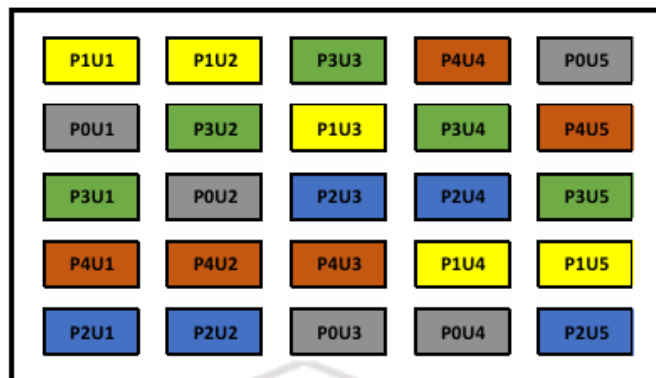


LAMPIRAN

Lampiran 1. Deskripsi Murbei (*Morus Alba* L)

Nama Ilmiah	: <i>Morus alba</i> L.
Nama Umum	: Murbei
Famili	: Moraceae
Asal Tanaman	: Tiongkok
Bentuk tanaman	: Semak (perdu), tinggi 5–6 m
Batang	: Berkayu; muda berwarna hijau, dewasa kecokelatan
Daun	: Bergerigi, ujung meruncing; panjang 5–15 cm
Buah	: Buah majemuk (multiple fruit)
Bunga	: Kecil, tersusun majemuk di ketiak daun, (unisexual)
Syarat tumbuh (iklim)	: Suhu 23–26°C dan kelembapan 65–80%
Syarat tumbuh (tanah)	: pH 6,2–6,8 dengan drainase yang baik
Keterangan	: Dapat tumbuh di 3300 mdpl
Sumber bahan tanam	: Pekarangan penduduk setempat

Lampiran 2. Tata letak denah penelitian



Denah Perlakuan. U = Ulangan, P = Perlakuan

Keterangan:

- P0. Stek tanaman murbei yang diberi perlakuan kontrol.
- P1. Stek Tanaman murbei yang diberi perlakuan kontrol positif Rootone-F 300 mg/l.
- P2. Stek tanaman murbei yang diberi perlakuan bawang merah 6% (60 ml/l).
- P3. Stek tanaman murbei yang diberi perlakuan bawang merah 8% (80 ml/l).
- P4. Stek tanaman murbei yang diberi perlakuan bawang merah 10% (100 ml/l).

Lampiran 3. Data suhu rata-rata penelitian

No	Periode	Rata-rata suhu maksimum (°C)	Rata-rata suhu minimum (°C)	Rata-rata suhu (°C)
1	9–15 April 2026	33,14	24,43	28,79
2	16–22 April 2026	32,57	24,86	28,71
3	23–29 April 2026	32,86	25,14	29,00
4	30 April–6 Mei 2026	32,43	24,57	28,50
5	7–13 Mei 2026	33,00	25,14	29,07
6	14–20 Mei 2026	32,57	24,86	28,71
7	21–27 Mei 2026	33,14	24,14	28,64
8	28 Mei–4 Juni 2026	33,25	24,38	28,81

Sumber : AccuWeather (2026), data suhu lokasi Jelekong, Kabupaten Bandung, Jawa Barat, periode 9 April–4 Juni 2026.



Lampiran 4. Hasil pengolahan data waktu muncul tunas stek murbei dengan menggunakan software SPSS 25

- Descriptives

Descriptives

waktu muncul tunas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
P0	5	11,40	1,342	,600	9,73	13,07	10	13
P1	5	11,40	1,517	,678	9,52	13,28	9	13
P2	5	10,00	1,225	,548	8,48	11,52	9	12
P3	5	9,60	1,140	,510	8,18	11,02	8	11
P4	5	11,40	1,517	,678	9,52	13,28	9	13
Total	25	10,76	1,480	,296	10,15	11,37	8	13

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
waktu muncul tunas	P0	,273	5	,200 [*]	,852	5	,201
	P1	,254	5	,200 [*]	,914	5	,492
	P2	,300	5	,161	,833	5	,146
	P3	,237	5	,200 [*]	,961	5	,814
	P4	,254	5	,200 [*]	,914	5	,492

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: waktu muncul tunas

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	29,520 ^a	8	3,690	2,562	,052
Intercept	2894,440	1	2894,440	2010,028	,000
perlakuan	15,760	4	3,940	2,736	,066
kelompok	13,760	4	3,440	2,389	,094
Error	23,040	16	1,440		
Total	2947,000	25			
Corrected Total	52,560	24			

a. R Squared = ,562 (Adjusted R Squared = ,342)

Lampiran 5. Hasil pengolahan data jumlah tunas stek murbei 2 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah tunasM2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	2,20	,837	,374	1,16	3,24	1	3
P1	5	1,80	,837	,374	,76	2,84	1	3
P2	5	2,00	,707	,316	1,12	2,88	1	3
P3	5	2,80	1,643	,735	,76	4,84	1	5
P4	5	1,80	,837	,374	,76	2,84	1	3
Total	25	2,12	1,013	,203	1,70	2,54	1	5

- Uji normalitas

Tests of Normality

perlakuan		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
jumlah tunasM2	P0	,231	5	,200 [*]	,881	5	,314
	P1	,231	5	,200 [*]	,881	5	,314
	P2	,300	5	,161	,883	5	,325
	P3	,287	5	,200 [*]	,914	5	,490
	P4	,231	5	,200 [*]	,881	5	,314

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah tunasM2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8,080 ^a	8	1,010	,976	,488
Intercept	112,360	1	112,360	108,560	,000
perlakuan	3,440	4	,860	,831	,525
kelompok	4,640	4	1,160	1,121	,381
Error	16,560	16	1,035		
Total	137,000	25			
Corrected Total	24,640	24			

a. R Squared = ,328 (Adjusted R Squared = -,008)

Lampiran 6. Hasil pengolahan data jumlah tunas stek murbei 4 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah tunasM4

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
P0	5	2,20	,837	,374	1,16	3,24	1	3
P1	5	2,00	,707	,316	1,12	2,88	1	3
P2	5	2,00	,707	,316	1,12	2,88	1	3
P3	5	2,80	1,643	,735	,76	4,84	1	5
P4	5	2,20	,837	,374	1,16	3,24	1	3
Total	25	2,24	,970	,194	1,84	2,64	1	5

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
jumlah tunasM4	P0	,231	5	,200 [*]	,881	5	,314
	P1	,300	5	,161	,883	5	,325
	P2	,300	5	,161	,883	5	,325
	P3	,287	5	,200 [*]	,914	5	,490
	P4	,231	5	,200 [*]	,881	5	,314

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah tunasM4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5,120 ^a	8	,640	,587	,775
Intercept	125,440	1	125,440	115,083	,000
perlakuan	2,160	4	,540	,495	,739
kelompok	2,960	4	,740	,679	,617
Error	17,440	16	1,090		
Total	148,000	25			
Corrected Total	22,560	24			

a. R Squared = ,227 (Adjusted R Squared = -,160)

Lampiran 7. Hasil pengolahan data jumlah tunas stek murbei 6 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah tunasM6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	2,00	,707	,316	1,12	2,88	1	3
P1	5	1,80	,837	,374	,76	2,84	1	3
P2	5	1,80	,837	,374	,76	2,84	1	3
P3	5	2,60	1,817	,812	,34	4,86	1	5
P4	5	1,80	,837	,374	,76	2,84	1	3
Total	25	2,00	1,041	,208	1,57	2,43	1	5

- Uji normalitas

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
jumlah tunasM6	P0	,300	5	,161	,883	5	,325
	P1	,231	5	,200 [*]	,881	5	,314
	P2	,231	5	,200 [*]	,881	5	,314
	P3	,229	5	,200 [*]	,867	5	,254
	P4	,231	5	,200 [*]	,881	5	,314

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah tunasM6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6,800 ^a	8	,850	,708	,681
Intercept	100,000	1	100,000	83,333	,000
perlakuan	2,400	4	,600	,500	,736
kelompok	4,400	4	1,100	,917	,478
Error	19,200	16	1,200		
Total	126,000	25			
Corrected Total	26,000	24			

a. R Squared = ,262 (Adjusted R Squared = -,108)

Lampiran 8. Hasil pengolahan data jumlah tunas stek murbei 8 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah tunasM8

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	2,00	,707	,316	1,12	2,88	1	3
P1	5	1,80	,837	,374	,76	2,84	1	3
P2	5	2,00	1,000	,447	,76	3,24	1	3
P3	5	2,80	1,643	,735	,76	4,84	1	5
P4	5	2,00	,707	,316	1,12	2,88	1	3
Total	25	2,12	1,013	,203	1,70	2,54	1	5

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
jumlah tunasM8	P0	,300	5	,161	,883	5	,325
	P1	,231	5	,200 [*]	,881	5	,314
	P2	,241	5	,200 [*]	,821	5	,119
	P3	,287	5	,200 [*]	,914	5	,490
	P4	,300	5	,161	,883	5	,325

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah tunasM8

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8,880 ^a	8	1,110	1,127	,397
Intercept	112,360	1	112,360	114,071	,000
perlakuan	3,040	4	,760	,772	,559
kelompok	5,840	4	1,460	1,482	,254
Error	15,760	16	,985		
Total	137,000	25			
Corrected Total	24,640	24			

a. R Squared = ,360 (Adjusted R Squared = ,041)

Lampiran 9. Hasil pengolahan data jumlah daun stek murbei 2 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah daunM2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	3,00	1,000	,447	1,76	4,24	2	4
P1	5	3,00	1,225	,548	1,48	4,52	2	5
P2	5	4,20	1,924	,860	1,81	6,59	2	7
P3	5	4,60	1,517	,678	2,72	6,48	3	7
P4	5	3,20	1,304	,583	1,58	4,82	2	5
Total	25	3,60	1,472	,294	2,99	4,21	2	7

- Uji normalitas

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
jumlah daunM2	P0	,241	5	,200 [*]	,821	5	,119
	P1	,300	5	,161	,833	5	,146
	P2	,141	5	,200 [*]	,979	5	,928
	P3	,254	5	,200 [*]	,914	5	,492
	P4	,221	5	,200 [*]	,902	5	,421

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah daunM2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12,400 ^a	8	1,550	,626	,745
Intercept	324,000	1	324,000	130,909	,000
perlakuan	11,200	4	2,800	1,131	,377
kelompok	1,200	4	,300	,121	,973
Error	39,600	16	2,475		
Total	376,000	25			
Corrected Total	52,000	24			

Lampiran 10. Hasil pengolahan data jumlah daun stek murbei 4 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah daunM4

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	8,20	1,483	,663	6,36	10,04	6	10
P1	5	7,80	2,168	,970	5,11	10,49	6	11
P2	5	9,20	1,643	,735	7,16	11,24	7	11
P3	5	11,40	3,362	1,503	7,23	15,57	9	17
P4	5	9,20	2,280	1,020	6,37	12,03	7	12
Total	25	9,16	2,444	,489	8,15	10,17	6	17

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
jumlah daunM4	P0	,246	5	,200 [*]	,956	5	,777
	P1	,244	5	,200 [*]	,871	5	,272
	P2	,287	5	,200 [*]	,914	5	,490
	P3	,261	5	,200 [*]	,807	5	,093
	P4	,233	5	,200 [*]	,884	5	,329

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah daunM4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	44,720 ^a	8	5,590	,907	,535
Intercept	2097,640	1	2097,640	340,250	,000
perlakuan	38,960	4	9,740	1,580	,228
kelompok	5,760	4	1,440	,234	,915
Error	98,640	16	6,165		
Total	2241,000	25			
Corrected Total	143,360	24			

a. R Squared = ,312 (Adjusted R Squared = -,032)

Lampiran 11. Hasil pengolahan data jumlah daun stek murbei 6 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah daunM6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
P0	5	9,20	2,490	1,114	6,11	12,29	7	13
P1	5	8,60	3,578	1,600	4,16	13,04	5	14
P2	5	10,40	5,683	2,542	3,34	17,46	6	20
P3	5	15,60	6,950	3,108	6,97	24,23	10	25
P4	5	11,20	5,566	2,498	4,26	18,14	6	19
Total	25	11,00	5,307	1,061	8,81	13,19	5	25

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
jumlah daunM6	P0	,212	5	,200 [*]	,895	5	,384
	P1	,167	5	,200 [*]	,943	5	,685
	P2	,264	5	,200 [*]	,816	5	,110
	P3	,298	5	,169	,825	5	,127
	P4	,253	5	,200 [*]	,895	5	,385

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah daunM6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	332,800 ^a	8	41,600	1,939	,124
Intercept	3025,000	1	3025,000	141,026	,000
perlakuan	152,800	4	38,200	1,781	,182
kelompok	180,000	4	45,000	2,098	,129
Error	343,200	16	21,450		
Total	3701,000	25			
Corrected Total	676,000	24			

a. R Squared = ,492 (Adjusted R Squared = ,238)

Lampiran 12. Hasil pengolahan data jumlah daun stek murbei 8 MST dengan menggunakan software SPSS 25

- Descriptives

Descriptives

jumlah daunM8

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
P0	5	9,40	4,159	1,860	4,24	14,56	5	15
P1	5	10,00	5,701	2,550	2,92	17,08	5	19
P2	5	11,40	5,941	2,657	4,02	18,78	6	21
P3	5	21,60	8,142	3,641	11,49	31,71	12	29
P4	5	14,00	7,483	3,347	4,71	23,29	7	23
Total	25	13,28	7,430	1,486	10,21	16,35	5	29

- Uji normalitas

Tests of Normality

Kolmogorov-Smirnov^a Shapiro-Wilk

perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
jumlah daunM8 P0	,193	5	,200 [*]	,947	5	,715
P1	,237	5	,200 [*]	,889	5	,354
P2	,257	5	,200 [*]	,885	5	,331
P3	,225	5	,200 [*]	,839	5	,163
P4	,256	5	,200 [*]	,847	5	,184

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: jumlah daunM8

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	983,680 ^a	8	122,960	5,763	,001
Intercept	4408,960	1	4408,960	206,654	,000
perlakuan	495,440	4	123,860	5,805	,004
kelompok	488,240	4	122,060	5,721	,005
Error	341,360	16	21,335		
Total	5734,000	25			
Corrected Total	1325,040	24			

a. R Squared = ,742 (Adjusted R Squared = ,614)

- Uji Tukey

jumlah daunM8

Tukey HSD^{a,b}

perlakuan	N	Subset	
		1	2
P0	5	9,40	
P1	5	10,00	
P2	5	11,40	
P4	5	14,00	14,00
P3	5		21,60
Sig.		,533	,117

Lampiran 13. Hasil pengolahan data panjang akar stek murbei dengan menggunakan software SPSS 25

- Descriptives

Descriptives

panjang akar

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
P0	5	15,80	4,550	2,035	10,15	21,45	12	23
P1	5	17,00	6,364	2,846	9,10	24,90	11	27
P2	5	18,80	5,586	2,498	11,86	25,74	11	24
P3	5	25,00	,707	,316	24,12	25,88	24	26
P4	5	21,20	4,087	1,828	16,13	26,27	16	25
Total	25	19,56	5,424	1,085	17,32	21,80	11	27

- Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
panjang akar	P0	,202	5	,200 [*]	,876	5	,293
	P1	,238	5	,200 [*]	,901	5	,416
	P2	,253	5	,200 [*]	,895	5	,385
	P3	,300	5	,161	,883	5	,325
	P4	,224	5	,200 [*]	,881	5	,314

- Uji ANOVA

Tests of Between-Subjects Effects

Dependent Variable: panjang akar

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	417,920 ^a	8	52,240	2,900	,033
Intercept	9564,840	1	9564,840	530,938	,000
perlakuan	267,760	4	66,940	3,716	,025
kelompok	150,160	4	37,540	2,084	,131
Error	288,240	16	18,015		
Total	10271,000	25			
Corrected Total	706,160	24			

a. R Squared = ,592 (Adjusted R Squared = ,388)

- Uji Tukey

panjang akar

Tukey HSD^{a, b}

perlakuan	N	Subset	
		1	2
P0	5	15,80	
P1	5	17,00	17,00
P2	5	18,80	18,80
P4	5	21,20	21,20
P3	5		25,00
Sig.		,304	,059

Lampiran 14. Dokumentasi kegiatan penelitian



Pemotongan stek tanaman murbei
(*Morus alba* L)



Pembuatan ZPT bawang merah



Pengukuran Rootone-F menggunakan
timbangan analitik



Perendaman stek tanaman murbei
dengan ZPT



Media tanam



Penanaman stek dan penyungkupan
menggunakan plastik bening



Pembuatan naungan menggunakan paranet



Penyiraman



Serangan hama pada pertengahan minggu ke 4-6



Pengendalian menggunakan pestisida Demolish



Pengukuran panjang akar di akhir pengamatan



Lampiran 15. Dokumentasi pertumbuhan 2 minggu sekali



Pertumbuhan 2 MST



Pertumbuhan 4 MST



Pertumbuhan 6 MST



Pertumbuhan 8 MST

Lampiran 16. Dokumentasi jumlah daun pada akhir pengamatan



P0 (Kontrol)



P1 (Rootone-F 300 mg/L)



P2 Ekstrak bawang merah 6% (60 ml/L)



P3 Ekstrak bawang merah 8% (80 ml/L)



P4 Ekstrak bawang merah 10% (100 ml/L)

Lampiran 17. Dokumentasi hasil pengamatan pada panjang akar

P0U1	P0U2	P0U3	P0U4	P0U5
				

P1U1	P1U2	P1U3	P1U4	P1U5
				

P2U1	P2U2	P2U3	P2U4	P2U5
				

P3U1	P3U2	P3U3	P3U4	P3U5
				

P4U1	P4U2	P4U3	P4U4	P4U5
				

