

DAFTAR PUSTAKA

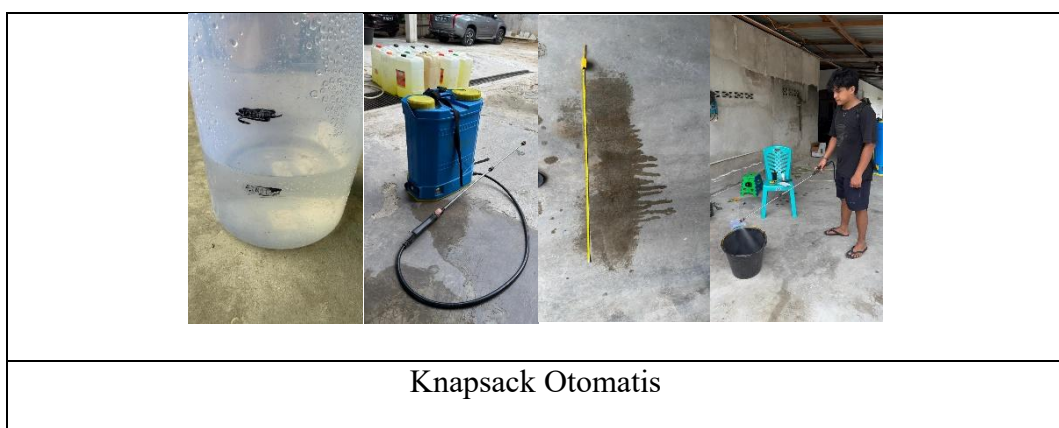
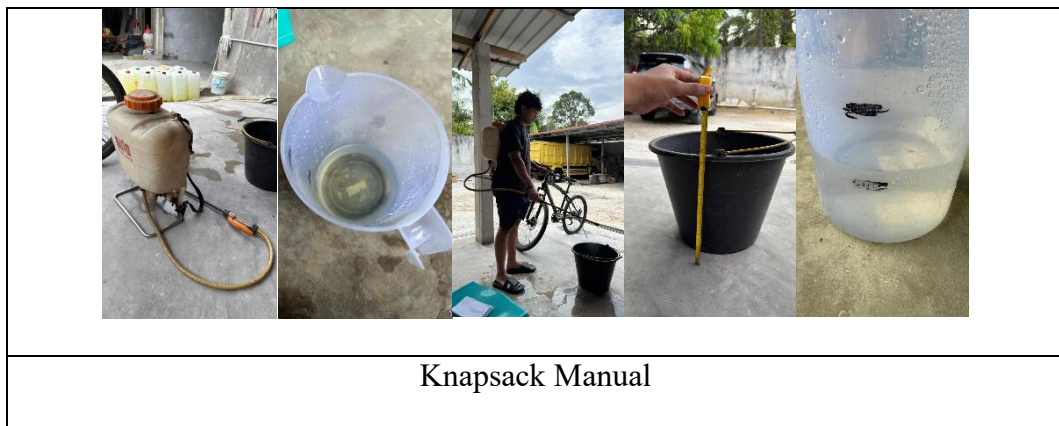
- Adi Surya, S., & Renny Eka Putri, dan. (2023b). Analisis Pemilihan Alternatif Pengendalian Gulma Pada Tanaman Jagung Di Nagari Aia Gadang Kabupaten Pasaman Barat. *Jurnal Teknologi Pertanian Andalas*. <https://doi.org/10.25077/jtpa.27.1.126-135.2023>
- Ahmal, V. J., Ilmiasari, Y., Vania, N., Harini, A., & Novrimansyah, E. A. (2025). Efektivitas Herbisida Bahan Aktif Haloxypop-R Methyl Ester Terhadap Gulma Belulang (*Eleusine indica* L.). *Journal of Agriculture and Animal Science*. <https://doi.org/10.47637/agrimals.v5i2.1900>
- Arpiansyah, E., Mawandha, H. G., & Tarmadja, S. (2023). Efektivitas Beberapa Herbisida Sistemik dan Perlakuan Pembabatan Terhadap Gulma *Scleria Sumatrensis* di Kebun Kelapa Sawit. *Jurnal Agroforetech, 1*. <https://jurnal.instiperjogja.ac.id/index.php/JOM/article/view/879?articlesBySameAuthorPage=4>
- Che Ruzlan, K. A., Bakar, S. A. Bin, Che Manan, C. A. H., Mohd Noor, M. K. A., Abd Latif, M. R. B., Zainal Abidin, C. M. R., Jusoh, M., & Ahmad Hamdani, M. S. (2024). Weed control efficiency of unmanned aerial vehicle spray in replanting oil palm plantation areas. *Weed Science, 73*. <https://doi.org/10.1017/wsc.2024.91>
- Fadhillah, W., Susanti, R., & Widiastuty. (2023). Kerapatan Dominansi Gulma Pada Tanaman Kelapa Sawit Pasca Aplikasi Tandan Kosong Kelapa Sawit (TKKS) dan Kompos Tandan Kosong Kelapa sawit. *AGRIUM: Jurnal Ilmu Pertanian, 26*. <https://doi.org/10.30596/agrium.v26i2.16570>
- Haryadi, A. (2017). Uji Resistensi Gulma Rumput Belulungan (*Eleusine Indica*), Jalantir (*Erigeron Sumatrensis*), Dan Teki Udelan (*Cyperus Kyllingia*) Asal Perkebunan Jambu Biji Lampung Timur Terhadap Herbisida Glifosat. [Universitas Lampung]. Dalam *Jurnal*. <http://digilib.unila.ac.id/id/eprint/25805>
- Irawan, D., Aziz, M., Maggribi, F., Nisa, J., Seprianti, W. A., Hasibuan, P. A., Rani, A., Fitri, R., Sofianingsih, V., Alwa, Z., & Ilhan, M. (2023). Metode Penerapan Alat Pengendalian Gulma, Smart Gun Sprayer, Guna Meningkatkan Kualitas Kelapa Sawit di Desa Bukit Kratai, Kecamatan Rumbio Jaya, Kabupaten Kampar. *Jurnal Selekt PKM, 1*(1), 10–16.
- Irawan, D., Pratiwi, W., Muliani, R., Zallen, A., Bima Sanda, B., Afifah, N., Ariq Hidayat, M., Endah, Y., Ayundari, M., Adelia, R., & Kurniawanda, R. (2023). Penerapan Smart Gun Sprayer Alat Pengendalian Gulma

- Berbasis Egronomi untuk Membantu Proses Peremajaan (Reflanting) Kelapa Sawit di Desa Bukit Kratai. *Jurnal Selekt PKM*, (1).
<https://journal.riau-edutech.com/index.php/selektapkm/>
- Iskandar, D., & Yudiawati, E. (2022). Efektivitas Dosis Glyphosat Terhadap Pengendalian Gulma Pada Kebun Kelapa Sawit Tbm 1. *Jurnal Sains Agro*. <https://doi.org/10.36355/jsa.v7i1.775>
- Mahhendra, D. W., Mawandha, H. G., & Yuniasih, B. (2025b). Perbandingan Teknis Penyemprotan Gulma secara Manual dan Menggunakan Drone Sprayer di Lahan Replanting. *AGROISTA : Jurnal Agroteknologi*, 8(2), 120–127. <https://doi.org/10.55180/agi.v8i2.851>
- Manab, A., Muttaqin, M. B., Rabiula, A., Ramadhani, S., ‘Asyarina, Hais, Y. R., & Tessel, D. (2025). ADDIE-Based Development of a Solar-Powered Sprayer for Efficient Weed Control in Remote Oil Palm Plantations. *Jurnal Nasional Teknik Elektro*, 14(2).
<https://doi.org/10.25077/jnte.v14n2.1221.2025>
- Nasution, A. A., Sopandie, D., & Lontoh, A. P. (2024b). Pengelolaan Gulma Kelapa Sawit (*Elaeis guineensis* Jacq.) di Kebun Negeri Lama Selatan, Sumatera Utara. *Buletin Agrohorti*, 12(1), 1–12.
<https://doi.org/10.29244/agrob.v12i1.51386>
- Pujiswanto, H., Susanto, H., Sugiatno, S., & Saputra, R. A. (2022). Efikasi Herbisida Amonium Glufosinat Untuk Pengendalian Gulma Pada Tanaman Kelapa Sawit (*Elaeis Guineensis* Jacq.) Menghasilkan. *Jurnal Agrotek Tropika*, 10(2), 301. <https://doi.org/10.23960/jat.v10i2.5965>
- Rahmawati, A. (2023). Keragaman Genetik Varietas Kelapa Sawit (*Elaeis guineensis* Jacq.). *Jurnal Kridatama Sains Dan Teknologi*, 5.
<https://jurnal.umnu.ac.id/index.php/kst/article/view/677/278>
- Ratna, Y., Pebrianti, H. D., Swari, E. I., Muryunika, R., & Pardosi, J. R. (2025). Komposisi Gulma Pada Perkebunan Kelapa Sawit (*Elaeis guineensis* Jacq.) Sebelum dan Setelah Dilakukan Pengendalian Secara Mekanik dan Kimia. *Jurnal Media Pertanian*, 10(2), 167.
<https://doi.org/10.33087/jagro.v10i2.293>
- Saumatgerat, A., Wahyudiono, S., & Prijono, A. (2024). Uji Efektivitas Aplikasi Pre Emergent Herbisida Menggunakan Drone Sprayer Dibandingkan dengan Penggunaan Knapsack Sprayer. *AGROFORETECH*, 2..
- Siburian, Z., Mawandha, H. G., & Suryanti, S. (2024b). Keragaman Gulma Tanaman Kelapa Sawit di Lahan Datar dan Lahan Miring. *Jurnal Agroforetech*, 2.
<https://jurnal.instiperjogja.ac.id/index.php/JOM/article/view/1139>

- Silalahi, F. R., Zuliyanti Siregar, A., & Syahputra Siregar, D. (2023). Efektivitas Penggunaan Knapsack Sprayer Elektrik dalam Pengendalian Gulma Tanaman Kelapa Sawit (*Elaeis guineensis* Jacq). *Jurnal Sosial Ekonomi Pertanian*, 19. <https://journal.unhas.ac.id/index.php/jsep>
- Sitorus, H., & Widaryanto, E. (2019). Pengaruh Berbagai Cara Pengendalian Gulma terhadap Pertumbuhan dan Hasil Tanaman Kacang Hijau (*Vigna radiata* L.). *Jurnal Produksi Tanaman*, 7(5), 827–835.
- Sumantri, B., Mu'in, A., & Mawandha, H. G. (2024). Perbandingan Pengendalian Gulma Piringan Manual dan Mekanis di Daerah Aliran Sungai Perkebunan Kelapa Sawit. *Jurnal Agroforetech*, 2. <https://jurnal.instiperjogja.ac.id/index.php/JOM/article/view/1433>
- Syarief, M., Rahmawati, D., Mujiono, & Fittryah, L. D. (2024). Efektivitas dan Efisiensi Drone Sprayer untuk Pengendalian Gulma pada Tanaman Padi (*Oryza sativa* L). *Agriprima : Journal of Applied Agricultural Sciences*, 8(1), 52–60. <https://doi.org/10.25047/agriprima.v8i1.523>
- Yuliyanto, Wijaya Kesuma, N., & Sinuraya, R. (2017). Efektivitas Dan Efisiensi Penggunaan Knapsack Sprayer Dan Knapsack Motor Pada Penyemprotan Gulma Di Perkebunan Kelapa Sawit. *Jurnal Citra Widya Edukasi*, (1).

LAMPIRAN

Lampiran 1 Dokumentasi Penelitian





Knapsack Bermotor



Knapsack Motor Bertekanan Tinggi



Mesin Babat / Potong Rumput



Jenis Herbisida yang digunakan



Kuadran (Q) yang digunakan



Pelaksanaan Penelitian dengan Berbagai Perlakuan

Lampiran 2 Data per Frame

No	Jenis Gulma	Q1	Q2	Q3	Blok 1	Q4	Q5	Q6	Blok 2	Q7	Q8	Q9	Q10	Blok 3	Total Jenis Gulma
1	Ageratum conyzoides	25	20	18	63	22	18	15	55	14	16	20	17	67	185
2	Asystasia gangetica	5	4	3	12	6	5	7	18	6	5	4	3	18	48
3	Borreira alata	4	3	2	9	5	4	3	12	3	2	3	2	10	31
4	Clidemia hirta	3	2	3	8	2	2	1	5	2	2	1	1	6	19
5	Coleus rotundifolius	2	1	1	4	2	2	1	5	1	1	1	1	4	13
6	Desmodium heterocarpon	1	1	1	3	1	1	1	3	1	1	1	1	4	10
7	Erigeron sumatrensis	2	1	1	4	2	2	1	5	1	1	1	1	4	13
8	Hyptis capitata	5	6	5	16	6	5	4	15	5	5	6	5	21	52
9	Imperata cylindrica	10	9	11	30	10	9	8	27	9	8	9	8	34	91
10	Nephrolepis biserrata	2	2	2	6	2	2	1	5	1	1	2	1	5	16
11	Ottlochloa nodosa	2	1	1	4	2	2	1	5	1	1	1	1	4	13
12	Paspalum conjugatum	6	5	4	15	6	5	6	17	5	5	6	5	21	53
13	Physalis angulata	2	2	1	5	2	2	1	5	1	1	1	1	4	14
14	Total Gulma per Frame	69	57	53		68	59	50		50	49	56	47		558

Lampiran 3 Tabel Data SDR per Blok

Blok 1

KR (%)	FR (%)	INP	SDR (%)
35,20	30,88	66,08	33,04
6,70	5,88	12,59	6,29
5,03	4,41	9,44	4,72
4,47	3,92	8,39	4,20
2,23	4,90	7,14	3,57
1,68	4,90	6,58	3,29
2,23	4,90	7,14	3,57
8,94	7,84	16,78	8,39
16,76	14,71	31,47	15,73
3,35	2,94	6,29	3,15
2,23	4,90	7,14	3,57
8,38	7,35	15,73	7,87
2,79	2,45	5,24	2,62
100	100	200	100

Blok 2

KR (%)	FR (%)	INP	SDR (%)
31,07	26,32	57,39	28,69
10,17	8,61	18,78	9,39
6,78	5,74	12,52	6,26
2,82	2,39	5,22	2,61
2,82	4,78	7,61	3,80
1,69	4,78	6,48	3,24
2,82	4,78	7,61	3,80
8,47	9,57	18,04	9,02
15,25	12,92	28,17	14,09
2,82	2,39	5,22	2,61
2,82	4,78	7,61	3,80
9,60	8,13	17,74	8,87
2,82	4,78	7,61	3,80
100	100	200	100

Blok 3

KR (%)	FR (%)	INP	SDR (%)
33,17	28,88	62,05	31,02
8,91	7,76	16,67	8,33
4,95	4,31	9,26	4,63
2,97	2,59	5,56	2,78
1,98	4,31	6,29	3,15
1,98	4,31	6,29	3,15
1,98	4,31	6,29	3,15
10,40	9,05	19,45	9,72
16,83	14,66	31,49	15,74
2,48	2,16	4,63	2,32
1,98	4,31	6,29	3,15
10,40	9,05	19,45	9,72
1,98	4,31	6,29	3,15
100	100	200	100

P e r l a k u a n	n a w a l	F e b r u a r i	M a r c h																																									
			10		11		12		13		14		15		16		17		18		19		20		21		22		23		24		25		26		27		28		1		2	
			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
P 1 U 1	4 1 6	9 2	2 2 2	2 8 0	2 1 9	2 8 9	3 5 6	4 0 0	4 4 5	4 8 0	4 4 5	4 2 3	4 8 2	5 3 3	5 7 0	6 2 9	6 2 2	6 4 8	6 4 7	6 6 7	6 6 7	6 8 6	6 8 9	7 3 5	7 3 4	7 5 6	7 7 3	7 7 6	7 8 9	7 3 5	7 3 3	7 2 6	7 1 4	7 5 6	7 3 8	7 2 3	7 7 3	7 2 3	8 0 0					
P 1 U 2	3 8 8	8 3	2 1 3	2 6 4	2 1 2	3 3 9	3 8 0	4 6 6	4 2 6	4 7 5	5 2 2	5 2 3	6 1 8	6 7 4	6 9 0	6 4 0	6 6 5	6 6 7	6 9 8	7 1 3	7 4 6	7 6 1	7 3 6	7 3 1	7 8 6	7 9 7	7 7 3	7 4 5	7 0 9	7 6 1	7 3 6	7 1 4	7 8 6	8 0 5	8 9 4	8 5 7	8 1 4	8 0 4	8 3 3					
P 1 U 3	4 0 7	9 2	2 2 3	2 7 1	2 1 7	3 3 9	3 8 7	4 6 6	4 3 8	4 1 4	5 2 3	5 2 7	6 1 2	6 5 0	6 3 6	7 1 8	7 3 7	7 5 6	7 3 8	7 6 5	8 0 6	8 1 5	8 4 6	8 5 0	8 7 5	8 9 0	8 7 3	8 4 5	8 1 0	8 3 5	8 2 0	8 0 4	8 3 7	8 1 4	8 5 7	8 2 3	8 3 5	9 1 3	9 3 2					
P 2 U 1	4 2 5	1 1	2 0 9	3 4 3	1 5 7	3 9 6	4 8 8	4 0 3	4 8 3	5 3 1	6 6 5	6 3 8	7 2 4	7 5 7	7 0 9	7 2 3	8 4 2	8 4 3	8 5 1	8 6 6	8 6 0	8 7 1	8 9 5	8 6 9	8 3 7	8 8 0	8 6 7	8 3 0	8 1 6	8 7 9	8 3 3	8 1 7	8 9 3	8 7 9	8 3 3	9 1 8	9 3 8	9 8 0						
P 2 U 2	3 9 7	1 0 2	2 5 9	3 2 7	1 5 7	3 9 6	4 7 6	4 9 4	5 8 2	5 4 2	6 5 0	6 2 7	7 9 5	7 0 5	7 6 4	7 1 9	8 3 2	8 1 3	8 8 3	8 3 1	8 6 3	8 4 1	8 3 3	8 4 2	8 6 4	8 3 3	8 8 3	8 4 6	8 6 2	8 3 1	8 8 0	9 0 0	9 6 0	9 8 0	9 3 0	9 7 0	9 3 0							

			5 8		5 6		5 3		1 9		8 4		8 1		7 9		7 7		7 4		7 4		0 7		4 0		4 0		7 2		7 2		0 5		0 5		3 7		7 0		7 0		0 2
P 2 U 3	4 1 6	1 1 1	2 6 7	1 3 9	3 3 3	1 6 6	4 0 0	1 9 4	4 6 7	2 1 3	5 1 1	2 3 1	5 5 6	2 5 9	6 2 2	2 8 6	6 8 9	3 1 4	3 5 6	3 1 4	7 5 6	3 5 3	7 7 8	3 0 0	3 4 2	8 2 2	3 4 2	8 2 2	3 4 2	8 2 2	3 5 1	8 4 4	3 5 1	8 4 4	3 6 0	8 6 7	3 7 0	8 8 9	3 7 0	8 8 9	3 7 9	9 1 1	
P 3 U 1	4 3 4	1 3 9	3 1 1	1 6 6	3 8 0	1 9 4	4 4 8	2 2 2	5 1 6	2 5 0	5 7 5	2 7 3	6 3 5	3 0 1	7 0 3	7 4 7	7 8 2	3 4 1	3 7 2	7 8 2	3 5 1	8 0 5	3 8 0	8 2 8	3 7 1	8 5 9	3 2 3	8 7 8	3 8 6	8 9 8	3 8 6	9 9 6	9 1 7	9 4 0	9 3 6	9 1 2	9 3 7	4 6 2	9 5 6	4 1 4	9 5 6		
P 3 U 2	4 0 7	1 2 9	3 1 2	1 5 7	3 8 4	1 8 5	4 4 5	2 1 3	5 2 7	2 2 1	5 6 2	2 8 9	6 3 4	7 0 5	7 5 0	7 0 3	7 9 0	3 2 5	3 5 3	7 9 5	8 1 3	8 4 2	3 8 3	8 4 2	3 0 9	8 6 1	8 6 6	3 6 0	8 8 4	3 7 0	9 0 1	9 0 1	9 8 8	3 4 5	9 5 8	3 8 5	9 5 8	3 9 0	9 5 2	9 6 1			
P 3 U 3	4 2 5	1 3 9	3 6 1	1 6 6	3 1 3	1 9 4	4 5 5	2 2 2	5 1 7	2 5 0	5 7 0	2 8 6	6 3 9	7 3 4	3 1 1	3 3 6	8 2 1	3 5 1	3 6 1	8 2 1	3 6 0	8 4 6	3 7 0	8 6 0	3 9 6	8 9 3	3 7 9	8 9 3	3 1 9	8 9 3	3 8 0	9 1 8	9 3 7	9 4 8	3 9 7	9 3 8	4 0 8	9 4 8	4 1 5	9 5 7			
P 4 U 1	4 1 6	1 6 6	4 0 0	1 9 4	4 6 7	2 2 3	5 3 0	2 5 0	6 7 7	2 6 7	6 8 6	2 8 9	6 8 6	7 1 1	3 0 5	7 3 4	7 5 6	3 1 5	3 5 4	7 5 6	3 2 3	8 7 8	3 0 3	8 0 3	3 0 2	8 2 2	3 5 1	8 4 4	3 6 0	8 6 7	3 6 0	8 8 9	3 7 0	9 3 8	3 9 7	9 5 6	4 0 7	9 7 8	4 0 7	9 7 8			
P 4 U 2	3 9 7	1 5 7	3 5 3	1 8 5	4 5 1	2 1 3	5 4 9	2 4 0	6 4 7	2 6 8	6 7 4	2 7 7	6 9 7	7 2 6	2 8 9	7 4 2	7 4 6	2 9 4	2 4 2	7 4 6	3 0 5	7 6 4	3 1 7	7 9 3	8 1 0	8 3 4	3 7 2	8 6 5	8 8 1	8 8 3	9 3 7	8 3 0	9 5 2	9 7 3	9 8 5	3 8 8	9 7 7	3 6 0	9 8 5				

P 4 U 3	4 0 7	1 6 6	4 0 1	1 9 4	4 7 3	2 2 2	5 4 5	2 5 0	6 1 6	2 7 7	6 8 8	2 8 6	7 0 5	2 9 6	7 2 3	3 0 5	7 5 0	3 1 4	7 7 7	3 2 3	7 9 5	3 3 3	8 1 2	3 4 2	8 4 9	3 4 2	8 4 9	3 5 1	8 6 6	3 6 0	8 8 4	3 8 8	9 5 5	3 9 7	9 7 3	4 0 0	9 8 8	4 0 7	1 0 0	
P 5 U 1	4 2 5	4 2 5	1 0 0	4 2 5	1 0 0	4 2 5	1 0 0	4 2 5	1 0 0	3 8 9	8 9 0	3 5 4	8 2 4	3 2 0	7 5 8	3 0 0	7 0 7	2 8 0	6 1 6	2 4 0	5 6 6	2 2 0	5 1 5	4 7 0	4 2 4	4 2 0	1 3 0	3 7 4	1 6 5	3 4 1	3 0 8	1 1 5	2 7 5	1 0 0	2 3 5	2 0 2	9 1 7	2 1 8	8 0	1 8 2
P 5 U 2	4 1 6	4 1 6	1 0 0	4 1 6	1 0 0	4 1 6	1 0 0	4 1 6	1 0 0	3 7 7	8 8 0	3 4 0	8 1 6	3 1 5	7 4 0	2 9 4	6 9 7	2 7 3	6 0 2	2 3 0	5 0 1	2 5 0	1 9 0	4 5 9	4 0 8	4 0 5	1 5 7	3 7 0	1 4 7	3 3 5	1 2 6	3 0 0	1 1 5	2 6 4	9 8 5	2 2 4	8 4 5	2 0 4	1 8 7	0 4
P 5 U 3	4 3 4	4 3 4	1 0 0	4 3 4	1 0 0	4 3 4	1 0 0	4 3 4	1 0 0	3 9 9	8 9 0	3 6 9	8 2 9	3 3 8	7 5 8	3 1 7	7 1 3	2 9 7	6 6 7	2 5 1	5 2 3	2 9 6	4 8 3	4 3 5	4 3 5	3 9 4	3 5 9	1 7 0	3 1 5	3 5 9	3 2 3	1 2 5	2 8 8	1 7 3	2 5 9	2 3 5	2 1 7	9 8 7	2 8 5	1 9 7

Lampiran 4 Hasil Uji SPSS
Univariate Analysis of Variance

Notes

Output Created		11-MAR-2026 15:20:21
Comments		
Input	Data	C:\Users\Digitalisasi\Downloads\O kta\Data.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	15
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA TKG BY Perlakuan Blok /RANDOM=Blok /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA(0.05) /DESIGN=Perlakuan Blok.
Resources	Processor Time	00:00:00,03
	Elapsed Time	00:00:00,02

Between-Subjects Factors

	N	
Jenis Alat	1	3
	2	3
	3	3
	4	3
	5	3
Ulangan	1.00	5
	2.00	5
	3.00	5

Tests of Between-Subjects Effects

Dependent Variable: Tingkat Kerusakan Gulma

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	131629.768	1	131629.768	54685.175	.000
	Error	4.814	2	2.407 ^a		
Perlakuan	Hypothesis	650.660	4	162.665	141.727	.000
	Error	9.182	8	1.148 ^b		
Blok	Hypothesis	4.814	2	2.407	2.097	.185
	Error	9.182	8	1.148 ^b		

a. MS(Blok)

b. MS(Error)

Expected Mean Squares^{a,b}

Source	Variance Component		
	Var(Blok)	Var(Error)	Quadratic Term
Intercept	5.000	1.000	Intercept, Perlakuan
Perlakuan	.000	1.000	Perlakuan
Blok	5.000	1.000	
Error	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

```
UNIANOVA TKG BY Perlakuan Blok
/RANDOM=Blok
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/POSTHOC=Perlakuan(DUNCAN)
/CRITERIA=ALPHA(0.05)
/DESIGN=Perlakuan Blok.
```

Univariate Analysis of Variance

Notes

Output Created	11-MAR-2026 15:28:26
Comments	

Input	Data	C:\Users\Digitalisasi\Downloads\O kta\Data.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	15
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA TKG BY Perlakuan Blok /RANDOM=Blok /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=Perlakuan(DUNCAN) /CRITERIA=ALPHA(0.05) /DESIGN=Perlakuan Blok.
Resources	Processor Time	00:00:00,03
	Elapsed Time	00:00:00,06

Between-Subjects Factors

		N
Jenis Alat	1	3
	2	3
	3	3
	4	3
	5	3
Ulangan	1.00	5
	2.00	5
	3.00	5

Univariate Analysis of Variance

Notes

Output Created	11-MAR-2026 15:29:53
Comments	

Input	Data	C:\Users\Digitalisasi\Downloads\O kta\Data.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	15
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA Luas BY Perlakuan Blok /RANDOM=Blok /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=Perlakuan(DUNCAN) /CRITERIA=ALPHA(0.05) /DESIGN=Perlakuan Blok.
Resources	Processor Time	00:00:00,05
	Elapsed Time	00:00:00,04

Between-Subjects Factors

		N
Jenis Alat	1	3
	2	3
	3	3
	4	3
	5	3
Ulangan	1.00	5
	2.00	5
	3.00	5

Tests of Between-Subjects Effects

Dependent Variable: Luas Jangkauan Kerja

		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	6.034	1	6.034	262.178	.004
	Error	.046	2	.023 ^a		
Perlakuan	Hypothesis	4.052	4	1.013	148.570	.000
	Error	.055	8	.007 ^b		
Blok	Hypothesis	.046	2	.023	3.376	.087
	Error	.055	8	.007 ^b		

a. MS(Blok)

b. MS(Error)

Expected Mean Squares^{a,b}

Source	Variance Component		
	Var(Blok)	Var(Error)	Quadratic Term
Intercept	5.000	1.000	Intercept, Perlakuan
Perlakuan	.000	1.000	Perlakuan
Blok	5.000	1.000	
Error	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

Luas Jangkauan Kerja

Duncan^{a,b}

Jenis Alat	N	Subset			
		1	2	3	4
5	3	.0403			
2	3		.3723		
1	3		.4117		
3	3			.7873	
4	3				1.5597
Sig.		1.000	.576	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = ,007.

a. Uses Harmonic Mean Sample Size = 3,000.

b. Alpha = 0.05.

Univariate Analysis of Variance

Notes

Output Created		11-MAR-2026 15:29:19
Comments		
Input	Data	C:\Users\Digitalisasi\Downloads\O kta\Data.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	15
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA Waktu BY Perlakuan Blok /RANDOM=Blok /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=Perlakuan(DUNCAN) /CRITERIA=ALPHA(0.05) /DESIGN=Perlakuan Blok.
Resources	Processor Time	00:00:00,03
	Elapsed Time	00:00:00,03

Between-Subjects Factors

		N
Jenis Alat	1	3
	2	3
	3	3
	4	3
	5	3
Ulangan	1.00	5
	2.00	5

3.00	5
------	---

Tests of Between-Subjects Effects

Dependent Variable: Waktu Kerja

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	42474.883	1	42474.883	51.927	.019
	Error	1635.937	2	817.969 ^a		
Perlakuan	Hypothesis	91826.944	4	22956.736	33.103	.000
	Error	5548.016	8	693.502 ^b		
Blok	Hypothesis	1635.937	2	817.969	1.179	.356
	Error	5548.016	8	693.502 ^b		

a. MS(Blok)

b. MS(Error)

Expected Mean Squares^{a,b}

Source	Variance Component		
	Var(Blok)	Var(Error)	Quadratic Term
Intercept	5.000	1.000	Intercept, Perlakuan
Perlakuan	.000	1.000	Perlakuan
Blok	5.000	1.000	
Error	.000	1.000	

a. For each source, the expected mean square equals the sum of the coefficients in the cells times the variance components, plus a quadratic term involving effects in the Quadratic Term cell.

b. Expected Mean Squares are based on the Type III Sums of Squares.

Waktu Kerja

Duncan^{a,b}

Jenis Alat	N	Subset	
		1	2
4	3	5.1667	
3	3	10.3667	
1	3	19.7333	
2	3	21.5667	
5	3		209.2333
Sig.		.492	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 693,502.

a. Uses Harmonic Mean Sample Size = 3,000.

b. Alpha = 0.05.