

DAFTAR PUSTAKA

- Abdurachman, A., S. Sutomo, dan N. Sutrisno. 2005. Teknologi Pengendalian Erosi Lahan Berlereng dalam Teknologi Pengelolaan Lahan Kering Menuju Pertanian
- Antari, R. dan G. M. Manurung. 2014. Pengaruh pemberian mulsa organik terhadap sifat fisik dan kimia tanah serta pertumbuhan akar kelapa sawit. Jurnal Online Mahasiswa Fakultas Pertanian Universitas Riau 1(1): 1-13.
- Cregg, B. M. dan R. Suzuki. 2009. Weed control and organic mulches affect physiology and growth of landscape shrubs. Hort. Scienc. 44(5): 1419–1429.
- Ditjenbun. 2016. Statistik Perkebunan Indonesia Komoditi Kelapa Sawit 2014-2016. Direktorat Jenderal Perkebunan. Jakarta.
- Dwiyana S. Rizki, Sampoerno Dan Ardian. (2015). Jurnal Waktu Dan Volume Pemberian Air Pada Bibit Kelapa Sawit (*Elaeis Guenneensis* Jacq) Di Main Nursery. Jom Faperta Vol 2 1 Februari 2015.
- Firda, Y. 2009. Respon Tanaman Kedelai (*Glycine Max* (L) Meril) Terhadap Cekaman Kekurangan Air Dan Penumpukan Kalium. Skripsi Fakultas Pertanian Universitas Riau : Pekanbaru.

Gultom, A. Yonni. Sampoerno dan Saputra, S Indra. (2017) Jurnal Pengaruh Pemberian Mulsa Tandan Kosong Kelapa Sawit Terhadap Pertumbuhan Bibit Kelapa Sawit (*Elaeis Guineensis* Jacq) di Main Nursery. Jom Faperta vol. 4 no. 1 Februari 2017.

Harjadi. 1986. Pengantar Agronomi. Departemen Agronomi Fakultas pertanian IPB. Bogor. 191 hal.

Lubis. R.E., A. Widanarko. 2011. Buku Pintar Kelapa Sawit. Agromedia, Jakarta.

Manik R. Saputra, Mu'in A, Hastuti P. Budi. (2018). Pengaruh Ketebalan Mulsa Organik Dan Frekuensi Penyiraman Terhadap Pertumbuhan Bibit Kelapa Sawit Di Pre Nursery. Jurnal Agromast, Vol.3, No.1, April 2018.

Maryani, A. T. 2012. Pengaruh volume pemberian air terhadap pertumbuhan bibit kelapa sawit di pembibitan utama. Bioplantae 1(2): 64-74.

Mulyani, A. dan M. Sarwani. 2013. Karakteristik dan potensi lahan sub optimal untuk pengembangan pertanian di Indonesia. Jurnal Sumberdaya Lahan 7(1): 47-55. Kiswanto, Purwanta. J.H., Wijayanto. B. 2008. Teknologi Budidaya Kelapa Sawit. Seri Buku Inovasi. Bogor.

Oksana, O., M. Irfan, dan U. Huda. 2012. Pengaruh alih fungsi lahan hutan menjadi perkebunan kelapa sawit terhadap sifat kimia tanah. Jurnal Agroteknologi 3(1): 29-34.

Pahan, I. 2012. Panduan Lengkap Kelapa Sawit. Jakarta : Penebar Swadaya.

Puwodidodo. 1983. Teknologi Mulsa. Jakarta : Dewaruci Press.

Risza, S. 2010. Masa Depan Perkebunan Kelapa Sawit Indonesia. Kanisius.
Yogyakarta.

Umboh A.H. 2002. Petunjuk Penggunaan Mulsa. Penebar Swadaya. Jakarta.

Vidianto, D. Z., S. Fatimah, dan C. Wasonowati. 2013. Penerapan panjang talang dan jarak tanam dengan sistem hidroponik NFT (nutrient film technique) pada tanaman kailan (*Brassica oleraceae* var. *alboglabra*). *Agrovigor* 6(2): 128-135.

Wiratmo S. Sastro. 2019. Dasar-Dasar Budidaya Tanaman. Akademi komunitas perkebunan yogyakarta.

LAMPIRAN

Lampiran 1. Layout penelitian

	M0	M0	M0	M0	M0	M0	M0	M0	M0
M1K1	M3K1	M2K1	M1K1	M2K1	M1K1	M3K1	M3K1	M2K1	
	M1K2	M3K2	M3K2	M3K2	M2K2	M2K2	M2K2	M1K2	M1K2
M1K3	M1K3	M3K3	M3K3	M3K3	M2K3	M2K3	M2K3	M1K3	

M0 = Tanpa mulsa

M1 = Mulsa daun kelapa sawit

M2 = Mulsa daun Mucuna Bracteata

M3 = Mulsa plastik

K1 = Mulsa ketebalan 2 cm

K2 = Mulsa ketebalan 3 cm

K3 = Mulsa ketebalan 4 cm

Lampiran 2. Hasil analisis sidik ragam tinggi bibit.

Tests of Between-Subjects Effects

Dependent
Variable:

Tinggi Bibit

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	191,532 ^a	8	23,941	,775	,630
Intercept	79880,961	1	79880,961	2584,928	,000
Mulsa	116,490	2	58,245	1,885	,181
Ketebalan	62,741	2	31,370	1,015	,382
Mulsa * Ketebalan	12,301	4	3,075	,100	,981
Error	556,247	18	30,903		
Total	80628,740	27			
Corrected Total	747,779	26			

a. R Squared = ,256 (Adjusted R Squared = -,074)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig. .	t	df	Sig. (2- tailed)	Mean Differe nce	Std. Error Differe nce	95% Confidence Interval of the Difference	
									Lower	Upper
Tinggi_Tanam an	Equal variances assumed	3,657	,08 5	- 4,056	10	,002	- 6,9133 3	1,7046 4	- 10,71150	- 3,1151 7
	Equal variances not assumed			- 6,451	9,950	,000	- 6,9133 3	1,0716 4	-9,30272	- 4,5239 4

Lampiran 3. Hasil analisis sidik ragam jumlah daun.

Tests of Between-Subjects Effects

Dependent Variable: Jumlah_Daun

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	,741 ^a	8	,093	,132	,997
Intercept	2259,593	1	2259,593	3211,000	,000
Mulsa	,074	2	,037	,053	,949
Ketebalan	,074	2	,037	,053	,949
Mulsa * Ketebalan	,593	4	,148	,211	,929
Error	12,667	18	,704		
Total	2273,000	27			
Corrected Total	13,407	26			

a. R Squared = ,055 (Adjusted R Squared = -,365)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Jumlah_Daun	Equal variances assumed	8,533	,015	-,218	10	,832	-4,00000	18,36744	-44,92521	36,92521
	Equal variances not assumed			-,134	2,158	,905	-4,00000	29,92305	-124,11292	116,11292

Lampiran 4. Hasil analisis sidik ragam panjang daun.

Tests of Between-Subjects Effects

Dependent Variable:	Panjang_Daun				
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	32,600 ^a	8	4,075	1,220	,343
Intercept	24625,080	1	24625,080	7370,327	,000
Mulsa	23,636	2	11,818	3,537	,051
Ketebalan	3,549	2	1,774	,531	,597
Mulsa * Ketebalan	5,416	4	1,354	,405	,802
Error	60,140	18	3,341		
Total	24717,820	27			
Corrected Total	92,740	26			

a. R Squared = ,352 (Adjusted R Squared = ,063)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Panjang_Daun	Equal variances assumed	,080	,783	-,146	10	,887	11,11111	76,09182	180,65426	158,43203
	Equal variances not assumed			-,152	3,722	,887	11,11111	72,90267	219,63083	197,40861

Lampiran 5. Hasil analisis sidik ragam lebar daun.

Tests of Between-Subjects Effects

Dependent
Variable:

Lebar Daun

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	18,927 ^a	8	2,366	,283	,963
Intercept	29548,379	1	29548,379	3528,555	,000
Mulsa	,210	2	,105	,013	,988
Ketebalan	4,227	2	2,114	,252	,780
Mulsa * Ketebalan	14,490	4	3,623	,433	,783
Error	150,733	18	8,374		
Total	29718,040	27			
Corrected Total	169,661	26			

a. R Squared = ,112 (Adjusted R Squared = -,283)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Lebar_daun	Equal variances assumed	,004	,948	-6,985	10	,000	- 413,88889	59,25646	- 545,92052	- 281,85726
	Equal variances not assumed			-6,957	3,437	,004	- 413,88889	59,49450	- 590,30687	- 237,47090

Lampiran 6. Hasil analisis sidik ragam berat segar tajuk.

Tests of Between-Subjects Effects

Dependent
Variable:

Berat_Segar_Tajuk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16249,961 ^a	8	2031,245	7,886	,000
Intercept	268801,333	1	268801,333	1043,587	,000
Mulsa	7664,128	2	3832,064	14,878	,000
Ketebalan	3845,544	2	1922,772	7,465	,004
Mulsa * Ketebalan	4740,288	4	1185,072	4,601	,010
Error	4636,340	18	257,574		
Total	289687,634	27			
Corrected Total	20886,301	26			

a. R Squared = ,778 (Adjusted R Squared = ,679)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Berat_Segar_Tajuk	Equal variances assumed	7,502	,021	-2,794	10	,019	-4337,00000	1552,46509	-7796,10778	-877,89222
	Equal variances not assumed			-4,966	8,219	,001	-4337,00000	873,39505	-6341,75054	-2332,24946

Lampiran 7. Hasil analisis sidik ragam berat kering tajuk.

Tests of Between-Subjects Effects

Dependent
Variable:

Berat_Kering_Tajuk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1387,062 ^a	8	173,383	5,695	,001
Intercept	25606,504	1	25606,504	841,101	,000
Mulsa	880,717	2	440,359	14,465	,000
Ketebalan	197,290	2	98,645	3,240	,063
Mulsa * Ketebalan	309,054	4	77,264	2,538	,076
Error	547,993	18	30,444		
Total	27541,559	27			
Corrected Total	1935,055	26			

a. R Squared = ,717 (Adjusted R Squared = ,591)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Berat_Kering_Tajuk	Equal variances assumed	5,170	,046	-2,804	10	,019	-1277,88889	455,66893	-2293,18253	-262,59524
	Equal variances not assumed			-4,768	9,469	,001	-1277,88889	267,99151	-1879,57704	-676,20074

Lampiran 8. Hasil analisis sidik ragam berat segar ajar.

Tests of Between-Subjects Effects

Dependent Variable: Berat_Segar_Akar

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5249,413 ^a	8	656,177	11,237	,000
Intercept	56000,538	1	56000,538	958,966	,000
Mulsa	1666,185	2	833,093	14,266	,000
Ketebalan	1210,787	2	605,393	10,367	,001
Mulsa * Ketebalan	2372,441	4	593,110	10,157	,000
Error	1051,142	18	58,397		
Total	62301,093	27			
Corrected Total	6300,555	26			

a. R Squared = ,833 (Adjusted R Squared = ,759)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Berat_Segar_Akar	Equal variances assumed	2,876	,121	-1,687	10	,122	-1510,00000	894,92773	-3504,02325	484,02325
	Equal variances not assumed			-2,627	9,745	,026	-1510,00000	574,87653	-2795,46848	-224,53152

Lampiran 9. Hasil analisis sidik ragam berat kering akar.

Tests of Between-Subjects Effects

Dependent
Variable:

Berat_Kering_Akar

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	369,224 ^a	8	46,153	10,121	,000
Intercept	3029,270	1	3029,270	664,299	,000
Mulsa	116,747	2	58,373	12,801	,000
Ketebalan	79,570	2	39,785	8,725	,002
Mulsa * Ketebalan	172,908	4	43,227	9,479	,000
Error	82,082	18	4,560		
Total	3480,576	27			
Corrected Total	451,306	26			

a. R Squared = ,818 (Adjusted R Squared = ,737)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Berat_kering_Akar	Equal variances assumed	2,380	,154	-1,641	10	,132	-391,66667	238,60676	-923,31566	139,98232
	Equal variances not assumed			-2,454	9,059	,036	-391,66667	159,60002	-752,35049	-30,98284

Lampiran 10. Parameter kelembapan tanah.

Jenis	26-agustus-2020	09-Sep-20	23-Sep-20	30-Sep-20
M1K0	100	100	100	100
M1K0	100	100	100	100
M1K0	100	100	100	100
M2K0	100	100	100	100
M2K0	100	100	100	100
M2K0	100	100	100	100
M3K0	100	100	100	100
M3K0	100	100	100	100
M3K0	100	100	100	100
M1K1	100	100	100	100
M1K1	100	100	100	100
M1K1	100	100	100	100
M2K1	100	100	100	100
M2K1	100	100	100	100
M2K1	100	100	100	100
M3K1	100	100	100	100
M3K1	100	100	100	100
M3K1	100	100	100	100
M1K2	100	100	100	100
M1K2	100	100	100	100
M1K2	100	100	100	100
M2K2	100	100	100	100
M2K2	100	100	100	100
M2K2	100	100	100	100
M3K2	100	100	100	100

M3K2	100	100	100	100
M3K2	100	100	100	100
M1K3	100	100	100	100
M1K3	100	100	100	100
M1K3	100	100	100	100
M2K3	100	100	100	100
M2K3	100	100	100	100
M2K3	100	100	100	100
M3K3	100	100	100	100
M3K3	100	100	100	100
M3K3	100	100	100	100

Lampiran 11. parameter PH tanah.

Jenis	26-agus-20	09-Sep-20	23-Sep-20	30-Sep-20
M1K1	6,5	6,5	6,5	6,5
M1K1	6,5	6,5	6,5	6,5
M1K1	6,5	6,5	6,5	6
M2K1	7	6,5	6,5	6
M2K1	6	6	6	6
M2K1	6,5	6,5	6,5	6
M3K1	6,5	6,5	6,5	6
M3K1	7	6,5	6,5	6,5
M3K1	7	6,5	6,5	6,5
M1K2	7	7	7	6
M1K2	6,5	6,5	6,5	6
M1K2	6,5	6,5	6,5	6
M2K2	6,5	6,5	6,5	5
M2K2	6	5	5	5
M2K2	6	5	5	5
M3K2	6,5	6	6	6
M3K2	6,5	6	6	6
M3K2	7	7	6,5	6,5
M1K3	7	6,5	6,5	6
M1K3	6	6,5	6,5	6
M1K3	6	6,5	6,5	6
M2K3	6,5	6,5	6	5,5
M2K3	6,5	6,5	5,5	5
M2K3	7	6	6	6

M3K3	7	7	6,5	6,5
M3K3	7	7	6,5	6
M3K3	7	7	7	6

Lampiran 12. Foto kegiatan.



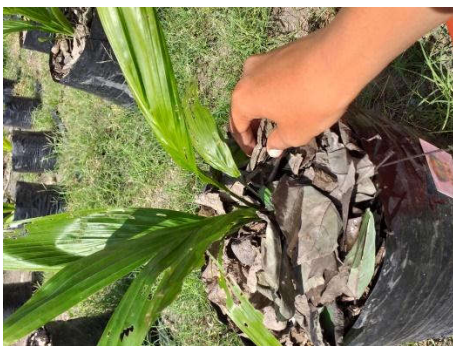
Persiapan lahan



Pengisian polibag



pemasangan buka kaca mata



mulsa *Mucuna breacteasa*



Pengukuran lebar daun



pemberian pupuk



Pengamatan



penyiraman



Mengukur berat akar



mengukur berat tajuk