9	0.44	41.51
	4	2.57	1.81	5	0.36	41.99
	5	2.45	1.55	4.8	0.32	58.06
	6	1.58	0.88	3.8	0.23	79.55
	7	2.31	1.7	4	0.43	35.88
	8	1.47	0.87	3	0.29	68.97
	9	1.68	0.96	5	0.19	75.00
	10	4.37	2.61	8.9	0.29	67.43
	<b>Rata-rata</b>	<b>3.03</b>	<b>1.957</b>	<b>6.19</b>	<b>0.32</b>	<b>58.41</b>

**Lampiran 9.** Data Kuantitatif Daun Bakau Hitam *Rhizophora mucronata*

Pohon		Daun					
		Berat Awal (g)	Berat Akhir (g)	Panjang (cm)	Lebar (cm)	Tebal (mm)	Kadar Air (%)
Polewali Mandar	1	3.74	2.29	13.4	7	0.39	63.38
	2	4.74	2.76	15	8.3	0.39	71.50
	3	2.34	1.74	12	5.4	0.43	34.23
	4	6.08	3.43	15.9	8.3	0.48	77.51
	5	3.02	2.05	14.5	5.8	0.4	47.31
	6	5.93	3.05	17.5	9.2	0.43	94.61
	7	5.03	2.58	14.5	8.5	0.39	95.28
	8	3.99	2.32	15.1	6.6	0.38	72.24
	9	2.74	1.78	13.5	5.5	0.42	53.57
	10	4.87	2.83	15	7.7	0.47	71.95
		<b>Rata-rata</b>	<b>4.25</b>	<b>2.48</b>	<b>14.64</b>	<b>7.23</b>	<b>0.42</b>
Majene	1	3.59	1.83	13	6.5	0.4	95.83
	2	2.41	1.65	9	5.8	0.43	46.00
	3	2.63	1.73	10.6	5.1	0.43	51.92
	4	2.38	1.65	11.4	5.3	0.4	44.04
	5	2.82	1.83	11.9	5.4	0.43	54.22
	6	3.01	1.67	13.5	5.8	0.34	80.40
	7	1.88	1.40	10	5.1	0.32	34.08
	8	2.11	1.54	10.5	4.6	0.39	36.92
	9	3.2	1.97	10.9	6.2	0.49	62.54
	10	2.03	1.39	9.4	4.5	0.44	45.57
		<b>Rata-rata</b>	<b>2.61</b>	<b>1.67</b>	<b>11.02</b>	<b>5.43</b>	<b>0.41</b>
Mamuju	1	3.54	2.40	14.3	6	0.42	47.64
	2	2.82	2.01	12.5	5	0.45	39.97
	3	4.87	2.52	15.3	6.7	0.52	93.40
	4	2.58	1.88	11	5.2	0.43	37.10
	5	3.13	2.02	12.5	5.5	0.45	55.10
	6	2.31	1.74	10.6	3.3	0.48	32.51
	7	4.59	2.69	13.5	6.4	0.49	70.39
	8	3.71	2.15	12	5.1	0.5	72.22
	9	5.26	2.88	13.5	6.2	0.51	82.69
	10	3.68	2.19	11	5	0.49	68.37
		<b>Rata-rata</b>	<b>3.65</b>	<b>2.25</b>	<b>12.62</b>	<b>5.44</b>	<b>0.47</b>

**Lampiran 10.** Nilai Kadar Air dan Berat Jenis Bagian Kulit, Batang, dan Akar Bakau Hitam *Rhizophora mucronata*

Pohon		Kulit		Batang		Akar	
		KA Kulit (%)	BJ Kulit (g/cm <sup>3</sup> )	KA Batang (%)	BJ Batang (g/cm <sup>3</sup> )	KA Akar (%)	BJ Akar (g/cm <sup>3</sup> )
Polewali Mandar	1	42.92	0.25	96.93	0.47	88.89	0.53
	2	35.87	0.41	41.46	0.42	48.18	0.55
	3	38.47	0.74	97.25	0.56	99.19	0.39
	4	47.46	0.34	92.78	0.62	52.81	0.45
	5	45.35	0.33	83.35	0.53	92.71	0.60
	6	95.30	0.42	68.67	0.46	88.05	0.60
	7	53.50	0.28	83.51	0.46	85.99	0.40
	8	53.69	0.29	85.28	0.53	92.64	0.34
	9	44.48	0.27	72.04	0.56	62.50	0.55
	10	43.81	0.30	63.37	0.48	86.54	0.47
	<b>Rata-rata</b>	<b>50.08</b>	<b>0.36</b>	<b>78.46</b>	<b>0.51</b>	<b>79.75</b>	<b>0.49</b>
Majene	1	68.42	0.21	51.22	0.52	98.04	0.63
	2	39.13	0.46	72.56	0.46	93.75	0.96
	3	66.67	0.37	73.09	0.37	53.54	0.40
	4	42.98	0.46	83.15	0.23	95.98	0.40
	5	50.44	0.16	72.95	0.41	90.05	0.49
	6	85.54	0.28	93.23	0.74	89.07	0.61
	7	40.78	0.28	32.66	0.59	98.84	0.51
	8	51.40	0.31	69.44	0.46	76.98	0.28
	9	10.81	0.03	68.73	0.34	67.90	0.38
	10	52.29	0.73	95.58	0.25	96.48	0.52
	<b>Rata-rata</b>	<b>50.85</b>	<b>0.33</b>	<b>71.26</b>	<b>0.44</b>	<b>86.06</b>	<b>0.52</b>
Mamuju	1	26.48	0.72	86.65	0.52	76.51	0.29
	2	30.91	0.31	65.25	0.67	39.16	0.31
	3	31.95	0.39	55.65	0.62	41.51	0.44
	4	37.63	0.49	26.09	0.46	41.99	0.36
	5	40.63	0.40	33.21	0.54	58.07	0.32
	6	80.29	0.47	64.45	0.60	79.55	0.23
	7	26.06	0.44	67.29	0.59	35.88	0.43
	8	31.51	0.49	65.15	0.47	68.97	0.29
	9	60.44	0.26	72.25	0.47	75.00	0.19
	10	39.22	0.17	81.63	0.37	67.43	0.29
	<b>Rata-rata</b>	<b>40.51</b>	<b>0.41</b>	<b>61.76</b>	<b>0.53</b>	<b>58.41</b>	<b>0.32</b>



**Lampiran 11.** Nilai Rata-rata Kadar Air dan Berat Jenis Bagian Kulit, Batang, dan Akar Bakau Hitam *Rhizophora mucronata* Provenansi Polewali Mandar, Majene, dan Mamuju

<b>Karakter</b>		<b>Polman</b>	<b>Majene</b>	<b>Mamuju</b>	<b>Rata-rata</b>
Kadar Air	Kulit	50.08	50.85	40.51	47.15
	Batang	78.46	71.26	61.76	70.50
	Akar	79.75	86.06	58.41	74.74
<b>Rata-rata</b>		<b>69.43</b>	<b>69.39</b>	<b>53.56</b>	<b>64.13</b>
Berat Jenis	Kulit	0.36	0.33	0.41	0.37
	Batang	0.51	0.44	0.53	0.49
	Akar	0.49	0.52	0.32	0.44
<b>Rata-rata</b>		<b>0.45</b>	<b>0.43</b>	<b>0.42</b>	<b>0.43</b>

**Lampiran 12.** Nilai Heterozigositas/Keragaman Genetik Bakau Hitam *Rhizophora mucronata* Provenansi Polewali Mandar

Karakter	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Jumlah	qi	pi	qi^2	pi^2	He
Kulit_BJ_<_0.36	1	0	0	1	1	0	1	1	1	1	7	0.84	0.16	0.7	0.03	0.27
Kulit_BJ_>_0.36	0	1	1	0	0	1	0	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Kulit_KA_<_50.08	1	1	1	1	1	0	0	0	1	1	7	0.84	0.16	0.7	0.03	0.27
Kulit_KA_>_50.08	0	0	0	0	0	1	1	1	0	0	3	0.55	0.45	0.3	0.20	0.50
Kulit_tekstur_sulcatus	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Hue_2.5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Value_<_6.6	0	0	0	0	0	0	1	1	0	0	2	0.45	0.55	0.2	0.31	0.49
Kulit_Warna_Value_>_6.6	1	1	1	1	1	1	0	0	1	1	8	0.89	0.11	0.8	0.01	0.19
Kulit_Warna_Chroma_<_2	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Chroma_>_2	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
coklat keabu-abuan	0	0	0	0	0	0	1	1	0	0	2	0.45	0.55	0.2	0.31	0.49
abu-abu cerah	1	1	1	1	1	1	0	0	1	1	8	0.89	0.11	0.8	0.01	0.19
Batang_BJ_<_0.51	1	1	0	0	0	1	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Batang_BJ_>_0.51	0	0	1	1	1	0	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41
Batang_KA_<_78.46	0	1	0	0	0	1	0	0	1	1	4	0.63	0.37	0.4	0.14	0.46
Batang_KA_>_78.46	1	0	1	1	1	0	1	1	0	0	6	0.77	0.23	0.6	0.05	0.35
Batang_bentuk_teres	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_kelurusan_lurus	1	1	1	1	1	1	0	1	1	0	8	0.89	0.11	0.8	0.01	0.19
Batang_kelurusan_miring	0	0	0	0	0	0	1	0	0	1	2	0.45	0.55	0.2	0.31	0.49
Batang_Warna_Hue_10R	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_Warna_Value_<_3.45	1	0	0	0	1	1	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
Batang_Warna_Value_>_3.45	0	1	1	1	0	0	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
Batang_Warna_Chrome_<_5	1	1	0	0	1	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46

Karakter	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Jumlah	qi	pi	qi^2	pi^2	He
Batang_Warna_Chrome_>_5	0	0	1	1	0	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
merah kehitaman	1	0	0	0	0	1	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
merah	0	1	1	1	0	0	0	1	0	0	4	0.63	0.37	0.4	0.14	0.46
hitam kemerahan	0	0	0	0	1	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
merah pudar	0	0	0	0	0	0	1	0	0	0	1	0.32	0.68	0.1	0.47	0.43
merah gelap	0	0	0	0	0	0	0	0	1	1	2	0.45	0.55	0.2	0.31	0.49
Akar_BJ_<_0.48	0	0	1	1	0	0	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Akar_BJ_>_0.48	1	1	0	0	1	1	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Akar_KA_<_79.74	0	1	0	1	0	0	0	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Akar_KA_>_79.74	1	0	1	0	1	1	1	1	0	1	7	0.84	0.16	0.7	0.03	0.27
Akar_panjang_<_90.9	1	0	1	0	1	1	1	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Akar_panjang_>_90.9	0	1	0	1	0	0	0	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Hue_7.5Y R	1	1	0	1	0	0	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
Akar_Warna_Hue_10YR	0	0	1	0	1	0	0	0	0	1	3	0.55	0.45	0.3	0.20	0.50
Akar_Warna_Hue_5YR	0	0	0	0	0	1	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Akar_Warna_Value_<_5.4	0	1	0	1	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Value_>_5.4	1	0	1	0	1	0	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Chroma_<_6.8	0	1	0	1	1	1	0	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Chroma_>_6.8	1	0	1	0	0	0	1	1	1	0	5	0.71	0.29	0.5	0.09	0.41
kuning kemerahan	1	0	0	0	0	0	0	1	0	0	2	0.45	0.55	0.2	0.31	0.49
coklat	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
kuning kecoklatan	0	0	1	0	1	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
coklat tua	0	0	0	1	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
merah kekuningan	0	0	0	0	0	1	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43

Karakter	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Jumlah	qi	pi	qi^2	pi^2	He
kuning	0	0	0	0	0	0	0	0	0	1	1	0.32	0.68	0.1	0.47	0.43
propagul_Berat_<_20.53	1	1	1	0	0	1	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
propagul_Berat_>_20.53	0	0	0	1	1	0	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
propagul_Panjang buah_<_4.08	0	0	1	0	0	0	0	0	0	1	2	0.45	0.55	0.2	0.31	0.49
propagul_Panjang buah_>_4.08	1	1	0	1	1	1	1	1	1	0	8	0.89	0.11	0.8	0.01	0.19
Propogul_Warna_Hue buah_5Y	1	1	0	1	1	1	1	1	1	0	8	0.89	0.11	0.8	0.01	0.19
Propogul_Warna_Value buah_<_3.3	0	0	1	0	0	1	0	0	0	1	3	0.55	0.45	0.3	0.20	0.50
Propogul_Warna_Value buah_>_3.3	1	1	0	1	1	0	1	1	1	0	7	0.84	0.16	0.7	0.03	0.27
Propogul_Warna_Chroma buah_<_4.2	0	0	1	0	0	0	0	0	0	1	2	0.45	0.55	0.2	0.31	0.49
Propogul_Warna_Chroma buah_>_4.2	1	1	0	1	1	1	1	1	1	0	8	0.89	0.11	0.8	0.01	0.19
olive	1	1	0	1	1	0	1	0	0	0	5	0.71	0.29	0.5	0.09	0.41
propagul_Panjang hipokotil_<_8.41	1	1	1	0	0	1	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
propagul_Panjang hipokotil_>_8.41	0	0	0	1	1	0	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Propogul_Warna_Hue hipokotil_5Y	1	1	0	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Propogul_Warna_Hue hipokotil_10YR	0	0	0	0	0	0	1	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_value hipokotil_<_1.9	0	0	1	0	0	1	0	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Propogul_Warna_value hipokotil_>_1.9	1	1	0	1	1	0	1	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Propogul_Warna_chroma hipokotil_<_2.1	1	1	1	1	0	0	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Propogul_Warna_chroma hipokotil_>_2.1	0	0	0	0	1	1	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
olive	0	0	0	0	1	1	0	1	0	0	3	0.55	0.45	0.3	0.20	0.50
abu-abu olive gelap	0	0	0	1	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
coklat kekuningan gelap	0	0	0	0	0	0	1	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Bunga_Warna_Hue bunga_5Y	1	0	1	0	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Bunga_Warna_value bunga_<_3.3	0	1	0	1	1	0	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41

Karakter	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Jumlah	qi	pi	qi^2	pi^2	He
Bunga_Warna_value bunga_>_3.3	1	0	1	0	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Bunga_Warna_value chroma_<_4	0	1	0	1	1	0	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Bunga_Warna_value chroma_>_4	1	0	1	0	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Kuning Olive	1	0	1	0	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_bentuk_Elliptical	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLUD_Apiculate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLPD_Cuneate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BTD_Entire	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_Berat awal_<_4.24	1	0	1	0	1	0	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_Berat awal_>_4.24	0	1	0	1	0	1	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_Berat akhir_<_2.48	1	0	1	0	1	0	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_Berat akhir_>_2.48	0	1	0	1	0	1	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_KA_<_68.15	1	0	1	0	1	0	0	0	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_KA_>_68.15	0	1	0	1	0	1	1	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Daun_panjang_<_14.64	1	0	1	0	1	0	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_panjang_>_14.64	0	1	0	1	0	1	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_lebar_<_7.23	1	0	1	0	1	0	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_lebar_>_7.23	0	1	0	1	0	1	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_tebal_<_0.41	1	1	0	0	1	0	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
Daun_tebal_>_0.41	0	0	1	1	0	1	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
Daun_Hue WPAD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPAD_<_3.6	0	1	1	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_value WPAD_>_3.6	1	0	0	0	0	1	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_chroma WPAD_<_2.8	1	1	1	1	1	0	0	0	0	1	6	0.77	0.23	0.6	0.05	0.35

Karakter	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Jumlah	qi	pi	qi^2	pi^2	He
Daun_chroma WPAD_>_2.8	0	0	0	0	0	1	1	1	1	0	4	0.63	0.37	0.4	0.14	0.46
abu-abu olive	1	0	0	0	0	0	0	0	0	1	2	0.45	0.55	0.2	0.31	0.49
abu-abu olive gelap	0	1	1	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
olive	0	0	0	0	0	1	1	1	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_Hue WPBD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPBD_<_5.6	1	1	1	1	1	0	0	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Daun_value WPBD_>_5.6	0	0	0	0	0	1	1	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Daun_chroma WPBD_<_5	1	1	1	1	1	0	0	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Daun_chroma WPBD_>_5	0	0	0	0	0	1	1	1	1	1	5	0.71	0.29	0.5	0.09	0.41
olive	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
abu-abu olive	0	1	1	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
kuning	0	0	0	0	0	1	1	1	1	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Timur_<_1.60	1	1	1	0	0	0	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
ProyeksiTajuk_Timur_>_1.60	0	0	0	1	1	1	0	0	0	1	4	0.63	0.37	0.4	0.14	0.46
ProyeksiTajuk_Selatan_<_2.04	1	0	1	0	0	0	1	1	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Selatan_>_2.04	0	1	0	1	1	1	0	0	0	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_<_1.90	1	0	1	0	1	0	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_>_1.90	0	1	0	1	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Utara_<_1.36	1	0	1	0	0	0	1	1	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Utara_>_1.36	0	1	0	1	1	1	0	0	0	1	5	0.71	0.29	0.5	0.09	0.41
TTot_Pohon_<_6.47	1	0	0	0	0	0	1	1	0	1	4	0.63	0.37	0.4	0.14	0.46
TTot_Pohon_>_6.47	0	1	1	1	1	1	0	0	1	0	6	0.77	0.23	0.6	0.05	0.35
Tbc_Pohon_<_1.72	1	0	1	0	0	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Tbc_Pohon_>_1.72	0	1	0	1	1	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>Jumlah</b>	<b>qi</b>	<b>pi</b>	<b>qi^2</b>	<b>pi^2</b>	<b>He</b>
Proporsi_tbc_ttot_<_25.97	1	0	1	1	0	0	0	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Proporsi_tbc_ttot_>_25.97	0	1	0	0	1	1	1	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Diameter_Pohon_<_0.12	1	0	0	0	0	1	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Diameter_Pohon_>_0.12	0	1	1	1	1	0	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Volume_Pohon_<_0.06	1	1	0	0	0	1	1	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Volume_Pohon_>_0.06	0	0	1	1	1	0	0	0	1	0	4	0.63	0.37	0.4	0.14	0.46

**Lampiran 13.** Nilai Heterozigositas/Keragaman Genetik Bakau Hitam *Rhizophora mucronata* Provenansi Majene

Karakter	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9	MJ10	Jumlah	qi	pi	qi^2	pi^2	He
Kulit_BJ_<_0.33	1	0	0	0	1	1	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
Kulit_BJ_>_0.33	0	1	1	1	0	0	0	0	0	1	4	0.63	0.37	0.4	0.14	0.46
Kulit_KA_<_50.85	0	1	0	1	1	0	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Kulit_KA_>_50.85	1	0	1	0	0	1	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Kulit_tekstur_sulcatus	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Hue_2.5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Value_<_5.0	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Value_>_5.0	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
Kulit_Warna_Chroma_<_2.6	1	0	1	1	1	0	0	1	1	1	7	0.84	0.16	0.7	0.03	0.27
Kulit_Warna_Chroma_>_2.6	0	1	0	0	0	1	1	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Hitam	1	0	0	0	1	0	0	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Coklat keabu-abuan gelap	0	1	0	1	0	1	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Coklat keabu-abuan	0	0	1	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Coklat olive keabu-abuan	0	0	0	0	0	0	1	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Batang_BJ_<_0.44	0	0	1	1	0	0	0	0	1	1	4	0.63	0.37	0.4	0.14	0.46
Batang_BJ_>_0.44	1	1	0	0	1	1	1	1	0	0	6	0.77	0.23	0.6	0.05	0.35
Batang_KA_<_71.26	1	0	0	0	0	0	1	1	1	0	4	0.63	0.37	0.4	0.14	0.46
Batang_KA_>_71.26	0	1	1	1	1	1	0	0	0	1	6	0.77	0.23	0.6	0.05	0.35
Batang_bentuk_teres	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_kelurusan batang bercabang banyak	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_Warna_Hue_2.5YR	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_Warna_Value_<_3.90	0	0	0	0	0	0	0	0	1	1	2	0.45	0.55	0.2	0.31	0.49



Karakter	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9	MJ10	Jumlah	qi	pi	qi^2	pi^2	He
Batang_Warna_Value_>_3.90	1	1	1	1	1	1	1	1	0	0	8	0.89	0.11	0.8	0.01	0.19
Batang_Warna_Chrome_<_6.20	1	1	1	1	1	0	1	0	1	1	8	0.89	0.11	0.8	0.01	0.19
Batang_Warna_Chrome_>_6.20	0	0	0	0	0	1	0	1	0	0	2	0.45	0.55	0.2	0.31	0.49
Merah	1	1	1	1	1	1	1	1	0	0	8	0.89	0.11	0.8	0.01	0.19
Coklat kemerahan gelap	0	0	0	0	0	0	0	0	1	0	1	0.32	0.68	0.1	0.47	0.43
Merah gelap	0	0	0	0	0	0	0	0	0	1	1	0.32	0.68	0.1	0.47	0.43
Akar_BJ_<_0.52	0	0	1	1	1	0	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
Akar_BJ_>_0.52	1	1	0	0	0	1	0	0	0	1	4	0.63	0.37	0.4	0.14	0.46
Akar_KA_<_86.06	0	0	1	0	0	0	0	1	1	0	3	0.55	0.45	0.3	0.20	0.50
Akar_KA_>_86.06	1	1	0	1	1	1	1	0	0	1	7	0.84	0.16	0.7	0.03	0.27
Akar_panjang_<_203.20	1	0	0	1	0	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Akar_panjang_>_203.20	0	1	1	0	1	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Akar_Warna_Hue_7.5Y R	0	0	1	0	1	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Akar_Warna_Hue_10YR	1	1	0	1	0	1	1	1	1	1	8	0.89	0.11	0.8	0.01	0.19
Akar_Warna_Value_<_6.6	0	0	1	0	1	1	0	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Akar_Warna_Value_>_6.6	1	1	0	1	0	0	1	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Akar_Warna_Chroma_<_7.8	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Akar_Warna_Chroma_>_7.8	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Kuning	1	1	0	1	0	0	1	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Kuning kemerahan	0	0	1	0	1	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Kuning kecoklatan	0	0	0	0	0	1	0	1	0	0	2	0.45	0.55	0.2	0.31	0.49
propagul_Berat_<_14.46	1	0	1	1	1	1	1	1	0	1	8	0.89	0.11	0.8	0.01	0.19
propagul_Berat_>_14.46	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
propagul_Panjang buah_<_1.42	1	0	1	1	1	1	0	1	0	1	7	0.84	0.16	0.7	0.03	0.27

Karakter	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9	MJ10	Jumlah	qi	pi	qi^2	pi^2	He
propagul_Panjang buah_>_1.42	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Propogul_Warna_Hue buah_5Y	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Propgul_Warna_Value buah_<_1.6	1	0	1	1	1	1	0	1	0	1	7	0.84	0.16	0.7	0.03	0.27
Propgul_Warna_Value buah_>_1.6	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Propgul_Warna_Chroma buah_<_2	1	0	1	1	1	1	0	1	0	1	7	0.84	0.16	0.7	0.03	0.27
Propgul_Warna_Chroma buah_>_2	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
olive	0	1	0	0	0	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
propagul_Panjang hipokotil_<_7.48	1	0	1	1	1	1	1	1	0	1	8	0.89	0.11	0.8	0.01	0.19
propagul_Panjang hipokotil_>_7.48	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
Propogul_Warna_Hue hipokotil_5Y	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
Propogul_Warna_value hipokotil_<_0.8	1	0	1	1	1	1	1	1	0	1	8	0.89	0.11	0.8	0.01	0.19
Propogul_Warna_value hipokotil_>_0.8	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
Propogul_Warna_chroma hipokotil_<_0.8	1	0	1	1	1	1	1	1	0	1	8	0.89	0.11	0.8	0.01	0.19
Propogul_Warna_chroma hipokotil_>_0.8	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
olive	0	1	0	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
Bunga_Warna_Hue bunga_5Y	1	1	1	1	1	0	0	0	1	1	7	0.84	0.16	0.7	0.03	0.27
Bunga_Warna_value bunga_<_4.9	0	0	0	0	0	1	1	1	0	0	3	0.55	0.45	0.3	0.20	0.50
Bunga_Warna_value bunga_>_4.9	1	1	1	1	1	0	0	0	1	1	7	0.84	0.16	0.7	0.03	0.27
Bunga_Warna_value chroma_<_5.6	0	0	0	0	0	1	1	1	0	0	3	0.55	0.45	0.3	0.20	0.50
Bunga_Warna_value chroma_>_5.6	1	1	1	1	1	0	0	0	1	1	7	0.84	0.16	0.7	0.03	0.27
Kuning olive	1	1	1	1	1	0	0	0	1	1	7	0.84	0.16	0.7	0.03	0.27
Daun_bentuk_Elliptical	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLUD_Apiculate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLPD_Cuneate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00

Karakter	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9	MJ10	Jumlah	qi	pi	qi^2	pi^2	He
Daun_BTD_Entire	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_Berat awal_<_2.61	0	1	0	1	0	0	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_Berat awal_>_2.61	1	0	1	0	1	1	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_Berat akhir_<_1.67	0	1	0	1	0	1	1	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Daun_Berat akhir_>_1.67	1	0	1	0	1	0	0	0	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_KA_<_55.15	0	1	1	1	1	0	1	1	0	1	7	0.84	0.16	0.7	0.03	0.27
Daun_KA_>_55.15	1	0	0	0	0	1	0	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Daun_panjang_<_11.02	0	1	1	0	0	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_panjang_>_11.02	1	0	0	1	1	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_lebar_<_5.43	0	0	1	1	1	0	1	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Daun_lebar_>_5,43	1	1	0	0	0	1	0	0	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_tebal_<_0.41	1	0	0	1	0	1	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
Daun_tebal_>_0.41	0	1	1	0	1	0	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
Daun_Hue WPAD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPAD_<_4.7	0	0	1	0	1	1	0	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Daun_value WPAD_>_4.7	1	1	0	1	0	0	1	1	1	1	7	0.84	0.16	0.7	0.03	0.27
Daun_chroma WPAD_<_3.6	0	1	1	0	1	0	0	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_chroma WPAD_>_3.6	1	0	0	1	0	1	1	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Olive	1	0	0	1	0	1	1	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Abu-abu olive	0	1	1	0	1	0	0	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_Hue WPBD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPBD_<_5.8	0	0	1	1	0	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Daun_value WPBD_>_5.8	1	1	0	0	1	1	1	1	1	1	8	0.89	0.11	0.8	0.01	0.19
Daun_chroma WPAD_<_7	0	0	1	1	1	0	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41

<b>Karakter</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>	<b>MJ6</b>	<b>MJ7</b>	<b>MJ8</b>	<b>MJ9</b>	<b>MJ10</b>	<b>Jumlah</b>	<b>qi</b>	<b>pi</b>	<b>qi^2</b>	<b>pi^2</b>	<b>He</b>
Daun_chroma WPAD_>_7	1	1	0	0	0	1	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Kuning olive	1	1	0	0	1	1	1	1	1	1	8	0.89	0.11	0.8	0.01	0.19
Olive	0	0	1	1	0	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
ProyeksiTajuk_Timur_<_2.91	1	0	1	0	0	0	1	0	0	1	4	0.63	0.37	0.4	0.14	0.46
ProyeksiTajuk_Timur_>_2.91	0	1	0	1	1	1	0	1	1	0	6	0.77	0.23	0.6	0.05	0.35
ProyeksiTajuk_Selatan_<_3.05	1	1	1	1	0	0	0	0	0	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Selatan_>_3.05	0	0	0	0	1	1	1	1	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_<_2.43	1	1	1	0	0	0	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_>_2.43	0	0	0	1	1	1	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Utara_<_3.06	1	1	1	1	0	0	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
ProyeksiTajuk_Utara_>_3.06	0	0	0	0	1	1	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
TTot_Pohon_<_5.88	1	1	0	0	1	0	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
TTot_Pohon_>_5.88	0	0	1	1	0	1	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Tbc_Pohon_<_1.23	1	0	1	1	0	0	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
Tbc_Pohon_>_1.23	0	1	0	0	1	1	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
Proporsi_tbc_ttot_<_22.15	0	0	1	1	0	0	0	0	1	1	4	0.63	0.37	0.4	0.14	0.46
Proporsi_tbc_ttot_>_22.15	1	1	0	0	1	1	1	1	0	0	6	0.77	0.23	0.6	0.05	0.35
Diameter_Pohon_<_0.11	1	1	0	0	0	0	1	1	1	0	5	0.71	0.29	0.5	0.09	0.41
Diameter_Pohon_>_0.11	0	0	1	1	1	1	0	0	0	1	5	0.71	0.29	0.5	0.09	0.41
Volume_Pohon_<_0.04	1	1	0	0	0	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Volume_Pohon_>_0.04	0	0	1	1	1	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46

**Lampiran 14.** Nilai Heterozigositas/Keragaman Genetik Bakau Hitam *Rhizophora mucronata* Provenansi Mamuju

Karakter	MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9	MM10	Jumlah	qi	pi	qi^2	pi^2	He
Kulit_BJ_<_0.41	0	1	1	0	1	0	0	0	1	1	5	0.71	0.29	0.5	0.09	0.41
Kulit_BJ_>_0.41	1	0	0	1	0	1	1	1	0	0	5	0.71	0.29	0.5	0.09	0.41
Kulit_KA_<_40.51	1	1	1	1	0	0	1	1	0	1	7	0.84	0.16	0.7	0.03	0.27
Kulit_KA_>_40.51	0	0	0	0	1	1	0	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Kulit_tekstur_mengelupas	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Kulit_Warna_Hue_7.5YR	0	1	0	0	0	0	1	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Kulit_Warna_Hue_2.5Y	1	0	1	1	1	1	0	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Kulit_Warna_Value_<_4.4	1	1	0	0	0	1	1	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Kulit_Warna_Value_>_4.4	0	0	1	1	1	0	0	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Kulit_Warna_Chroma_<_1.8	0	1	0	0	0	0	1	0	1	1	4	0.63	0.37	0.4	0.14	0.46
Kulit_Warna_Chroma_>_1.8	1	0	1	1	1	1	0	1	0	0	6	0.77	0.23	0.6	0.05	0.35
Coklat gelap	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Putih kemerahmudaan	0	1	0	1	0	0	0	1	0	0	3	0.55	0.45	0.3	0.20	0.50
Abu-abu kemerahan gelap	0	0	1	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Abu-abu gelap	0	0	0	0	1	0	1	0	1	0	3	0.55	0.45	0.3	0.20	0.50
Coklat	0	0	0	0	0	1	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Hitam	0	0	0	0	0	0	0	0	0	1	1	0.32	0.68	0.1	0.47	0.43
Batang_BJ_<_0.53	1	0	0	1	0	0	0	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Batang_BJ_>_0.53	0	1	1	0	1	1	1	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Batang_KA_<_61.76	0	1	1	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Batang_KA_>_61.76	1	0	0	0	0	1	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Batang_bentuk_teres	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_kelurusan_bengkok	1	0	0	0	0	0	0	1	1	0	3	0.55	0.45	0.3	0.20	0.50

<b>Karakter</b>	<b>MM1</b>	<b>MM2</b>	<b>MM3</b>	<b>MM4</b>	<b>MM5</b>	<b>MM6</b>	<b>MM7</b>	<b>MM8</b>	<b>MM9</b>	<b>MM10</b>	<b>Jumlah</b>	<b>qi</b>	<b>pi</b>	<b>qi^2</b>	<b>pi^2</b>	<b>He</b>
Batang_kelurusan_lurus	0	1	1	1	0	0	1	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Batang_kelurusan_miring	0	0	0	0	1	1	0	0	0	1	3	0.55	0.45	0.3	0.20	0.50
Batang_Warna_Hue_2.5YR	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Batang_Warna_Value_<_3.70	1	1	0	0	1	0	0	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Batang_Warna_Value_>_3.70	0	0	1	1	0	1	1	1	1	1	7	0.84	0.16	0.7	0.03	0.27
Batang_Warna_Chrome_<_5.80	0	0	0	0	1	0	0	0	0	1	2	0.45	0.55	0.2	0.31	0.49
Batang_Warna_Chrome_>_5.80	1	1	1	1	0	1	1	1	1	0	8	0.89	0.11	0.8	0.01	0.19
Merah gelap	1	1									2	0.45	0.55	0.2	0.31	0.49
Merah			1	1		1	1	1	1		6	0.77	0.23	0.6	0.05	0.35
Coklat Kemerahan					1					1	2	0.45	0.55	0.2	0.31	0.49
Akar_BJ_<_0.32	1	1	0	0	0	1	0	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Akar_BJ_>_0.32	0	0	1	1	1	0	1	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Akar_KA_<_58.41	0	1	1	1	1	0	1	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Akar_KA_>_58.41	1	0	0	0	0	1	0	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Akar_panjang_<_110.5	1	1	0	1	0	1	1	0	1	0	6	0.77	0.23	0.6	0.05	0.35
Akar_panjang_>_110.5	0	0	1	0	1	0	0	1	0	1	4	0.63	0.37	0.4	0.14	0.46
Akar_Warna_Hue_5YR	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Akar_Warna_Value_<_4.75	1	0	0	1	1	1	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Value_>_4.75	0	1	1	0	0	0	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Akar_Warna_Chroma_<_2.2	1	0	1	1	1	1	1	1	1	0	8	0.89	0.11	0.8	0.01	0.19
Akar_Warna_Chroma_>_2.2	0	1	0	0	0	0	0	0	0	1	2	0.45	0.55	0.2	0.31	0.49
Hitam	1	0	0	1	0	0	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Hitam kemerahan	0	1	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Abu-abu terang	0	0	1	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43

Karakter	MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9	MM10	Jumlah	qi	pi	qi^2	pi^2	He
Coklat kemerahan gelap	0	0	0	0	1	1	0	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Abu-abu kemerahmudaan	0	0	0	0	0	0	1	1	0	0	2	0.45	0.55	0.2	0.31	0.49
Coklat kemerahan gelap	0	0	0	0	0	0	0	0	1	0	1	0.32	0.68	0.1	0.47	0.43
Merah muda	0	0	0	0	0	0	0	0	0	1	1	0.32	0.68	0.1	0.47	0.43
Propagaul_Berat_<_9.58	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propagaul_Berat_>_9.58	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propagaul_Panjang buah_<_0.53	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propagaul_Panjang buah_>_0.53	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_Hue buah_5Y	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_Value buah_<_0.6	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propogul_Warna_Value buah_>_0.6	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_Chroma buah_<_0.8	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propogul_Warna_Chroma buah_>_0.8	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
olive	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propagaul_Panjang hipokotil_<_6.1	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propagaul_Panjang hipokotil_>_6.1	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_Hue hipokotil_5Y	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_value hipokotil_<_0.4	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propogul_Warna_value hipokotil_>_0.4	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Propogul_Warna_chroma hipokotil_<_0.4	0	1	1	1	1	1	1	1	1	1	9	0.95	0.05	0.9	0.00	0.10
Propogul_Warna_chroma hipokotil_>_0.4	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
olive	1	0	0	0	0	0	0	0	0	0	1	0.32	0.68	0.1	0.47	0.43
Bunga_Warna_Hue bunga_	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
Bunga_Warna_value bunga_<_	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00

Karakter	MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9	MM10	Jumlah	qi	pi	qi^2	pi^2	He
Bunga_Warna_value bunga_>_	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
Bunga_Warna_value chroma_<_	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
Bunga_Warna_value chroma_>_	0	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.0	1.00	0.00
Daun_bentuk_Elliptical	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLUD_Apiculate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BLPD_Cuneate	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_BTD_Entire	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_Berat awal_<_3.65	1	1	0	1	1	1	0	0	1	0	6	0.77	0.23	0.6	0.05	0.35
Daun_Berat awal_>_3.65	0	0	1	0	0	0	1	1	0	1	4	0.63	0.37	0.4	0.14	0.46
Daun_Berat akhir_<_2.25	0	1	0	1	1	1	0	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Daun_Berat akhir_>_2.25	1	0	1	0	0	0	1	0	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_KA_<_59.94	1	1	0	1	1	1	0	0	0	0	5	0.71	0.29	0.5	0.09	0.41
Daun_KA_>_59.94	0	0	1	0	0	0	1	1	1	1	5	0.71	0.29	0.5	0.09	0.41
Daun_panjang_<_12.62	0	1	0	1	1	1	0	1	0	1	6	0.77	0.23	0.6	0.05	0.35
Daun_panjang_>_12.62	1	0	1	0	0	0	1	0	1	0	4	0.63	0.37	0.4	0.14	0.46
Daun_lebar_<_5.44	0	1	0	1	0	1	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Daun_lebar_>_5.44	1	0	1	0	1	0	1	0	1	0	5	0.71	0.29	0.5	0.09	0.41
Daun_tebal_<_0.47	1	1	0	1	1	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_tebal_>_0.47	0	0	1	0	0	1	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_Hue WPAD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPAD_<_3.8	1	0	0	0	1	0	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_value WPAD_>_3.8	0	1	1	1	0	1	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_chroma WPAD_<_2.4	1	0	0	0	1	0	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_chroma WPAD_>_2.4	0	1	1	1	0	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46



Karakter	MM1	MM2	MM3	MM4	MM5	MM6	MM7	MM8	MM9	MM10	Jumlah	qi	pi	qi^2	pi^2	He
Olive abu-abu gelap	1	0	0	0	0	0	0	1	0	0	2	0.45	0.55	0.2	0.31	0.49
Olive	0	1	1	1	0	1	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46
Abu-abu gelap	0	0	0	0	1	0	1	0	0	0	2	0.45	0.55	0.2	0.31	0.49
Abu-abu olive	0	0	0	0	0	0	0	0	1	1	2	0.45	0.55	0.2	0.31	0.49
Daun_Hue WPBD_5Y	1	1	1	1	1	1	1	1	1	1	10	1.00	0.00	1.0	0.00	0.00
Daun_value WPBD_<_5.3	1	0	0	0	1	0	1	1	0	0	4	0.63	0.37	0.4	0.14	0.46
Daun_value WPBD_>_5.3	0	1	1	1	0	1	0	0	1	1	6	0.77	0.23	0.6	0.05	0.35
Daun_chroma WPAD_<_4.7	1	0	1	0	1	0	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
Daun_chroma WPAD_>_4.7	0	1	0	1	0	1	0	0	0	1	4	0.63	0.37	0.4	0.14	0.46
Olive	1	0	0	0	1	0	1	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Kuning Olive	0	1	0	1	0	1	0	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Olive pucat	0	0	1	0	0	0	0	0	1	0	2	0.45	0.55	0.2	0.31	0.49
ProyeksiTajuk_Timur_<_1.93	0	0	1	0	0	1	0	1	0	0	3	0.55	0.45	0.3	0.20	0.50
ProyeksiTajuk_Timur_>_1.93	1	1	0	1	1	0	1	0	1	1	7	0.84	0.16	0.7	0.03	0.27
ProyeksiTajuk_Selatan_<_2.16	1	0	0	0	1	1	0	1	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Selatan_>_2.16	0	1	1	1	0	0	1	0	0	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_<_2.12	1	1	0	1	1	0	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Barat_>_2.12	0	0	1	0	0	1	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
ProyeksiTajuk_Utara_<_2.11	0	0	1	1	1	1	0	1	1	1	7	0.84	0.16	0.7	0.03	0.27
ProyeksiTajuk_Utara_>_2.11	1	1	0	0	0	0	1	0	0	0	3	0.55	0.45	0.3	0.20	0.50
TTot_Pohon_<_5.23	0	0	0	1	1	1	1	1	1	0	6	0.77	0.23	0.6	0.05	0.35
TTot_Pohon_>_5.23	1	1	1	0	0	0	0	0	0	1	4	0.63	0.37	0.4	0.14	0.46
Tbc_Pohon_<_2.22	0	0	0	1	0	1	1	1	0	1	5	0.71	0.29	0.5	0.09	0.41
Tbc_Pohon_>_2.22	1	1	1	0	1	0	0	0	1	0	5	0.71	0.29	0.5	0.09	0.41

<b>Karakter</b>	<b>MM1</b>	<b>MM2</b>	<b>MM3</b>	<b>MM4</b>	<b>MM5</b>	<b>MM6</b>	<b>MM7</b>	<b>MM8</b>	<b>MM9</b>	<b>MM10</b>	<b>Jumlah</b>	<b>qi</b>	<b>pi</b>	<b>qi^2</b>	<b>pi^2</b>	<b>He</b>
Proporsi_tbc_ttot_<_43.42	0	1	0	0	0	1	0	1	0	1	4	0.63	0.37	0.4	0.14	0.46
Proporsi_tbc_ttot_>_43.42	1	0	1	1	1	0	1	0	1	0	6	0.77	0.23	0.6	0.05	0.35
Diameter_Pohon_<_0.20	0	1	1	0	0	1	1	1	1	1	7	0.84	0.16	0.7	0.03	0.27
Diameter_Pohon_>_0.20	1	0	0	1	1	0	0	0	0	0	3	0.55	0.45	0.3	0.20	0.50
Volume_Pohon_<_0.12	0	0	0	0	1	1	1	1	1	1	6	0.77	0.23	0.6	0.05	0.35
Volume_Pohon_>_0.12	1	1	1	1	0	0	0	0	0	0	4	0.63	0.37	0.4	0.14	0.46

**Lampiran 15.** Data Keseluruhan untuk Analisis Heatmap

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>
Kulit_BJ	0.25	0.41	0.74	0.34	0.33	0.42	0.28	0.29	0.27	0.30	0.21	0.46	0.37	0.46	0.16
Kulit_KA	42.92	35.87	38.47	47.46	45.35	95.30	53.50	53.68	44.48	43.81	68.42	39.13	66.67	42.98	50.44
Kulit_Warna_Hue_2.5Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Kulit_Warna_Hue_7.5YR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kulit_Warna_Value	7	7	7	7	7	7	5	5	7	7	5	5	5	5	5
Kulit_Warna_Chroma	2	2	2	2	2	2	2	2	2	2	2	4	2	2	2
Batang_BJ	0.47	0.42	0.55	0.62	0.53	0.46	0.46	0.53	0.56	0.48	0.52	0.46	0.37	0.23	0.41
Batang_KA	96.93	41.46	97.25	92.78	83.35	68.67	83.51	85.28	72.04	63.37	51.22	72.56	73.08	83.15	72.95
Batang_Warna_Hue_10R	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Batang_Warna_Hue_2.5YR	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Batang_Warna_Value	3	4	4	4	2.5	3	4	4	3	3	4	4	4	4	4
Batang_Warna_Chrome	3	4	6	6	1	4	8	6	6	6	6	6	6	6	6
Akar_BJ	0.53	0.55	0.39	0.45	0.60	0.60	0.40	0.34	0.55	0.47	0.63	0.96	0.40	0.40	0.49
Akar_KA	88.89	48.18	99.18	52.81	92.71	88.05	85.99	92.64	62.50	86.54	98.04	93.75	53.54	95.98	90.05
Akar_panjang	83	102	77	119	12	82	85	126	118	105	179	266	257	180	230
Akar_Warna_Hue_7.5Y R	1	1	0	1	0	0	1	1	1	0	0	0	1	0	1
Akar_Warna_Hue_5Y R	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Akar_Warna_Hue_10YR	0	0	1	0	1	0	0	0	0	1	1	1	0	1	0
Akar_Warna_Value	6	4	6	4	6	5	5	6	5	7	7	7	6	7	6
Akar_Warna_Chroma	8	6	8	4	6	6	8	8	8	6	6	8	8	8	8
propagul_Berat	11.3	7.99	0	64.95	31.21	18.98	35.93	26.25	8.78	0	0	66.05	0	0	0
propagul_Panjang_buah	5.46	4.42	0	4.97	5.6	5.52	5.52	5.3	4.1	0	0	5.28	0	0	0
Propogul_Warna_Hue_buah_5Y	1	1	0	1	1	1	1	1	1	0	0	1	0	0	0

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>
Propgul_Warna_Value_buah	6	4	0	4	5	0	6	4	4	0	0	6	0	0	0
Propgul_Warna_Chroma_buah	8	4	0	4	6	4	8	4	4	0	0	8	0	0	0
propagul_Panjang hipokotil	0	0	0	32.4	15.32	3.31	17	16.13	0	0	0	36.34	0	0	0
Propogul_Warna_Hue_hipokotil 5Y	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0
Propogul_Warna_Hue_hipokotil 10YR	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Propogul_Warna_value_hipokotil	0	0	0	3	4	4	4	4	0	0	0	4	0	0	0
Propogul_Warna_chroma hipokotil	0	0	0	2	4	4	6	5	0	0	0	4	0	0	0
Bunga_Warna_Hue_bunga_5Y	1	0	1	0	0	1	1	0	1	0	1	1	1	1	1
Bunga_Warna_value_bunga	7	0	7	0	0	6	6	0	7	0	7	7	7	7	7
Bunga_Warna_value_chroma	8	0	8	0	0	8	8	0	8	0	8	8	8	8	8
Daun_Berat_awal	3.74	4.74	2.34	6.08	3.02	5.93	5.03	3.99	2.74	4.87	3.59	2.41	2.63	2.38	2.82
Daun_Berat_akhir	2.29	2.76	1.74	3.43	2.05	3.05	2.58	2.32	1.78	2.83	1.83	1.65	1.73	1.65	1.83
Daun_KA	63.38	71.50	34.23	77.51	47.31	94.61	95.28	72.24	53.57	71.95	95.83	46.00	51.92	44.04	54.22
Daun_panjang	13.4	15	12	15.9	14.5	17.5	14.5	15.1	13.5	15	13	9	10.6	11.4	11.9
Daun_lebar	7	8.3	5.4	8.3	5.8	9.2	8.5	6.6	5.5	7.7	6.5	5.8	5.1	5.3	5.4
Daun_tebal	0.39	0.39	0.43	0.48	0.4	0.43	0.39	0.38	0.42	0.47	0.4	0.43	0.43	0.4	0.43
Daun_Hue_WPAD_5Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Daun_value_WPAD	4	3	3	3	3	4	4	4	4	4	5	5	4	5	4
Daun_chroma_WPAD	2	2	2	2	2	4	4	4	4	2	4	2	2	6	2
Daun_Hue_WPBD_5Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Daun_value_WPBD	5	4	4	4	4	7	7	7	7	7	6	6	5	5	6
Daun_chroma_WPBD	4	2	2	2	2	8	8	8	8	6	8	8	6	6	6
ProyeksiTajuk_Timur	1.33	0.5	1.05	1.98	1.98	4.02	1.11	0.97	1	2.03	1.98	2.91	2	3.13	3.45
ProyeksiTajuk_Selatan	1.89	2.75	0.7	3.12	2.97	2.58	1	1.8	1.03	2.56	2.01	2.45	1.89	2.56	4.23

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>
ProyeksiTajuk_Barat	1.36	3.21	0.95	3.1	1.69	1.11	3.03	0.5	3.17	0.91	2	1.68	2	2.65	3.56
ProyeksiTajuk_Utara	1.29	1.47	1.01	2.11	1.71	1.5	1	0.5	0.96	2	1.95	2.85	2.11	2.98	3.81
TTot_Pohon	5.52	6.69	7.04	7.2	7.53	7.95	4.76	5.81	7.77	4.52	4.87	4.9	7.23	7.02	5.1
Tbc_Pohon	1	2.6	1.3	1.8	2.3	3.6	1.3	1	1.3	1	1.1	1.4	0.7	0.97	1.3
Proporsi_tbc_ttot	18.12	38.86	18.47	25	30.54	45.28	27.31	17.21	16.73	22.12	22.59	28.57	9.68	13.82	25.49
Diameter_Pohon	0.12	0.13	0.14	0.15	0.14	0.11	0.08	0.09	0.13	0.11	0.09	0.10	0.12	0.13	0.12
Volume_Pohon	0.04	0.07	0.08	0.08	0.08	0.06	0.02	0.03	0.08	0.03	0.02	0.02	0.06	0.06	0.04

<b>Karakter</b>	<b>MJ6</b>	<b>MJ7</b>	<b>MJ8</b>	<b>MJ9</b>	<b>MJ10</b>	<b>MM1</b>	<b>MM2</b>	<b>MM3</b>	<b>MM4</b>	<b>MM5</b>	<b>MM6</b>	<b>MM7</b>	<b>MM8</b>	<b>MM9</b>	<b>MM10</b>
Kulit_BJ	0.28	0.28	0.31	0.03	0.73	0.72	0.31	0.39	0.49	0.40	0.47	0.44	0.49	0.26	0.17
Kulit_KA	85.54	40.78	51.40	10.81	52.29	26.48	30.91	31.95	37.63	40.63	80.29	26.06	31.51	60.44	39.22
Kulit_Warna_Hue_2.5Y	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0
Kulit_Warna_Hue_7.5YR	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1
Kulit_Warna_Value	5	5	5	5	5	4	4	5	5	5	4	4	8	3	2
Kulit_Warna_Chroma	4	4	2	2	2	2	0	4	4	4	2	0	2	0	0
Batang_BJ	0.74	0.59	0.46	0.34	0.25	0.52	0.67	0.62	0.46	0.54	0.60	0.59	0.47	0.47	0.37
Batang_KA	93.23	32.66	69.44	68.73	95.58	86.65	65.25	55.65	26.09	33.20	64.45	67.29	65.15	72.24	81.63
Batang_Warna_Hue_10R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Batang_Warna_Hue_2.5YR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Batang_Warna_Value	4	4	5	3	3	3	3	4	4	3	4	4	4	4	4
Batang_Warna_Chrome	8	6	8	4	6	6	6	8	6	4	6	6	6	6	4
Akar_BJ	0.61	0.51	0.28	0.38	0.52	0.29	0.31	0.44	0.36	0.32	0.23	0.43	0.29	0.19	0.29
Akar_KA	89.07	98.84	76.98	67.90	96.48	76.51	39.16	41.51	41.99	58.06	79.55	35.88	68.97	75.00	67.43

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>
Akar_panjang	362	170	147	131	110	102	104	113	87	145	82	105	141	102	124
Akar_Warna_Hue_7.5Y R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Akar_Warna_Hue_5Y R	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Akar_Warna_Hue_10YR	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Akar_Warna_Value	6	7	6	7	7	2.5	7	7	2.5	3	3	6	7	2.5	7
Akar_Warna_Chroma	8	8	8	8	8	1	6	1	1	2	2	2	2	2	3
propagul_Berat	0	10.9	0	67.67	0	95.81	0	0	0	0	0	0	0	0	0
propagul_Panjang_buah	0	4.43	0	4.51	0	5.32	0	0	0	0	0	0	0	0	0
Propogul_Warna_Hue_buah_5Y	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0
Propgul_Warna_Value_buah	0	4	0	6	0	6	0	0	0	0	0	0	0	0	0
Propgul_Warna_Chroma_buah	0	4	0	8	0	8	0	0	0	0	0	0	0	0	0
propagul_Panjang hipokotil	0	0	0	38.5	0	61	0	0	0	0	0	0	0	0	0
Propogul_Warna_Hue hipokotil_5Y	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Propogul Warna Hue hipokotil 10YR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propogul_Warna_value_hipokotil	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
Propogul_Warna chroma_hipokotil	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
Bunga_Warna_Hue_bunga_5Y	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Bunga_Warna_value_bunga	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0
Bunga_Warna_value_chroma	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0
Daun_Berat_awal	3.01	1.88	2.11	3.2	2.03	0	0	0	0	0	0	0	0	0	0
Daun_Berat_akhir	1.67	1.40	1.54	1.97	1.39	2.40	2.01	2.52	1.88	2.02	1.74	2.69	2.15	2.88	2.19
Daun_KA	80.40	34.08	36.92	62.54	45.57	47.64	39.97	93.40	37.10	55.10	32.51	70.39	72.22	82.69	68.37
Daun_panjang	13.5	10	10.5	10.9	9.4	14.3	12.5	15.3	11	12.5	10.6	13.5	12	13.5	11
Daun_lebar	5.8	5.1	4.6	6.2	4.5	6	5	6.7	5.2	5.5	3.3	6.4	5.1	6.2	5

<b>Karakter</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>	<b>P7</b>	<b>P8</b>	<b>P9</b>	<b>P10</b>	<b>MJ1</b>	<b>MJ2</b>	<b>MJ3</b>	<b>MJ4</b>	<b>MJ5</b>
Daun_tebal	0.34	0.32	0.39	0.49	0.44	0.42	0.45	0.52	0.43	0.45	0.48	0.49	0.5	0.51	0.49
Daun_Hue_WPAD_5Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Daun_value_WPAD	4	5	5	5	5	3	4	5	5	3	4	3	3	4	4
Daun_chroma_WPAD	4	4	2	4	6	2	4	3	4	1	3	1	2	2	2
Daun_Hue_WPBD_5Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Daun_value_WPBD	6	6	6	6	6	4	6	6	6	4	6	4	5	6	6
Daun_chroma_WPBD	8	8	6	6	8	4	6	4	6	3	6	4	4	4	6
ProyeksiTajuk_Timur	4.17	2.09	3.5	3.89	1.97	2	2	1	2	3	0	3.1	0.8	2.6	2.8
ProyeksiTajuk_Selatan	4.45	3.88	3.21	3.86	1.92	0.5	3.8	3	4	1	0.6	3.2	0.5	2	3
ProyeksiTajuk_Barat	3.07	3.01	3.44	0.91	2	1	1.7	2.5	1.3	0.5	3.5	3.2	3.3	1	3.2
ProyeksiTajuk_Utara	3.91	4.61	3.42	2.87	2.04	4.02	3	2	1	1	2	3.1	2	1	2
TTot_Pohon	6.08	6.83	4.26	7.58	4.92	7.2	7.8	6.5	4.5	4	4	3.8	3.5	4.2	6.8
Tbc_Pohon	1.4	1.7	1.7	1	1	3.5	2.7	3	2.1	2.7	1.1	1.7	1.3	2.3	1.8
Proporsi_tbc_ttot	23.03	24.89	39.91	13.19	20.33	48.61	34.62	46.15	46.67	67.5	27.5	44.74	37.14	54.76	26.47
Diameter_Pohon	0.11	0.10	0.10	0.09	0.11	0.25	0.18	0.20	0.29	0.22	0.18	0.19	0.18	0.15	0.14
Volume_Pohon	0.04	0.04	0.02	0.03	0.04	0.26	0.13	0.14	0.21	0.11	0.07	0.08	0.06	0.05	0.07

**Lampiran 16. Data Rata-rata Provenansi untuk Analisis Heatmap**

<b>Karakter</b>	<b>P</b>	<b>MJ</b>	<b>MM</b>
Kulit_BJ	0.36	0.33	0.41
Kulit_KA	50.08	50.85	40.51
Kulit_Warna_Hue_2.5Y	1.00	1.00	0.50
Kulit_Warna_Hue_7.5YR	0.00	0.00	0.50
Kulit_Warna_Value	6.60	5.00	4.40
Kulit_Warna_Chroma	2.00	2.60	1.80
Batang_BJ	0.51	0.44	0.53
Batang_KA	78.46	71.26	61.76
Batang_Warna_Hue_10R	1.00	0.00	0.00
Batang_Warna_Hue_2.5YR	0.00	1.00	1.00
Batang_Warna_Value	3.45	3.90	3.70
Batang_Warna_Chrome	5.00	6.20	5.80
Akar_BJ	0.49	0.52	0.32
Akar_KA	79.75	86.06	58.41
Akar_panjang	90.90	203.20	110.50
Akar_Warna_Hue_7.5Y R	0.60	0.20	0.00
Akar_Warna_Hue_5Y R	0.10	0.00	1.00
Akar_Warna_Hue_10YR	0.30	0.80	0.00
Akar_Warna_Value	5.40	6.60	4.75
Akar_Warna_Chroma	6.80	7.80	2.20
propagul_Berat	20.54	14.46	9.58
propagul_Panjang_buah	4.09	1.42	0.53
Propogul_Warna_Hue_buah_5Y	0.80	0.30	0.10
Propogul_Warna_Value_buah	3.30	1.60	0.60
Propogul_Warna_Chroma_buah	4.20	2.00	0.80
propagul_Panjang hipokotil	8.42	7.48	6.10
Propogul_Warna_Hue_hipokotil_5Y	0.40	0.20	0.10
Propogul_Warna_Hue_hipokotil_10YR	0.10	0.00	0.00
Propogul_Warna_value_hipokotil	1.90	0.80	0.40
Propogul_Warna_chroma_hipokotil	2.10	0.80	0.40
Bunga_Warna_Hue_bunga_5Y	0.50	0.70	0.00
Bunga_Warna_value_bunga	3.30	4.90	0.00
Bunga_Warna_value_chroma	4.00	5.60	0.00
Daun_Berat_awal	4.25	2.61	0.00
Daun_Berat_akhir	2.48	1.67	2.25
Daun_KA	68.16	55.15	59.94
Daun_panjang	14.64	11.02	12.62
Daun_lebar	7.23	5.43	5.44
Daun_tebal	0.42	0.41	0.47
Daun_Hue_WPAD_5Y	1.00	1.00	1.00



<b>Karakter</b>	<b>P</b>	<b>MJ</b>	<b>MM</b>
Daun_value_WPAD	3.60	4.70	3.80
Daun_chroma_WPAD	2.80	3.60	2.40
Daun_Hue_WPBD_5Y	1.00	1.00	1.00
Daun_value_WPBD	5.60	5.80	5.30
Daun_chroma_WPBD	5.00	7.00	4.70
ProyeksiTajuk_Timur	1.60	2.91	1.93
ProyeksiTajuk_Selatan	2.04	3.05	2.16
ProyeksiTajuk_Barat	1.90	2.43	2.12
ProyeksiTajuk_Utara	1.36	3.06	2.11
TTot_Pohon	6.48	5.88	5.23
Tbc_Pohon	1.72	1.23	2.22
Proporsi_tbc_ttot	25.96	22.15	43.42
Diameter_Pohon	0.12	0.11	0.20
Volume_Pohon	0.06	0.04	0.12

**Lampiran 17.** Jarak Genetik antara Provenansi Polewali Mandar dan Majene

x	y	xy	x <sup>2</sup>	y <sup>2</sup>
0.84	0.77	0.65	0.7	0.6
0.55	0.63	0.35	0.3	0.4
0.84	0.71	0.59	0.7	0.5
0.55	0.71	0.39	0.3	0.5
1.00	1.00	1.00	1.0	1.0
0.00	0.00	0.00	0.0	0.0
0.45	1.00	0.45	0.2	1.0
0.89	0.00	0.00	0.8	0.0
1.00	0.84	0.84	1.0	0.7
0.00	0.55	0.00	0.0	0.3
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
0.63	0.63	0.40	0.4	0.4
0.77	0.77	0.60	0.6	0.6
1.00	0.00	0.00	1.0	0.0
0.00	1.00	0.00	0.0	1.0
0.71	0.45	0.32	0.5	0.2
0.71	0.89	0.63	0.5	0.8
0.63	0.89	0.57	0.4	0.8
0.77	0.45	0.35	0.6	0.2
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.55	0.55	0.30	0.3	0.3
0.84	0.84	0.70	0.7	0.7
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.77	0.45	0.35	0.6	0.2
0.55	0.00	0.00	0.3	0.0
0.32	0.89	0.28	0.1	0.8
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
0.71	0.32	0.22	0.5	0.1
0.71	0.95	0.67	0.5	0.9
0.63	0.32	0.20	0.4	0.1
0.63	0.45	0.28	0.4	0.2
0.55	0.45	0.24	0.3	0.2
0.71	0.32	0.22	0.5	0.1
0.89	0.55	0.49	0.8	0.3
0.71	0.32	0.22	0.5	0.1
0.55	0.45	0.24	0.3	0.2

x	y	xy	x <sup>2</sup>	y <sup>2</sup>
0.71	0.32	0.22	0.5	0.1
0.55	0.45	0.24	0.3	0.2
0.45	0.32	0.14	0.2	0.1
0.55	0.32	0.17	0.3	0.1
0.63	0.45	0.28	0.4	0.2
0.32	0.00	0.00	0.1	0.0
0.32	0.45	0.14	0.1	0.2
0.63	0.00	0.00	0.4	0.0
0.55	0.45	0.24	0.3	0.2
0.45	0.00	0.00	0.2	0.0
0.71	0.84	0.59	0.5	0.7
0.45	0.84	0.37	0.2	0.7
0.55	0.00	0.00	0.3	0.0
0.71	0.84	0.59	0.5	0.7
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.63	0.84	0.53	0.4	0.7
0.77	0.55	0.42	0.6	0.3
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
1.00	1.00	1.00	1.0	1.0
0.63	0.55	0.35	0.4	0.3
0.77	0.84	0.65	0.6	0.7
0.77	0.63	0.49	0.6	0.4
0.63	0.77	0.49	0.4	0.6
1.00	1.00	1.00	1.0	1.0
0.71	0.45	0.32	0.5	0.2
0.71	0.89	0.63	0.5	0.8
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.77	0.63	0.49	0.6	0.4
0.63	0.77	0.49	0.4	0.6
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5

<b>x</b>	<b>y</b>	<b>xy</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>
0.71	0.71	0.50	0.5	0.5
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.63	0.71	0.45	0.4	0.5
0.77	0.71	0.55	0.6	0.5
0.77	0.71	0.55	0.6	0.5
0.63	0.71	0.45	0.4	0.5
0.77	0.63	0.49	0.6	0.4
0.63	0.77	0.49	0.4	0.6
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
		<b>39.35</b>	<b>44.5</b>	<b>41.4</b>

*Keterangan:*

x : frekuensi karakter morfologi pada populasi Polewali Mandar

y : frekuensi karakter morfologi pada

**Lampiran 18.** Jarak Genetik antara Provenansi Polewali Mandar dan Mamuju

x	y	xy	x <sup>2</sup>	y <sup>2</sup>
0.84	0.71	0.59	0.7	0.5
0.55	0.71	0.39	0.3	0.5
0.84	0.84	0.70	0.7	0.7
0.55	0.55	0.30	0.3	0.3
1.00	0.71	0.71	1	0.5
0.00	0.71	0.00	0	0.5
0.45	0.77	0.35	0.2	0.6
0.89	0.63	0.57	0.8	0.4
1.00	0.63	0.63	1	0.4
0.00	0.77	0.00	0	0.6
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.63	0.63	0.40	0.4	0.4
0.77	0.77	0.60	0.6	0.6
1.00	0.00	0.00	1	0
0.00	1.00	0.00	0	1
0.71	0.55	0.39	0.5	0.3
0.71	0.84	0.59	0.5	0.7
0.63	0.45	0.28	0.4	0.2
0.77	0.89	0.69	0.6	0.8
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.55	0.71	0.39	0.3	0.5
0.84	0.71	0.59	0.7	0.5
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.77	0.00	0.00	0.6	0
0.55	1.00	0.55	0.3	1
0.32	0.00	0.00	0.1	0
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.89	0.63	0.5	0.8
0.71	0.45	0.32	0.5	0.2
0.63	0.32	0.20	0.4	0.1
0.63	0.00	0.00	0.4	0
0.55	0.32	0.17	0.3	0.1
0.71	0.00	0.00	0.5	0
0.89	0.32	0.28	0.8	0.1
0.71	0.32	0.22	0.5	0.1
0.55	0.00	0.00	0.3	0

x	y	xy	x <sup>2</sup>	y <sup>2</sup>
0.71	0.32	0.22	0.5	0.1
0.55	0.00	0.00	0.3	0
0.45	0.32	0.14	0.2	0.1
0.55	0.00	0.00	0.3	0
0.63	0.32	0.20	0.4	0.1
0.32	0.00	0.00	0.1	0
0.32	0.32	0.10	0.1	0.1
0.63	0.00	0.00	0.4	0
0.55	0.32	0.17	0.3	0.1
0.45	0.00	0.00	0.2	0
0.71	0.00	0.00	0.5	0
0.45	0.00	0.00	0.2	0
0.55	0.00	0.00	0.3	0
0.71	0.00	0.00	0.5	0
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.63	0.71	0.45	0.4	0.5
0.77	0.71	0.55	0.6	0.5
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
1.00	1.00	1.00	1	1
0.63	0.63	0.40	0.4	0.4
0.77	0.77	0.60	0.6	0.6
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
1.00	1.00	1.00	1	1
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.77	0.55	0.42	0.6	0.3
0.63	0.84	0.53	0.4	0.7
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5

<b>x</b>	<b>y</b>	<b>xy</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>
0.71	0.71	0.50	0.5	0.5
0.71	0.84	0.59	0.5	0.7
0.71	0.55	0.39	0.5	0.3
0.63	0.77	0.49	0.4	0.6
0.77	0.63	0.49	0.6	0.4
0.77	0.71	0.55	0.6	0.5
0.63	0.71	0.45	0.4	0.5
0.77	0.63	0.49	0.6	0.4
0.63	0.77	0.49	0.4	0.6
0.71	0.84	0.59	0.5	0.7
0.71	0.55	0.39	0.5	0.3
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
		<b>36.20</b>	<b>44.5</b>	<b>37.9</b>

*Keterangan:*

x : frekuensi karakter morfologi pada populasi Polewali Mandar

y : frekuensi karakter morfologi pada populasi Mamuju

**Lampiran 19. Jarak Genetik antara Provenansi Majene dan Mamuju**

x	y	xy	x <sup>2</sup>	y <sup>2</sup>
0.77	0.71	0.55	0.6	0.5
0.63	0.71	0.45	0.4	0.5
0.71	0.84	0.59	0.5	0.7
0.71	0.55	0.39	0.5	0.3
1.00	0.71	0.71	1	0.5
0.00	0.71	0.00	0	0.5
1.00	0.77	0.77	1	0.6
0.00	0.63	0.00	0	0.4
0.84	0.63	0.53	0.7	0.4
0.55	0.77	0.42	0.3	0.6
0.63	0.71	0.45	0.4	0.5
0.77	0.71	0.55	0.6	0.5
0.63	0.63	0.40	0.4	0.4
0.77	0.77	0.60	0.6	0.6
0.00	0.00	0.00	0	0
1.00	1.00	1.00	1	1
0.45	0.55	0.24	0.2	0.3
0.89	0.84	0.75	0.8	0.7
0.89	0.45	0.40	0.8	0.2
0.45	0.89	0.40	0.2	0.8
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
0.55	0.71	0.39	0.3	0.5
0.84	0.71	0.59	0.7	0.5
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
0.45	0.00	0.00	0.2	0
0.00	1.00	0.00	0	1
0.89	0.00	0.00	0.8	0
0.63	0.71	0.45	0.4	0.5
0.77	0.71	0.55	0.6	0.5
0.32	0.89	0.28	0.1	0.8
0.95	0.45	0.42	0.9	0.2
0.32	0.32	0.10	0.1	0.1
0.45	0.00	0.00	0.2	0
0.45	0.32	0.14	0.2	0.1
0.32	0.00	0.00	0.1	0
0.55	0.32	0.17	0.3	0.1
0.32	0.32	0.10	0.1	0.1
0.45	0.00	0.00	0.2	0



<b>x</b>	<b>y</b>	<b>xy</b>	<b>x^2</b>	<b>y^2</b>
0.32	0.32	0.10	0.1	0.1
0.45	0.00	0.00	0.2	0
0.32	0.32	0.10	0.1	0.1
0.32	0.00	0.00	0.1	0
0.45	0.32	0.14	0.2	0.1
0.00	0.00	0.00	0	0
0.45	0.32	0.14	0.2	0.1
0.00	0.00	0.00	0	0
0.45	0.32	0.14	0.2	0.1
0.00	0.00	0.00	0	0
0.84	0.00	0.00	0.7	0
0.84	0.00	0.00	0.7	0
0.00	0.00	0.00	0	0
0.84	0.00	0.00	0.7	0
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
0.84	0.71	0.59	0.7	0.5
0.55	0.71	0.39	0.3	0.5
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
0.77	0.71	0.55	0.6	0.5
0.63	0.71	0.45	0.4	0.5
0.71	0.63	0.45	0.5	0.4
0.71	0.77	0.55	0.5	0.6
1.00	1.00	1.00	1	1
0.55	0.63	0.35	0.3	0.4
0.84	0.77	0.65	0.7	0.6
0.63	0.77	0.49	0.4	0.6
0.77	0.63	0.49	0.6	0.4
1.00	1.00	1.00	1	1
0.45	0.63	0.28	0.2	0.4
0.89	0.77	0.69	0.8	0.6
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.63	0.55	0.35	0.4	0.3
0.77	0.84	0.65	0.6	0.7
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5

<b>x</b>	<b>y</b>	<b>xy</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>
0.71	0.71	0.50	0.5	0.5
0.77	0.84	0.65	0.6	0.7
0.63	0.55	0.35	0.4	0.3
0.71	0.77	0.55	0.5	0.6
0.71	0.63	0.45	0.5	0.4
0.71	0.71	0.50	0.5	0.5
0.71	0.71	0.50	0.5	0.5
0.63	0.63	0.40	0.4	0.4
0.77	0.77	0.60	0.6	0.6
0.71	0.84	0.59	0.5	0.7
0.71	0.55	0.39	0.5	0.3
0.77	0.77	0.60	0.6	0.6
0.63	0.63	0.40	0.4	0.4
		<b>35.89</b>	<b>41.4</b>	<b>37.9</b>

*Keterangan:*

x : frekuensi karakter morfologi pada populasi Majene

y : frekuensi karakter morfologi pada populasi Mamuju

## Lampiran 20. Pengamatan di Laboratorium



Pengamatan Warna Daun



Pengamatan Warna Kulit



Pengamatan Warna Batang



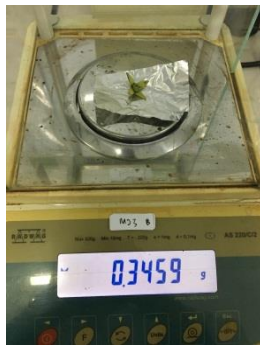
Pengamatan Berat Batang



Pengamatan Berat Kulit



Pengukuran Berat Akar



Pengukuran Berat Bunga



Pengukuran Berat Daun



Pengukuran berat kering daun



Pengukuran berat kering akar



Pengukuran berat kering batang



Mengoven sampel



Pengukuran tebal daun



Mendesikator sampel



Mengukur volume akar



Mengukur volume batang



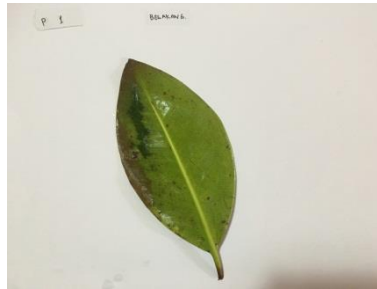
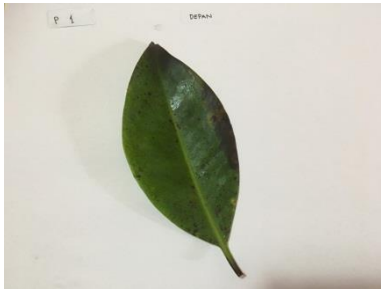
Mengukur volume kulit

Lampiran 21. Pegambilan sampel di Lapangan



## Lampiran 22. Sampel Daun Provenansi Polewali Mandar

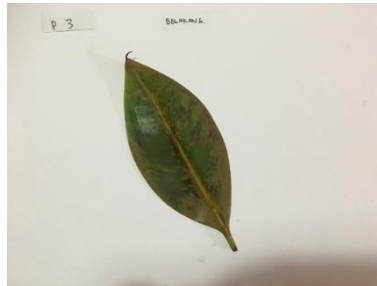
### 1. P1 (Depan-Belakang-Panjang)



### 2. P2 (Depan-Belakang-Panjang)



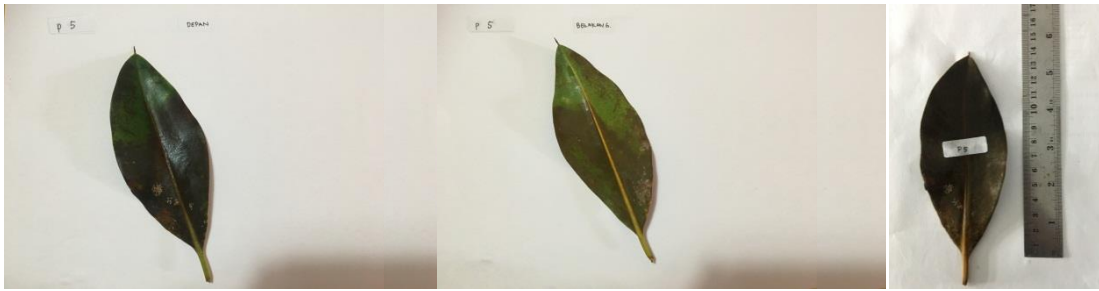
### 3. P3 (Depan-Belakang-Panjang)



### 4. P4 (Depan-Belakang-Panjang)



5. P5 (Depan-Belakang-Panjang)



6. P6 (Depan-Belakang-Panjang)



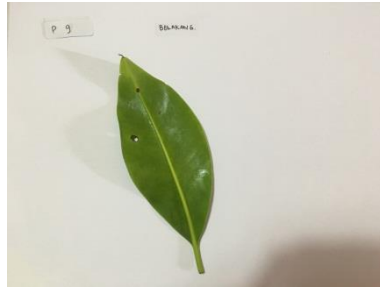
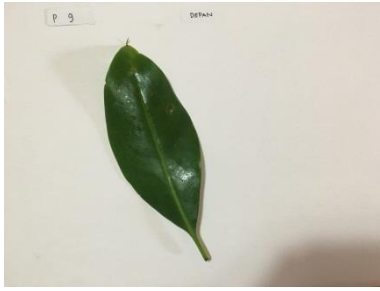
7. P7 (Depan-Belakang-Panjang)



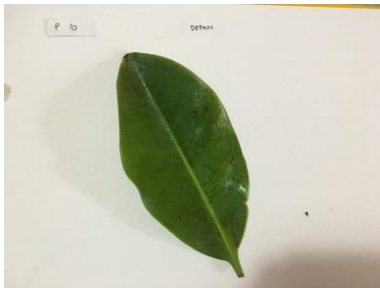
8. P8 (Depan-Belakang-Panjang)



9. P9 (Depan-Belakang-Panjang)



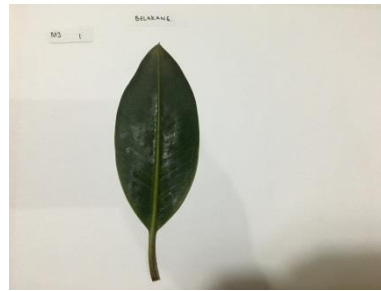
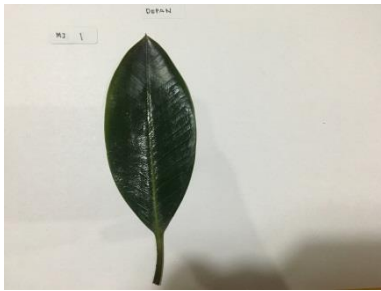
10. P10 (Depan-Belakang-Panjang)



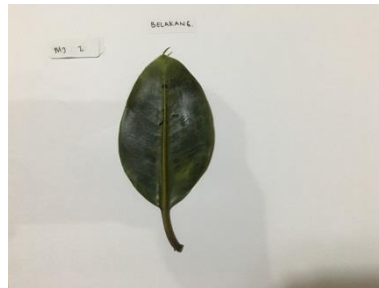
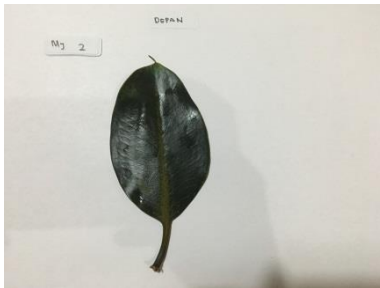


## Lampiran 23. Sampel Daun Provenansi Majene

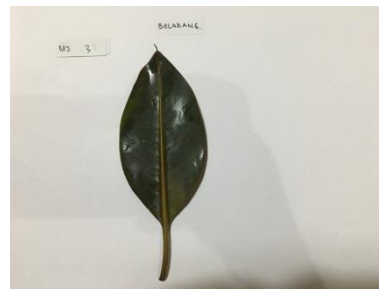
### 1. MJ1 (Depan-Belakang-Panjang)



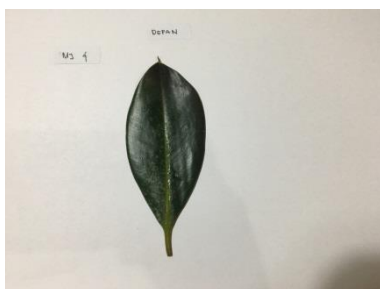
### 2. MJ2 (Depan-Belakang-Panjang)



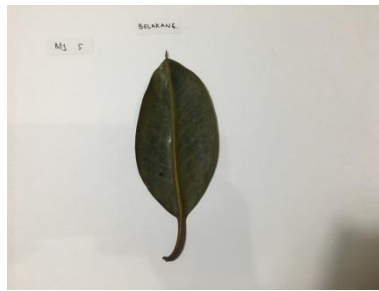
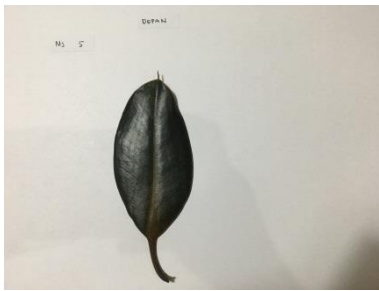
### 3. MJ3 (Depan-Belakang-Panjang)



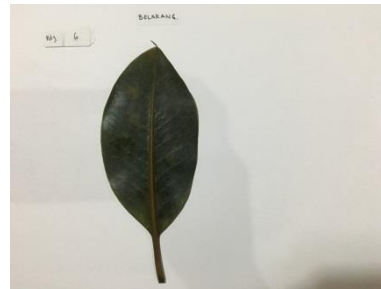
### 4. MJ4 (Depan-Belakang-Panjang)



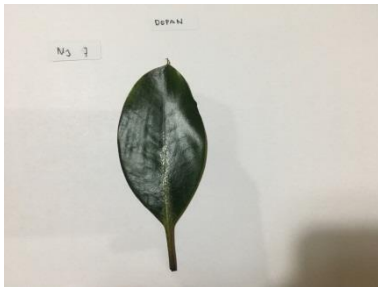
5. MJ5 (Depan-Belakang-Panjang)



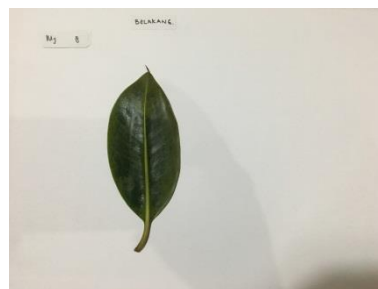
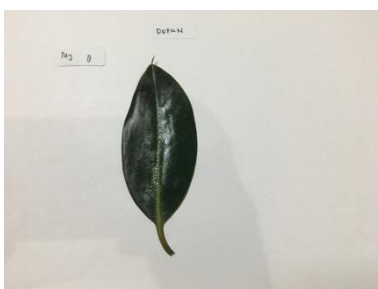
6. MJ6 (Depan-Belakang-Panjang)



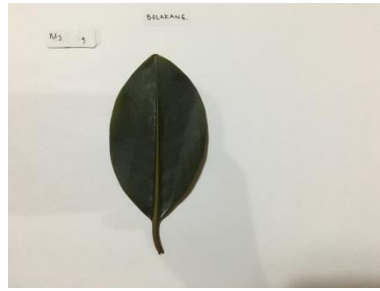
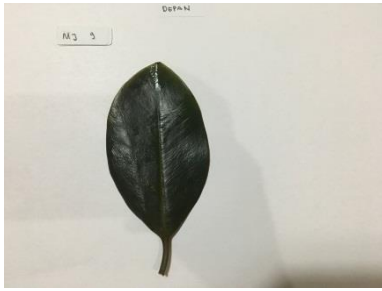
7. MJ7 (Depan-Belakang-Panjang)



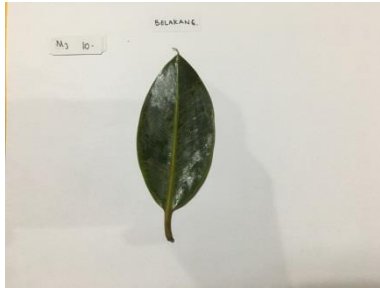
8. MJ8 (Depan-Belakang-Panjang)



9. MJ9 (Depan-Belakang-Panjang)



10. MJ10 (Depan-Belakang-Panjang)



**Lampiran 24. Sampel Daun Provenansi Mamuju**

**1. MM1 (Depan-Belakang-Panjang)**



**2. MM2 (Depan-Belakang-Panjang)**



**3. MM3 (Depan-Belakang-Panjang)**



**4. MM4 (Depan-Belakang-Panjang)**



**5. MM5 (Depan-Belakang-Panjang)**



6. MM6 (Depan-Belakang-Panjang)



7. MM7 (Depan-Belakang-Panjang)



8. MM8 (Depan-Belakang-Panjang)



9. MM9 (Depan-Belakang-Panjang)



10. MM10 (Depan-Belakang-Panjang)



**Lampiran 25. Sampel Akar dan Batang Provenansi Polewali Mandar**



P1



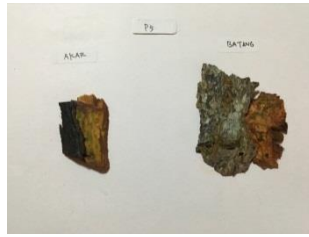
P2



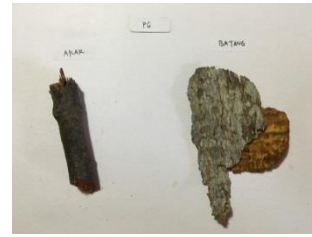
P3



P4



P5



P6



P7



P8



P9

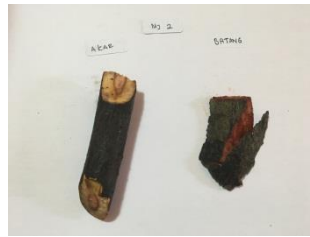


P10

**Lampiran 26. Sampel Akar dan Batang Provenansi Majene**



**MJ1**



**MJ2**



**MJ3**



**MJ4**



**MJ5**



**MJ6**



**MJ7**



**MJ8**

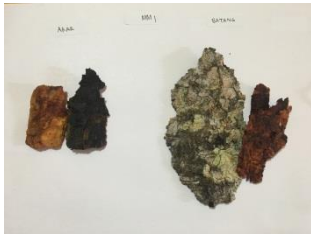


**MJ9**



**MJ10**

**Lampiran 27. Sampel Akar dan Batang Provenansi Mamuju**



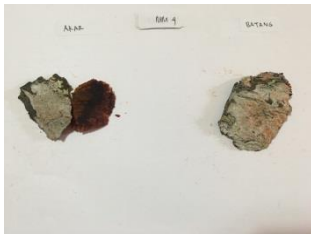
MM1



MM2



MM3



MM4



MM5



MM6



MM10



**Lampiran 28. Batang Pohon Polewali Mandar**



P1



P2



P3



P4



P5



P6



P7



P8



P9



P10

**Lampiran 29. Batang Pohon Majene**



MJ1



MJ2



MJ3



MJ4



MJ5



MJ6



MJ7



MJ8



MJ9



MJ10

**Lampiran 30. Batang Pohon Mamuju**



MM1



MM2



MM3



MM4



MM5



MM6



MM7



MM8



MM9



MM10