

DAFTAR PUSTAKA

- Abdurahman, O., Sarasi, V., & Afrullah, Y. (2023). Revegetasi Lahan Bekas Tambang dengan Tanaman Multifungsi di Karang Panganten, Desa Gunungmasigit, Kabupaten Bandung Barat. *Warta LPM*, October, 432–441. <https://doi.org/10.23917/warta.v26i4.1949>
- Borrego, A. (2021). *Buku Lapang Budidaya Alpukat*. 10, 6.
- Dewa, M. J., Sensus, L., Sinapoy, M. S., Haris, O. K., Tatawu, G., & Ganing, M. Y. (2023). Kajian Hukum Perubahan Fungsi Penggunaan Kawasan Hutan untuk Usaha Pertambangan. *Halu Oleo Legal Research* |, 5(1), 352–368. <https://journal.uho.ac.id/index.php/holresch/>
- Figueiredo, R. A. de, Oliveira, A. A. de, Zacharias, M. A., Barbosa, S. M., Pereira, F. F., Cazela, G. N., Viana, J. P., & Camargo, R. A. de. (2008). Reproductive ecology of the exotic tree *Muntingia calabura* L. (Muntingiaceae) in southeastern Brazil. *Revista Árvore*, 32(6), 993–999. <https://doi.org/10.1590/s0100-67622008000600004>
- Firgiyanto, R., Antika, H., Elfina, V., Kusparwanti, T. R., Rohman, H. F., Siswadi, E., & Sukri, M. Z. (2023). Respons Pertumbuhan dan Hasil Produksi Pegagan pada Pemberian Pupuk Organik Cair dan Pupuk Kandang Sapi. *Vegetalika*, 12(3), 243. <https://doi.org/10.22146/veg.82789>
- Hamid, M. K. (2017). Aktivitas Antipenuaan Ekstrak Air Daun Kersen (*Muntingia calabura*) terhadap Jumlah Fibroblas Kulit. *Karya Tulis Ilmiah*.
- Hermanto, C., Indriani, ni luh putu, & Hardianti, S. (2013). Keragaman dan Kekayaan Buah Tropika Nusantara. *Badan Penelitian Dan Pengembangan Pertanian Kementerian Pertanian*, 68–70.
- Khair, H. (2013). Pemanfaatan biji alpukat sebagai pembuatan pati. *Agrium*, 18(2), 130–138.
- Kumar, R., Patel, S. V., Yadav, S., Singh, V., Kumar, M., & Kumar, M. (2020). Hydrogel and its effect on soil moisture status and plant growth: A review. ~ 1746 ~ *Journal of Pharmacognosy and Phytochemistry*, 9(3), 1746–1753. www.phytojournal.com
- Lamichaney, S., Kumar, R., Sharma, L., & Tare, K. (2022). *Influence of Organic Manure and Hydrogel-based Irrigation Scheduling on Brown Mustard (Brassica juncea L .)*. <https://doi.org/10.18805/ag.D-6280.Submitted>
- Nasution, M. S. (2020). Identifikasi Tanaman Alpukat (*Persea americana*) sebagai

Tanaman Multi Purpose Tree Species (MPTS) di Tiga Kabupaten Dataran Tinggi di Sumatera Utara. *Universitas Sumatera Utara*, 49.

Nau, G. W. (2024) Fisiologi Tumbuhan, Bandung: Widina Media Utama.

Neidel, J. D., Astri, P., Consuji, H., & Mateo-Vega, J. (2011). Restoring Forests For Communities , Biodiversity , and Ecosystem Services. In *Environmental Leadership & Training Initiative*.

Nurholis, N., & Saleh, I. (2019). Hubungan Karakteristik Morfofisiologi Tanaman Kersen (*Muntingia calabura*). *Agrovigor: Jurnal Agroekoteknologi*, 12(2), 47–52. <https://doi.org/10.21107/agrovigor.v12i2.5418>

Pratiwi, Narendra, B. H., Siregar, C. A., Turjaman, M., Hidayat, A., Rachmat, H. H., Mulyanto, B., Suwardi, Iskandar, Maharani, R., Rayadin, Y., Prayudyaningsih, R., Yuwati, T. W., Prematuri, R., & Susilowati, A. (2021). Managing and reforesting degraded post-mining landscape in Indonesia: A review. *Land*, 10(6). <https://doi.org/10.3390/land10060658>

Prayudyaningsih, R. (2014). *Pertumbuhan Semai Alstonia scholaris, Acacia auriculiformis dan Muntingia calabura Yang Diinokulasi Fungi Mikoriza Arbuskula Pada Media Tanah Bekas Tambang Kapur (Growth of Alstonia scholaris, Acacia auriculiformis and Muntingia calabura Seedlings that wa.* 13–24.

Rahmadani, N., Septiani, K. S., Yulianti, R., Handayani, I. S., Haitomi, A., Al-Ghani, M. G., Febrinatasia, W., Murdiyanti, R., Febrinatasia, W., Sulistiyo, R. B., Uthami, M., Rahmi, F., Archi, M., Parura, N. L., Ngenda, F. V., Annida, S. F., Dewi, R. S., Fauzia, S., Ninawati, ... Haekal, A. F. (2022). *Tentang Etnobiologi Di Kalimantan Selatan* (Issue March).

Rahman, A., Ngapiyatun, S., Rahman, A., Ngapiyatun, S., Perkebunan, P., Pertanian, J. M., Pertanian, P., Samarinda, N., Hutan, P. H., Pertanian, J. T., Pertanian, P., & Samarinda, N. (2021). Utilization Of Ex-Mining Soil For The Growth Of Plantation Crops. *Jurnal Sains STIPER*, 11(1), 31–38.

Rosandari, T., Thayib, H. M., & Krisdiawati, N. (2013). Variasi Penambahan Gula Dan Lama Inkubasi Papa Proses Fermentasi Cider Kersen (*Muntingia calabura* L). *Jurnal Ilmiah Cendekia Eksakta*, Vol 08(3), 1–11.

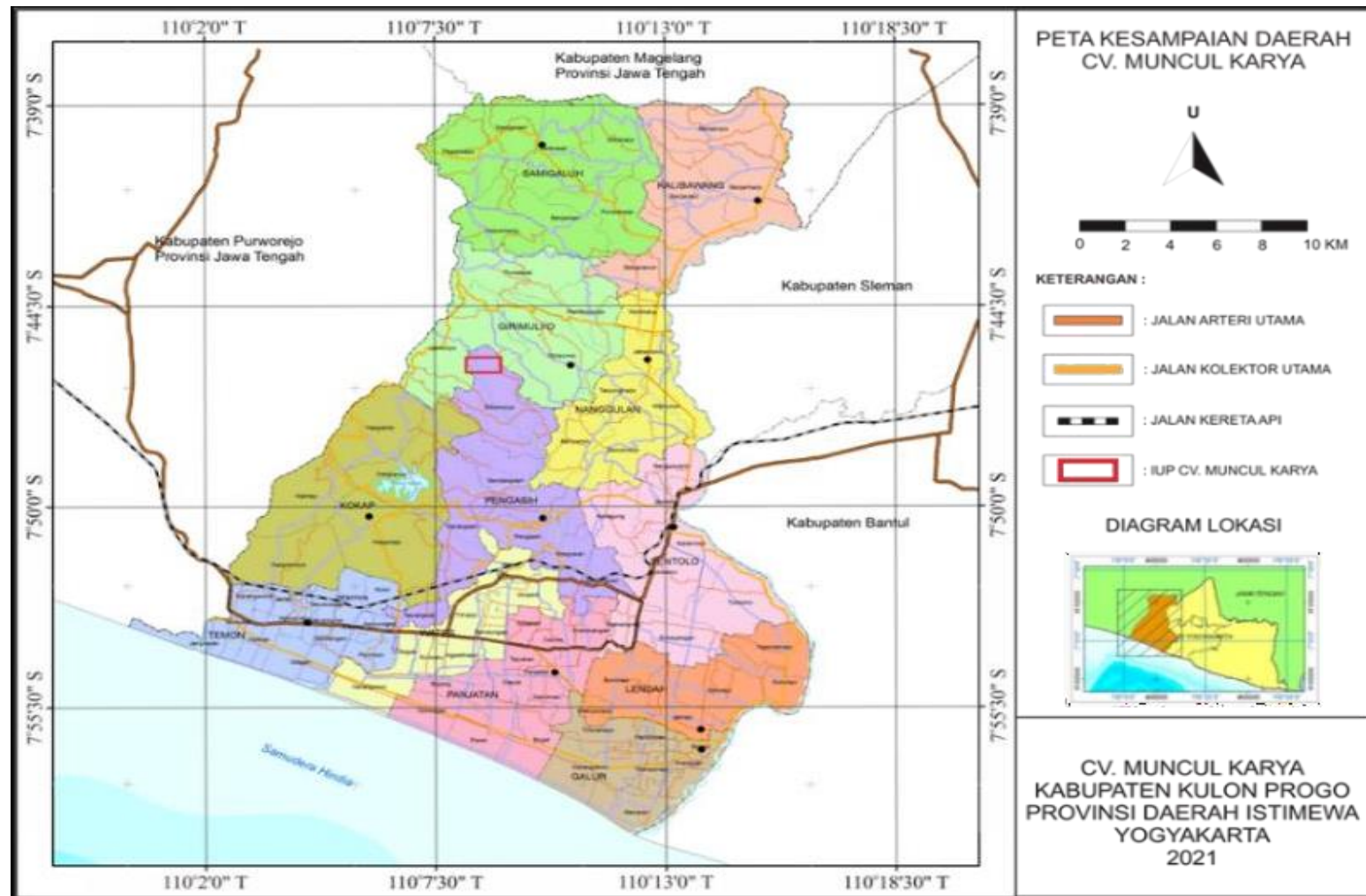
Royal Botanic Gardens, Kew. (2024). *Persea americana* Mill. Plants of The World Online. Retrieved July 09, 2025, <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:325623-2>

Setiadi, Y., & Adinda. (2013). Evaluasi Pertumbuhan Pohon di Lokasi Revegetasi Lahan Pasca. *Jurnal Silvikutur Tropika*, 4(1), 19–22.

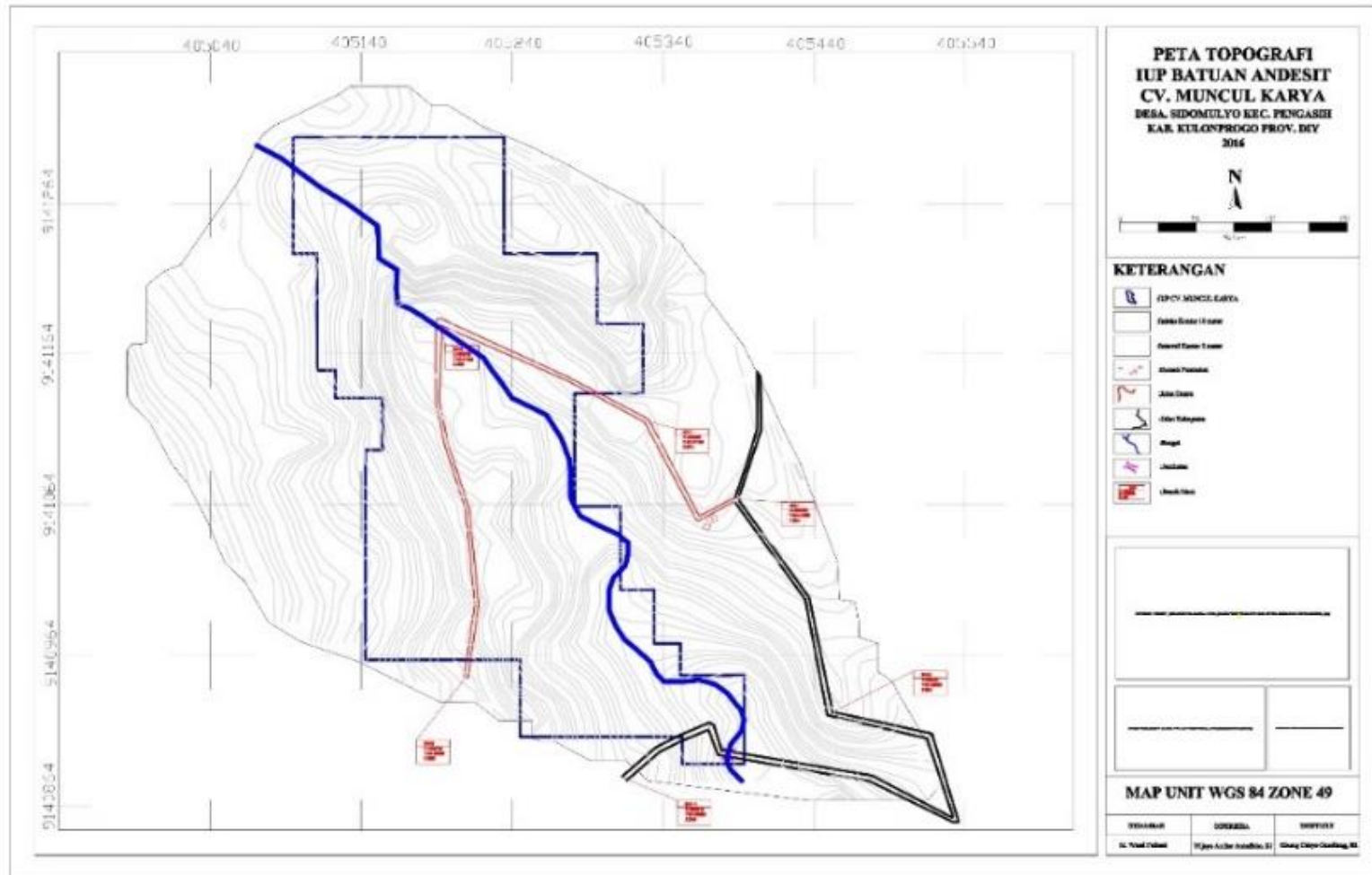
- Susilawati, M. (2015). Bahan Ajar Perancangan Percobaan. *Jurusan Matematika Fakultas Matematika Dan Ilmu Pengetahuan Alam Universitas Udayana*, 141.
- Syachroni, S. H., Rosianty, Y., & Samsuri, G. S. (2019). Daya Tumbuh Tanaman Pionir Pada Area Bekas Tambang Timah Di Kecamatan Bakam, Provinsi Bangka Belitung. *Sylva: Jurnal Ilmu-Ilmu Kehutanan*, 7(2), 78. <https://doi.org/10.32502/sylva.v7i2.1544>
- Tampubolon, G., Mahbub, I. A., & Neliyati. (2019). Ameliorasi Lahan Bekas Tambang Batubara Dalam Mendukung Pertumbuhan Tanaman Alpukat (*Persea americana* Mill .). *Jurnal Silva Tropika*, 3(1), 84–94.
- Tjahyana, B. E., & Ferry, Y. (2011). Revegetasi Lahan Bekas Tambang Timah dengan Tanaman Karet (*Hevea brasiliensis*). *Prosiding Seminar Nasional Inovasi Perkebunan*, 117–123.
- Waniatri, W., Muslihudin, M., & Lestari, S. (2022). Dampak Sosial, Ekonomi dan Lingkungan Pertambangan Pasir di Desa Luragung Landeuh Kuningan, Jawa Barat. *Jurnal Ilmu Lingkungan*, 20(2), 279–290. <https://doi.org/10.14710/jil.20.2.279-290>
- Wijayanti, W., Mutaqin, B., & Iskandar, D. T. (2021). Evaluation of revegetation practices in post-mined areas of Indonesia. *Biotropia*, 28(1), 1–12. <https://doi.org/10.11598/btb.2021.28.1.1346>
- Zahara, M., & Suryady. (2018). Kajian Morfologi dan Review Fitokimia Tumbuhan Kersen. *Jurnal Ilmiah Pendidikan Dan Pembelajaran Fakultas Tasbiyah Universitas Muhammadiyah Aceh*, 5(2), 68–74.
- Zulkarnain. (2013). *30104-ID-analisis-penetapan-kriteria-kawasan-hutan (skoring hutan)*. XII(2), 230–243.

LAMPIRAN

Lampiran 1. Peta Lokasi Penelitian di CV. Muncul Karya Desa Sidomulyo



Lampiran 2 .Peta Topografi Lokasi Penelitian



Lampiran 3. Data Curah Hujan 16 Feb- 16 Mei

-BEGIN HEADER-

NASA/POWER Source Native Resolution Daily Data

Dates (month/day/year): 02/16/2025 through 05/16/2025 in LST

Location: latitude -7.7684 longitude 110.1388

elevation from MERRA-2: Average for 0.5 x 0.625 degree lat/lon region = 49.37 meters

The value for missing source data that cannot be computed or is outside of the sources availability range: -999

parameter(s):

PRECTOTCORR MERRA-2 Precipitation Corrected (mm/day)

YEAR	DOY	PRECTOTCORR	Tanggal	YEAR	DOY	PRECTOTCORR	Tanggal
2025	47	10.8	2/16/2025	2025	92	17.37	4/2/2025
2025	48	12.19	2/17/2025	2025	93	3.74	4/3/2025
2025	49	5.74	2/18/2025	2025	94	2.17	4/4/2025
2025	50	15.95	2/19/2025	2025	95	0.32	4/5/2025
2025	51	18.65	2/20/2025	2025	96	1.81	4/6/2025
2025	52	3.16	2/21/2025	2025	97	4.7	4/7/2025
2025	53	2.4	2/22/2025	2025	98	9.45	4/8/2025
2025	54	31	2/23/2025	2025	99	60.23	4/9/2025
2025	55	13.06	2/24/2025	2025	100	20.28	4/10/2025
2025	56	8.18	2/25/2025	2025	101	6.68	4/11/2025
2025	57	11.29	2/26/2025	2025	102	9.31	4/12/2025
2025	58	5.35	2/27/2025	2025	103	3.9	4/13/2025
2025	59	12.66	2/28/2025	2025	104	10.27	4/14/2025
2025	60	3.92	3/1/2025	2025	105	0.47	4/15/2025
2025	61	6.78	3/2/2025	2025	106	0.47	4/16/2025
2025	62	13.23	3/3/2025	2025	107	4.19	4/17/2025
2025	63	18.63	3/4/2025	2025	108	6.29	4/18/2025
2025	64	2.43	3/5/2025	2025	109	2.29	4/19/2025
2025	65	23.87	3/6/2025	2025	110	5.24	4/20/2025
2025	66	5.51	3/7/2025	2025	111	13.63	4/21/2025
2025	67	18.43	3/8/2025	2025	112	18.43	4/22/2025
2025	68	40.94	3/9/2025	2025	113	15.44	4/23/2025
2025	69	17.5	3/10/2025	2025	114	6.02	4/24/2025
2025	70	4.61	3/11/2025	2025	115	9.07	4/25/2025
2025	71	6.86	3/12/2025	2025	116	4.4	4/26/2025

Lanjutan Lampiran 3

2025	72	5.24	3/13/2025	2025	117	0.06	4/27/2025
2025	73	4.3	3/14/2025	2025	118	0.13	4/28/2025
2025	74	8.71	3/15/2025	2025	119	0.15	4/29/2025
2025	75	18.96	3/16/2025	2025	120	0.54	4/30/2025
2025	76	10.21	3/17/2025	2025	121	1.25	5/1/2025
2025	77	11.92	3/18/2025	2025	122	11.67	5/2/2025
2025	78	1.73	3/19/2025	2025	123	31.47	5/3/2025
2025	79	0.5	3/20/2025	2025	124	11.36	5/4/2025
2025	80	1.69	3/21/2025	2025	125	16.51	5/5/2025
2025	81	4.68	3/22/2025	2025	126	11.2	5/6/2025
2025	82	1.52	3/23/2025	2025	127	4.69	5/7/2025
2025	83	2.07	3/24/2025	2025	128	5.69	5/8/2025
2025	84	0.62	3/25/2025	2025	129	7.41	5/9/2025
2025	85	1.83	3/26/2025	2025	130	1.62	5/10/2025
2025	86	3.67	3/27/2025	2025	131	11.41	5/11/2025
2025	87	12.95	3/28/2025	2025	132	3.1	5/12/2025
2025	88	8.05	3/29/2025	2025	133	14.49	5/13/2025
2025	89	5.25	3/30/2025	2025	134	35.12	5/14/2025
2025	90	1.8	3/31/2025	2025	135	4.99	5/15/2025
2025	91	8.87	4/1/2025	2025	136	7.36	5/16/2025

Lampiran 4. Data Curah Hujan 2014-2023

ADER-													
NER Source Native Resolution Monthly and Annual													
nth/day/year): 01/01/2013 through 12/31/2023 in LST													
.atitude -7.7684 Longitude 110.1388													
from MERRA-2: Average for 0.5 x 0.625 degree lat/lon region = 49.37 meters													
for missing source data that cannot be computed or is outside of the sources availability range: -999													
r(s):													
ORR_SUM MERRA-2 Precipitation Corrected Sum (mm/day)													
DER-													

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
2013	403.14	338.39	188.65	238.68	223.81	319.7	233.65	64.31	46.86	64.47	205.03	278.86	2605.55
2014	657.33	300.37	218.75	164.89	156.11	169.39	303.7	54.03	1.97	61.56	318.96	389.93	2796.99
2015	390.3	382.42	298.43	231.51	153.95	56.57	10.51	14.92	1.18	2.3	354.65	310.48	2207.22
2016	287.64	394.89	199.8	289.83	268.65	333.57	300.23	216.05	491.55	533.53	382.91	392.26	4090.91
2017	370.93	407.79	201.6	226.64	147.2	169.18	39.48	2.36	100.09	377.73	331	337.77	2711.77
2018	248.9	420.4	332.6	348.72	32.7	53.96	2.59	3.79	19.02	56.85	418.31	539.63	2477.47
2019	534.65	387.03	256.17	284.13	86.73	3.4	4.78	3.23	11.25	21.8	91.35	403.46	2087.98
2020	326.99	432.37	646.16	450.73	801.04	261.29	69.01	45.72	112.84	547.87	427.92	474.78	4596.72
2021	418.3	619.28	327.13	208.51	193.4	246.68	50.78	70.94	185.95	192.76	423.84	461.51	3399.08
2022	374.44	259.3	325.94	327.37	260.22	269.95	153.25	148.95	242.26	308.97	545.54	363.41	3579.6
2023	234.33	388.26	310.96	275.22	171.68	97.06	110.12	8.63	3.17	16.98	223.9	291.64	2131.95

Lanjutan Lampiran 4

Tahun	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Basah	Kering	Lembab	Q%	Tipe Iklim
2014	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Lembab	Kering	Lembab	Basah	Basah	8	1	2	12.50	sangat Basah
2015	Basah	Basah	Basah	Basah	Basah	Kering	Kering	Kering	Kering	Kering	Basah	Basah	7	5	0	71.43	Sedang
2016	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	12	0	0	0.00	Sangat basah
2017	Basah	Basah	Basah	Basah	Basah	Basah	Kering	Kering	Basah	Basah	Basah	Basah	10	2	0	20.00	Basah
2018	Basah	Basah	Basah	Basah	Kering	Kering	Kering	Kering	Kering	Kering	Basah	Basah	6	6	0	100.00	Agak Kering
2019	Basah	Basah	Basah	Basah	Lembab	Kering	Kering	Kering	Kering	Kering	Lembab	Basah	5	5	2	100.00	Agak Kering
2020	Basah	Basah	Basah	Basah	Basah	Basah	Lembab	Kering	Basah	Basah	Basah	Basah	10	1	1	10.00	Sangat basah
2021	Basah	Basah	Basah	Basah	Basah	Basah	Kering	Lembab	Basah	Basah	Basah	Basah	10	1	1	10.00	Sangat basah
2022	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	Basah	12	0	0	0.00	Sangat basah
2023	Basah	Basah	Basah	Basah	Basah	Lembab	Basah	Kering	Kering	Kering	Kering	Basah	7	4	1	57.14	Agak basah
Rata-rata													8.7	2.5	7	28.74	Basah

Lampiran 5. Rata-Rata Pertumbuhan Diameter Tanaman Alpukat (mm)

Stimulan	Minggu Ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	5.5	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.8	5.8	5.9	5.9	5.9
H-U2	5.6	5.6	5.8	5.8	5.8	5.8	5.8	5.9	5.9	6	6.2	6.2	6.2
H-U3	6.1	6.1	6.4	6.4	6.6	6.7	6.7	6.7	6.7	6.7	7.1	7.1	7.1
H-U4	5	5.1	5.5	6.2	6.2	6.5	6.5	6.3	6.7	6.7	6.7	6.7	6.8
H-U5	5.7	5.7	6	6.2	6.2	6.2	6.5	6.6	6.6	6.7	7	7.1	7.1
H-U6	5.7	5.7	5.8	5.8	5.8	5.8	5.8	5.8	6.3	6.3	6.9	6.9	6.9
Jumlah	33.6	33.8	35.1	36	36.2	36.6	36.9	36.9	38	38.2	39.8	39.9	40
Rerata	5.60	5.63	5.85	6.00	6.03	6.10	6.15	6.15	6.33	6.37	6.63	6.65	6.67
K-U1	5.6	5.6	5.6	5.6	5.6	5.6	5.7	5.7	5.9	5.9	5.9	5.9	5.9
K-U2	6	6.1	6.8	6.8	6.8	6.8	6.9	6.9	6.9	7.2	7.2	7.2	7.4
K-U3	5.2	5.5	5.8	5.8	5.8	6.1	6.1	6.1	6.1	6.5	6.5	6.5	6.6
K-U4	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7
K-U5	5.8	5.8	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.2	6.2
K-U6	5.1	5.1	5.7	5.7	6.2	6.2	6.2	6.3	6.3	6.3	6.3	6.3	6.3
Jumlah	34.2	34.6	36.5	36.5	37	37.4	37.6	37.8	38	38.7	38.9	38.8	39.1
Rerata	5.70	5.77	6.08	6.08	6.17	6.23	6.27	6.30	6.33	6.45	6.48	6.47	6.52
P-U1	5.1	5.1	5.5	5.5	5.6	5.9	5.9	5.9	5.9	6.1	6.3	6.6	6.6
P-U2	6.5	6.5	6.9	7.2	7.2	7.3	7.3	7.4	7.4	7.4	7.7	7.7	7.7
P-U3	5.7	5.7	6.1	6.2	6.4	6.8	6.8	6.9	7	7.4	7.5	7.6	7.7
P-U4	5.4	5.4	5.6	5.7	5.8	6.1	6.1	6.1	6.2	6.2	6.3	6.9	7.4
P-U5	6.1	6.2	6.5	6.6	6.8	7.1	7.4	7.6	7.6	7.6	7.7	7.7	8.2
P-U6	6.2	6.2	6.2	6.3	6.4	6.9	6.6	6.6	6.6	6.6	6.7	6.7	6.9
Jumlah	35	35.1	36.8	37.5	38.2	40.1	40.1	40.5	40.7	41.3	42.2	43.2	44.5
Rerata	5.83	5.85	6.13	6.25	6.37	6.68	6.68	6.75	6.78	6.88	7.03	7.20	7.42

Lampiran 6. Rata-Rata Pertumbuhan Diameter Tanaman Kersen (mm)

Stimulan	Minggu Ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	3.3	3.3	3.6	3.6	3.7	3.8	3.8	3.9	3.9	3.9	4.5	4.5	4.5
H-U2	3	3	3.6	3.8	4.1	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.3
H-U3	3.7	3.7	3.7	3.7	3.7	3.8	4.1	4.6	5.1	5.4	5.6	6.1	6.8
H-U4	3.5	3.5	3.6	3.8	3.9	4	4	4.1	4.1	4.2	4.2	4.2	4.3
H-U5	3	3	4.4	5.1	5.2	5.5	5.7	6.3	6.3	6.4	7.1	7.2	7.9
H-U6	4.5	4.5	4.7	4.7	4.8	4.9	4.9	5	5	5	5.1	5.1	5.1
Jumlah	21.0	21.0	23.6	24.7	25.4	26.2	26.7	28.1	28.6	29.2	30.8	31.4	32.9
Rerata	3.50	3.50	3.93	4.12	4.23	4.37	4.45	4.68	4.77	4.87	5.13	5.23	5.48
K-U1	4.6	4.6	5	5.7	6.3	6.9	7.5	8.6	10	10.9	12.4	12.8	14.6
K-U2	4.1	4.1	4.2	4.2	4.3	4.5	4.8	5.1	5.3	5.3	5.4	5.4	5.6
K-U3	2.9	2.9	3.1	3.4	3.4	3.4	3.7	3.9	4.1	0	0	0	0
K-U4	3.4	3.4	3.6	3.7	3.9	4.5	4.9	5.3	5.8	5.9	6.9	6.9	7.4
K-U5	3.5	3.5	4.1	4.1	4.1	4.2	4.4	4.8	5.2	5.5	5.6	5.7	6
K-U6	4.1	4.1	4.3	4.3	4.5	4.6	4.7	5.1	5.1	5.2	5.3	5.3	5.3
Jumlah	22.6	22.6	24.3	25.4	26.5	28.1	30	32.8	35.5	32.8	35.6	36.1	38.9
Rerata	3.77	3.77	4.05	4.23	4.42	4.68	5.00	5.47	5.92	5.47	5.93	6.02	6.48
P-U1	4	4.1	4.1	4.2	4.2	4.2	4.3	4.4	4.6	4.7	5.1	5.1	5.4
P-U2	5.6	5.8	5.8	6.5	7.2	8.4	8.8	9.5	12.2	13.4	16	17.1	20.5
P-U3	3.8	3.8	4	4.1	4.3	4.8	5.2	5.8	6.3	6.9	7.8	8.6	9.4
P-U4	4.1	4.3	4.3	4.4	4.5	5	5.7	6.3	7.4	6.9	8	8.7	10.5
P-U5	5.2	5.2	5.5	5.8	5.8	5.9	5.9	6.1	6.1	6.5	6.5	6.5	6.6
P-U6	3.1	3.1	5	5.2	5.8	5.8	6	6.9	6.9	7	7.1	7.1	7.2
Jumlah	25.8	26.3	28.7	30.2	31.8	34.1	35.9	39.0	43.5	45.4	50.5	53.1	59.6
Rerata	4.30	4.38	4.78	5.03	5.30	5.68	5.98	6.50	7.25	7.57	8.42	8.85	9.93

Lampiran 7. Rata-Rata Pertumbuhan Tinggi Tanaman Alpukat (cm)

Stimulan	Minggu ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	28	28	28	28	28	29	29	29	29	29	30	30	30
H-U2	37	37	38	38	38	38	38	39	39	39	44	44	44
H-U3	33	33	31	31	34	35	35	35	35	36	36	36	37
H-U4	38	38	38	38	38	39	39	39	40	40	40	40	42
H-U5	47	48	47	47	43	50	50	51	51	51	51	51	51
H-U6	37	37	41	42	42	44	44	44	45	46	46	46	46
Jumlah	220	221	223	224	223	235	235	237	239	241	247	247	250
Rerata	36.67	36.83	37.17	37.33	37.17	39.17	39.17	39.50	39.83	40.17	41.17	41.17	41.67
K-U1	33	33	34	34	34	34	34	35	35	35	35	37	37
K-U2	41	42	46	46	48	49	49	49	49	49	50	50	50
K-U3	40	40	42	43	44	44	44	44	45	45	45	46	47
K-U4	51	52	52	52	52	52	52	52	53	53	53	53	53
K-U5	41	41	41	41	41	44	44	45	45	45	45	45	45
K-U6	37	37	39	40	41	42	42	42	42	43	43	43	43
Jumlah	243	245	254	256	260	265	265	267	269	270	271	274	275
Rerata	40.50	40.83	42.33	42.67	43.33	44.17	44.17	44.50	44.83	45.00	45.17	45.67	45.83
P-U1	37	38	44	44	46	46	46	48	48	48	48	49	49
P-U2	43	43	46	48	50	50	50	51	51	51	54	55	55
P-U3	45	45	48	49	50	52	52	53	53	53	53	54	55
P-U4	39	39	40	41	41	41	41	41	42	45	45	45	46
P-U5	22	22	25	42	45	49	49	49	49	49	51	51	51
P-U6	35	35	36	36	37	37	37	37	37	38	38	39	39
Jumlah	221	222	239	260	269	275	275	279	280	284	289	293	295
Rerata	36.83	37.00	39.83	43.33	44.83	45.83	45.83	46.50	46.67	47.33	48.17	48.83	49.17

Lampiran 8. Rata-Rata Pertumbuhan Tinggi Tanaman Kersen (cm)

Stimulan	Minggu ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	31	31	41	41	41	43	46	49	51	53	54	56	56
H-U2	45	46	53	55	64	65	65	65	65	65	65	67	67
H-U3	35	35	42	44	47	49	53	55	58	61	69	73	76
H-U4	48	49	49	50	55	56	56	56	56	56	56	56	56
H-U5	40	40	51	52	58	58	61	67	70	74	82	82	85
H-U6	56	58	61	62	65	65	65	66	66	67	68	68	70
Jumlah	255	259	297	304	330	336	346	358	366	376	394	402	410
Rerata	42.50	43.17	49.50	50.67	55.00	56.00	57.67	59.67	61.00	62.67	65.67	67.00	68.33
K-U1	41	41	43	45	45	56	59	65	68	89	92	111	119
K-U2	51	51	54	58	62	64	64	64	64	70	72	73	76
K-U3	35	35	37	37	37	37	38	43	44	0	0	0	0
K-U4	35	35	41	43	49	52	55	57	61	68	71	72	78
K-U5	43	43	46	47	49	49	50	52	54	56	58	59	61
K-U6	49	50	58	61	63	65	66	68	68	69	68	70	71
Jumlah	254	255	279	291	305	323	332	349	359	352	361	385	405
Rerata	42.33	42.50	46.50	48.50	50.83	53.83	55.33	58.17	59.83	58.67	60.17	64.17	67.50
P-U1	36	36	49	50	51	51	55	58	60	61	64	68	73
P-U2	48	51	62	70	74	80	87	93	103	119	135	141	146
P-U3	49	49	54	58	62	63	68	72	75	81	89	94	99
P-U4	48	50	51	51	55	69	72	76	80	88	98	108	115
P-U5	34	34	51	56	65	65	65	66	66	69	69	69	70
P-U6	30	34	48	51	62	62	63	63	63	65	66	68	71
Jumlah	245	254	315	336	369	390	410	428	447	483	521	548	574
Rerata	40.83	42.33	52.50	56.00	61.50	65.00	68.33	71.33	74.50	80.50	86.83	91.33	95.67

Lampiran 9. Rata-Rata Pertumbuhan Jumlah Daun Tanaman Alpukat (helai)

Stimulan	Minggu ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	19	19	19	19	19	19	19	19	19	19	19	19	19
H-U2	10	10	10	10	10	10	10	10	10	10	10	10	10
H-U3	6	6	6	6	6	6	6	6	6	6	6	6	6
H-U4	7	7	8	8	8	8	8	8	8	8	8	9	19
H-U5	7	7	7	7	7	7	7	7	7	7	7	7	7
H-U6	9	9	9	9	9	9	9	9	9	9	9	9	9
Jumlah	58	58	59	59	59	59	59	59	59	59	59	60	70
Rerata	9.7	9.7	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	10.0	11.7
K-U1	7	7	7	7	7	7	7	7	7	7	7	7	7
K-U2	7	7	7	7	7	7	7	7	7	7	7	7	7
K-U3	7	7	7	7	7	7	7	7	7	7	7	12	12
K-U4	5	5	5	5	5	5	5	5	5	5	5	5	5
K-U5	6	6	6	6	13	13	13	13	13	13	13	13	13
K-U6	9	9	9	10	10	10	10	10	10	10	10	10	10
Jumlah	41	41	41	42	49	49	49	49	49	49	49	54	54
Rerata	6.83	6.83	6.83	7.00	8.17	8.17	8.17	8.17	8.17	8.17	8.17	9.00	9.00
P-U1	12	12	12	12	12	12	12	15	15	15	15	15	15
P-U2	6	6	7	7	7	7	7	7	7	7	7	7	7
P-U3	11	11	13	13	7	13	13	14	14	16	22	22	25
P-U4	12	12	13	14	14	14	14	20	25	27	28	32	30
P-U5	8	8	8	8	8	8	8	11	18	20	16	16	16
P-U6	10	10	10	10	10	10	10	10	10	10	10	10	10
Jumlah	59	59	63	64	58	64	64	77	89	95	98	102	103
Rerata	9.8	9.8	10.5	10.7	9.7	10.7	10.7	12.8	14.8	15.8	16.3	17.0	17.2

Lampiran 10. Rata-Rata Pertumbuhan Jumlah Daun Tanaman Kersen (helai)

Stimulan	Minggu ke-												
	0	1	2	3	4	5	6	7	8	9	10	11	12
H-U1	18	20	26	28	32	35	36	38	38	42	43	46	49
H-U2	10	10	10	16	20	25	27	30	32	35	35	35	30
H-U3	20	22	28	34	41	47	52	57	62	67	79	98	114
H-U4	18	18	12	14	22	28	28	28	28	37	41	46	60
H-U5	17	18	36	41	42	44	48	53	56	68	101	109	126
H-U6	21	22	28	28	5	37	35	36	36	39	35	37	41
Jumlah	104	110	140	161	162	216	226	242	252	288	334	371	420
Rerata	17.33	18.33	23.33	26.83	27.00	36.00	37.67	40.33	42.00	48.00	55.67	61.83	70.00
K-U1	23	27	49	62	7	84	98	121	156	204	210	216	222
K-U2	19	19	24	27	29	33	33	34	34	38	38	38	44
K-U3	11	11	16	18	18	20	22	24	26	0	0	0	0
K-U4	14	14	26	28	35	44	49	55	58	74	89	105	122
K-U5	19	19	27	29	35	38	41	44	46	46	56	66	80
K-U6	19	19	21	27	30	34	37	44	44	45	43	44	46
Jumlah	105	109	163	191	154	253	280	322	364	407	436	469	514
Rerata	17.50	18.17	27.17	31.83	25.67	42.17	46.67	53.67	60.67	67.83	72.67	78.17	85.67
P-U1	17	17	26	30	31	33	35	37	39	42	52	54	65
P-U2	26	30	62	84	95	114	151	202	242	290	348	403	464
P-U3	18	18	25	30	35	39	44	51	60	70	83	103	128
P-U4	21	22	35	45	49	53	55	59	62	85	144	204	211
P-U5	18	18	33	36	33	44	46	49	51	54	68	70	85
P-U6	18	18	50	55	40	66	69	77	82	102	114	119	128
Jumlah	118	123	231	280	283	349	400	475	536	643	809	953	1081
Rerata	19.67	20.50	38.50	46.67	47.17	58.17	66.67	79.17	89.33	107.17	134.83	158.83	180.17

Lampiran 11. Pertumbuhan Diameter Tanaman dan Hasil Uji Anova Dua Arah

Jenis	Ulangan	Stimulan			Total
		Hidrogel	Kontrol	Pupuk	
Kersen	1	1.2	10	1.4	12.6
	2	1.3	1.5	14.9	17.7
	3	3.1	-2.9	5.6	5.8
	4	0.8	4	6.4	11.2
	5	4.9	2.5	1.4	8.8
	6	0.6	1.2	4.1	5.9
Sub total		11.9	16.3	33.8	62
Alpukat	1	0.4	0.3	1.5	2.2
	2	0.6	1.4	1.2	3.2
	3	1	1.4	2	4.4
	4	1.8	0.2	2	4
	5	1.4	0.4	2.1	3.9
	6	1.2	1.2	0.7	3.1
Sub total		6.4	4.9	9.5	20.8
Total		18.3	21.2	43.3	82.8

SV	dB	JK	KT	F	F Tab 5%
Jenis Tanaman (J)	1	47.151	47.151	6.06*	4.170
Stimulan (S)	2	31.218	15.581	2.00 ^{ns}	3.316
Interaksi (J*S)	2	15.407	7.704	0.99 ^{ns}	3.316
Galat (Error)	30	233.400	7.78		
Total	36	327.176			

Keterangan:

ns = Tidak berbeda nyata

* = Berbeda nyata

Lampiran 12. Pertumbuhan Tinggi Tanaman, Hasil Uji Anova Dua Arah dan Uji Tukey

Jenis	Ulangan	Stimulan			Total
		Hidrogel	Kontrol	Pupuk	
Kersen	1	25	78	37	140
	2	22	25	98	145
	3	41	-35	50	56
	4	8	43	67	118
	5	45	18	36	99
	6	14	22	41	77
Sub total		155	151	329	635
Alpukat	1	2	4	12	18
	2	7	9	12	28
	3	4	7	10	21
	4	4	2	7	13
	5	4	4	29	37
	6	9	6	4	19
Sub total		30	32	74	136
Total		185	183	403	771

SV	dB	JK	KT	F	F Tab 5%
Jenis Tanaman (J)	1	6916.694	6916.694	18.518*	4.170
Stimulan (P)	2	2664.667	1332.333	3.567*	3.316
Interaksi (J*S)	2	984.222	492.111	1.318 ^{ns}	3.316
Galat (Error)	30	11205.167	373.506		
Total	36	38283.000			

Keterangan:

ns = Tidak berbeda nyata

* = Berbeda nyata

Perlakuan (I)	Perlakuan (J)	Selisih Rata-Rata (I-J)	HSD
Hidrogel	Kontrol	0.41 ^{ns}	19.576
Hidrogel	Pupuk	18.16 ^{ns}	19.576
Pupuk	Kontrol	17.75 ^{ns}	19.576

Keterangan:

ns = Tidak berbeda nyata

* = Berbeda nyata

Lampiran 13. Pertumbuhan Jumlah Daun Tanaman dan Hasil Uji Anova Dua Arah

Jenis	Ulangan	Stimulan			Total
		Hidrogel	Kontrol	Pupuk	
Kersen	1	31	199	48	278
	2	20	25	438	483
	3	94	-11	110	193
	4	42	108	190	340
	5	109	61	67	237
	6	20	27	110	157
Sub total		316	409	963	1688
Alpukat	1	0	0	3	3
	2	0	0	1	1
	3	0	5	14	19
	4	12	0	18	30
	5	0	7	12	19
	6	0	1	0	1
Sub total		0	0	3	73
Total		12	13	48	73

SV	dB	JK	KT	F	F Tab 5%
Jenis Tanaman (J)	1	78680.250	78680.250	16.663*	4.170
Stimulan (S)	2	23028.722	11514.361	2.439 ^{ns}	3.316
Interaksi (J*S)	2	17925.500	8962.750	1.898 ^{ns}	3.316
Galat (Error)	30	141654.500	4721.817		
Total	36	340907.000			

Keterangan:

ns = Tidak berbeda nyata

* = Berbeda nyata

Lampiran 14. Persentase Hidup Tanaman dan Hasil Uji Anova Dua Arah

Jenis Tanaman	Nama latin	Stimulan	Jumlah Tanaman Hidup	Rata-Rata Hidup (%)
Kersen	<i>Muntingia calabura</i>	Hidrogel	6	100
Kersen	<i>Muntingia calabura</i>	Kontrol	5	83,33
Kersen	<i>Muntingia calabura</i>	Pupuk	6	100
Total			17	94,44
Alpukat	<i>Persea americana</i>	Hidrogel	6	100
Alpukat	<i>Persea americana</i>	Kontrol	6	100
Alpukat	<i>Persea americana</i>	Pupuk	6	100
Total			18	100

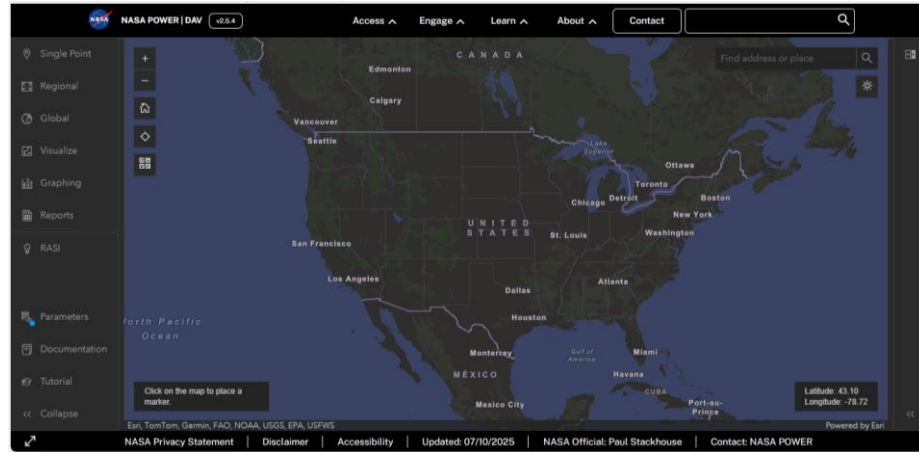
SV	dB	JK	KT	F	F Tab 5%
Jenis Tanaman (J)	1	277.778	277.778	1.000 ^{ns}	4.170
Stimulan (S)	2	555.556	277.778	1.000 ^{ns}	3.316
Interaksi (J*S)	2	555.556	277.778	1.000 ^{ns}	3.316
Galat (Error)	30	350000.000	277.778		
Total	36	340907.000			

Keterangan:

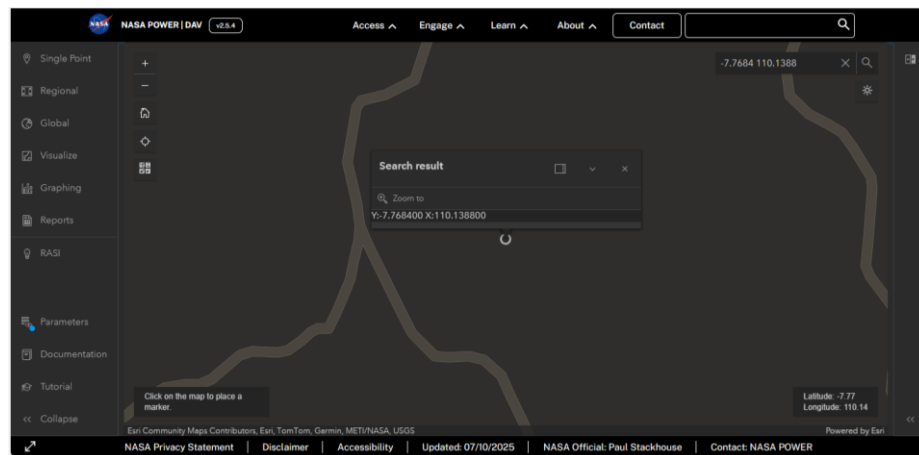
ns = Tidak berbeda nyata

* = Berbeda nyata

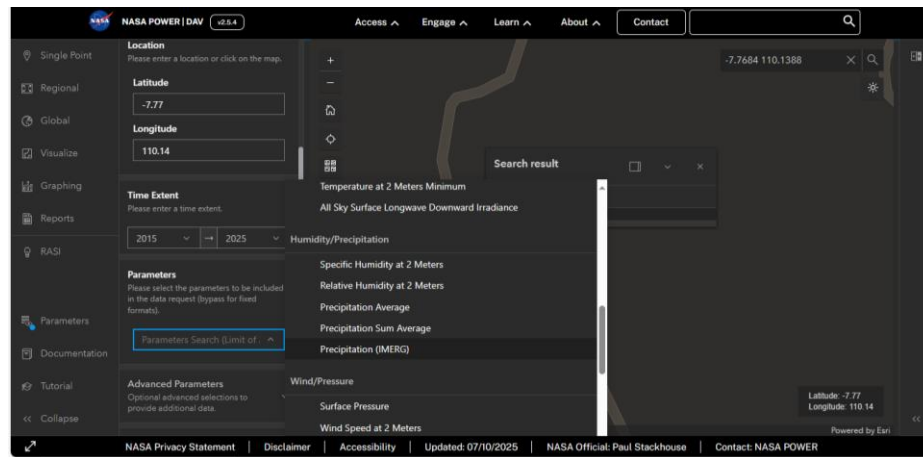
Lampiran 15. Langkah Pengunduhan Data Curah Hujan (Sumber: Nasa Power)



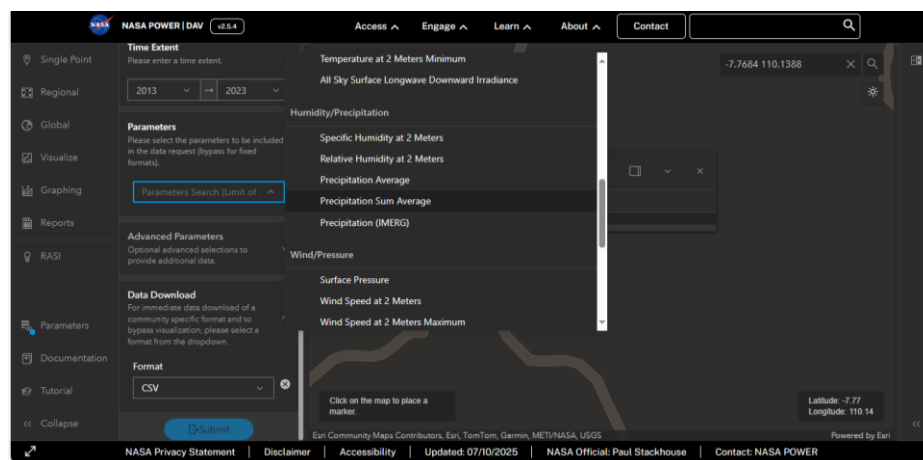
1. Mengakses link <https://power.larc.nasa.gov/data-access-viewer/>



2. Memasukkan titik koordinat



3. Mengakses menu bar *Single Point*, mengisi rentang waktu pada kolom (*Temporal Level*) dan memilih *Precipitation Sum Average* pada kolom parameter



4. Memilih jenis format CSV pada kolom format dan mengklik *submit*

Lampiran 16. Penanaman Tanaman Kersen dan Alpukat



1. Hidrogel



2. Penimbangan hidrogel



3. Pengukuran jarak tanam



4. Pembuatan lubang tanam



5. Pencampuran pupuk kandang



6. Pemberian hidrogel



7. Pelabelan tanaman



8. Pengukuran diameter



9. Pengukuran tinggi



10. Penghitungan jumlah daun



11. Tanaman Alpukat mengalami gugur daun (rontok)



12. Tanaman Kersen