

The logo of Universitas Diponegoro Semarang is a shield-shaped emblem. It features a central figure, possibly a lion or a similar mythical creature, with its mouth open as if roaring. The text "UNIVERSITAS DIPONEGORO" is written in a circular path around the top of the shield, and "SEMARANG" is written at the bottom. The logo is rendered in a light, semi-transparent grey color.

# LAMPIRAN-LAMPIRAN

Lampiran 1. Penghitungan Analisis Regresi Korelasi Antara Biomassa Gulma dengan Umur Kacang Tanah.

X	Y	XY	Y <sup>2</sup>	X <sup>2</sup>
2	3.02	6.04	9.12	4
4	7.50	30.00	56.25	16
6	21.90	131.40	479.61	36
8	54.16	433.28	2933.31	64
10	37.80	378.00	1428.84	100
12	26.24	314.88	688.54	144
$\Sigma X=42$	$\Sigma Y=150.62$	$\Sigma XY=1293.60$	$\Sigma Y^2=5595.67$	$\Sigma X^2=364$

Keterangan : X : Umur kacang tanah (dalam minggu).

Y : Biomassa gulma (dalam gram).

$$\begin{aligned}
 b &= \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} \\
 &= \frac{(6)(1293.60) - (42)(150.62)}{(6)(364) - (42)^2} \\
 &= \frac{7761.60 - 6326.04}{2184 - 1764} \\
 &= \frac{1435.56}{420} \\
 &= 3.418 \approx 3.42
 \end{aligned}$$

$$a = \bar{Y} - b\bar{X}$$

$$\bar{Y} = \frac{\sum Y}{n} = \frac{150.62}{6} = 25.103$$

$$\bar{X} = \frac{\sum X}{n} = \frac{42}{6} = 7$$

$$a = \bar{Y} - b\bar{X}$$

$$= 25.103 - (3.418)(7)$$

$$= 1.177 \approx 1.2$$

$$\text{Persamaan regresi : } \hat{Y} = 1.2 + 3.42X$$

Koefisien determinasi ( $r^2$ )

$$\begin{aligned} r^2 &= \frac{a \sum Y + b \sum XY - n(\bar{Y})^2}{\sum Y^2 - (\bar{Y})^2} \\ &= \frac{(1.2)(150.62) + (3.42)(1293.60) - (6)(25.103)^2}{5595.67 - (6)(25.103)^2} \\ &= \frac{180.744 + 4424.112 - 3780.964}{5595.67 - 3780.964} \\ &= \frac{823.892}{1814.706} \\ &= 0.454 \end{aligned}$$

Koefisien determinasi ( $r^2$ ) adalah 0.454, artinya bahwa hubungan antara biomassa gulma dengan umur kacang tanah sebesar 45.4%.

Koefisien korelasi ( r )

$$\begin{aligned} r &= \sqrt{r^2} \\ &= \sqrt{0.454} \\ &= 0.673 \end{aligned}$$

Koefisien korelasi ( r ) adalah 0.673, artinya bahwa keeratan hubungan antara umur kacang tanah dengan biomassa gulma sebesar 67.3%.



Lampiran 2. Penghitungan signifikansi pertambahan biomassa gulma pada lahan kacang tanah antara minggu 2, 4, 6, 8, 10, 12.

Minggu 2 (Y <sub>1</sub> )	Minggu 4 (Y <sub>2</sub> )	(Y <sub>1</sub> - $\bar{Y}$ ) <sup>2</sup>	(Y <sub>2</sub> - $\bar{Y}$ ) <sup>2</sup>	S <sup>2</sup>	t <sub>hitung</sub>	t <sub>tabel</sub> (5%)
1.2	6.1	3.312	1.960	4.695	3.270*	2.306
3.9	11.07	0.744	12.744			
4.4	7.93	1.904	0.185			
4.0	3.93	0.960	12.745			
1.6	8.48	2.016	0.960			
$\bar{Y}_1 = 3.02$	$\bar{Y}_2 = 7.50$	$\Sigma = 8.966$	$\Sigma = 28.594$			

Keterangan : \* = signifikan.

Minggu 4 (Y <sub>1</sub> )	Minggu 6 (Y <sub>2</sub> )	(Y <sub>1</sub> - $\bar{Y}$ ) <sup>2</sup>	(Y <sub>2</sub> - $\bar{Y}$ ) <sup>2</sup>	S <sup>2</sup>	t <sub>hitung</sub>	t <sub>tabel</sub>
6.1	13.53	1.96	70.057	34.455	3.879**	2.306 (5%)
11.07	15.71	12.744	38.316			3.355 (1%)
7.93	23.4	0.185	2.25			
3.93	23.35	12.745	2.103			
8.48	33.49	0.960	134.328			
$\bar{Y}_1 = 7.5$	$\bar{Y}_2 = 21.90$	$\Sigma = 8.584$	$\Sigma = 247.054$			

Keterangan : \*\* = sangat signifikan.

Minggu 6 (Y <sub>1</sub> )	Minggu 8 (Y <sub>2</sub> )	(Y <sub>1</sub> - $\bar{Y}$ ) <sup>2</sup>	(Y <sub>2</sub> - $\bar{Y}$ ) <sup>2</sup>	S <sup>2</sup>	t <sub>hitung</sub>	t <sub>tabel</sub>
13.53	51.39	70.057	7.673	54.096	6.935**	2.306
15.71	52.35	38.316	3.276			(5%)
23.40	66.26	2.25	146.41			3.355
23.35	50.34	2.103	14.592			(1%)
33.49	50.45	134.328	13.764			
$\bar{Y}_1 = 21.90$	$\bar{Y}_2 = 54.16$	$\Sigma = 247.054$	$\Sigma = 185.715$			

Keterangan : \*\* = sangat signifikan

Minggu 8 (Y <sub>1</sub> )	Minggu 10 (Y <sub>2</sub> )	(Y <sub>1</sub> - $\bar{Y}$ ) <sup>2</sup>	(Y <sub>2</sub> - $\bar{Y}$ ) <sup>2</sup>	S <sup>2</sup>	t <sub>hitung</sub>	t <sub>tabel</sub>
51.39	43.24	7.673	29.593	108.441	2.484*	2.306
52.35	56.24	3.276	18.44			(5%)
66.26	46.78	146.410	80.640			
50.34	18.85	14.592	359.102			
50.45	23.87	13.764	194.045			
$\bar{Y}_1 = 54.16$	$\bar{Y}_2 = 37.80$	$\Sigma = 185.715$	$\Sigma = 681.82$			

Keterangan : \* = signifikan

Minggu 10 (Y <sub>1</sub> )	Minggu 12 (Y <sub>2</sub> )	(Y <sub>1</sub> - $\bar{Y}$ ) <sup>2</sup>	(Y <sub>2</sub> - $\bar{Y}$ ) <sup>2</sup>	S <sup>2</sup>	t <sub>hitung</sub>	t <sub>tabel</sub>
43.24	27.58	29.593	1.796	98.584	1.841 <sup>ns</sup>	2.306 (5%)
56.24	23.83	18.440	5.808			
46.78	23.87	80.640	5.617			
18.85	21.35	359.102	23.912			
23.87	34.59	194.045	69.723			
$\bar{Y}_1 = 37.80$	$\bar{Y}_2 = 26.24$	$\Sigma = 681.82$	$\Sigma = 106.856$			

Keterangan : ns = non signifikan.



Lampiran 3. Data Faktor Lingkungan

Minggu	Temperatur (°C)	Kelembaban (%)	pH tanah
2	28.40	76.5	6.10 – 6.80
4	27.30	74.60	6.30 – 6.50
6	27.10	75.40	6.00 – 6.20
8	26.50	77.10	6.10 – 6.50
10	26.80	76.00	6.00 – 6.40
12	26.40	77.30	6.00 – 6.20
Rerata	27.08	76.15	6.40







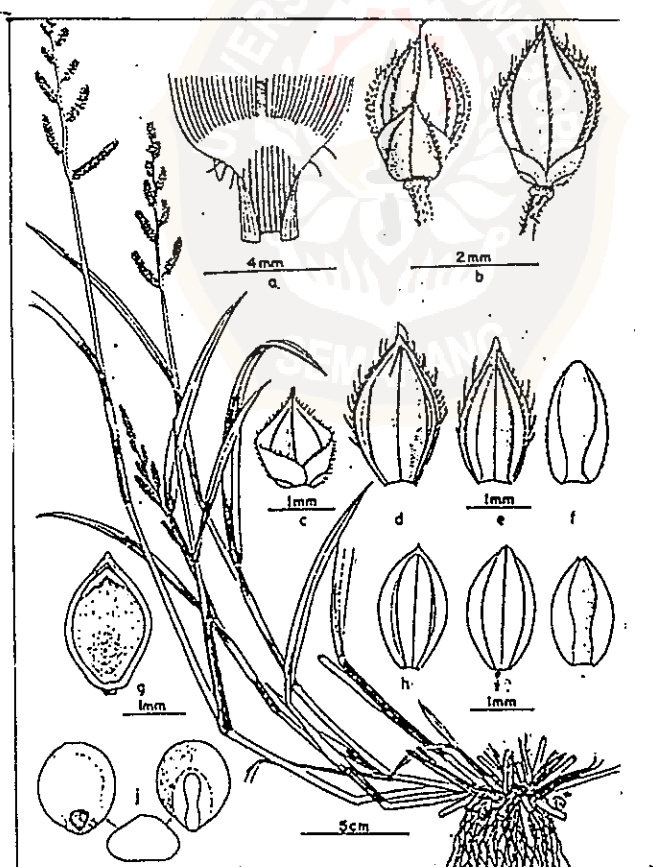
Gambar 4. Tanaman Kacang Tanah (*Arachis hypogaea*) saat umur 6 minggu



Gambar 5. Gulma *Spigelia anthelmia* (bertanda X) diantara tanaman kacang tanah (*Arachis hypogaea*) saat umur 6 minggu



Gambar 6. Plot ukuran 1X1 m<sup>2</sup> untuk keperluan pengambilan sampel spesies tumbuhan.

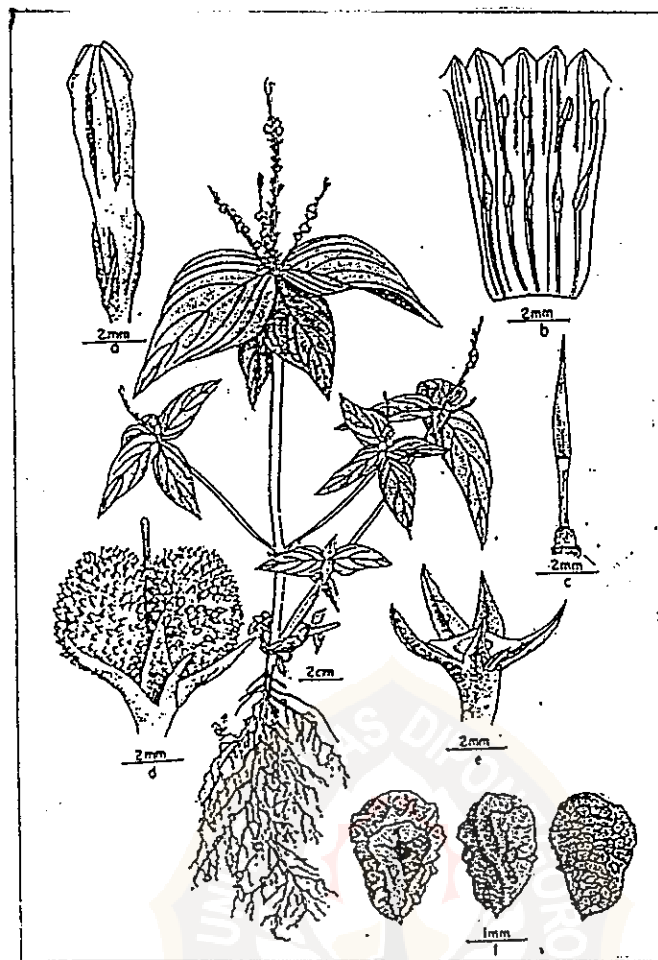


Gambar 7. Morfologi *Echinochloa colonum*

Keterangan:

- a. Pelepah daun
- b. Spikelet
- c. Glume bagian bawah
- d. Glume bagian atas
- e. Lemma bagian bawah
- f. Palea bagian bawah
- g. Floret bagian atas
- h. Lemma bagian atas dari depan
- i. Lemma bagian atas dari belakang
- j. Biji

Sumber: Weeds of Rice in Indonesia (Kostermans *et al.*, 1987).

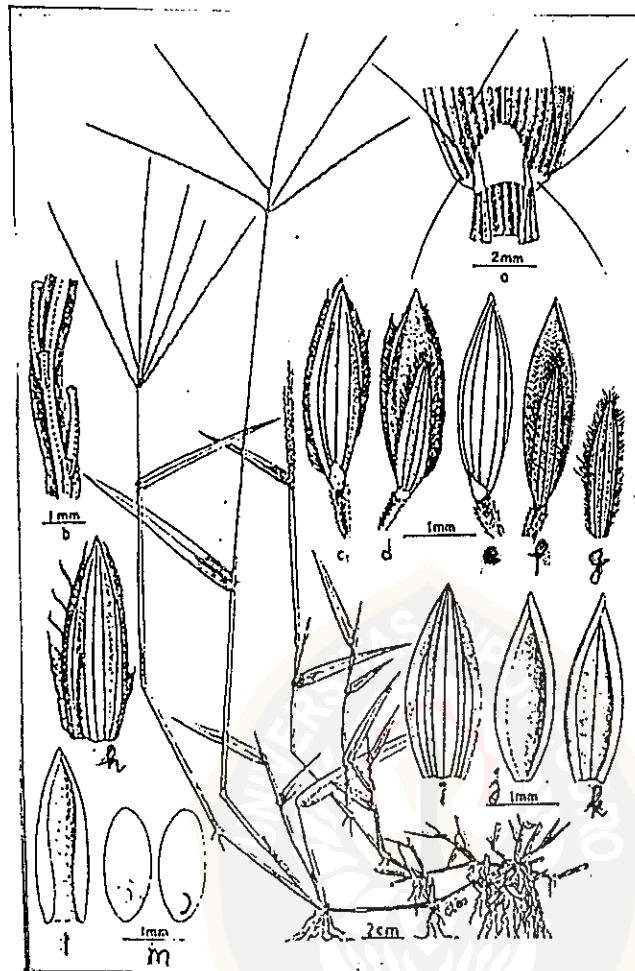


Gambar 8. Morfologi *Spigelia anthelmia*

Keterangan:

- a. Bunga
- b. Daun mahkota (terbuka)
- c. Putik
- d. Kapsul biji
- e. Kelopak pada kapsul dasar yang keras
- f. Biji

Sumber: Weeds of Rice in Indonesia (Kostermans et al, 1987)



Keterangan:

- a. Ligula
- b. Rachis
- c. Spikelet berambut bag. abaxial
- d. spikelet berambut bag. adaxial
- e. spikelet tidak berambut bag. abaxial
- f. spikelet tidak berambut bag. adaxial
- g. glume bagian atas dilihat dari depan
- h. lemma bag. bawah dari spikelet berambut
- i. lemma bag. bawah dari spikelet tidak berambut
- j. floret bag. atas
- k. lemma bag. atas
- l. palea bag. atas
- m. biji

Sumber: Weeds of Rice in Indonesia (Kostermans *et al*, 1987).

Gambar 9. Morfologi *Digitaria ciliaris*

Lampiran 4. Data Densitas Relatif, Frekuensi Relatif, Dominansi Relatif Gulma Kacang Tanah

No.	Nama Spesies	Minggu ke-																				
		2		4		6		8		10		12										
		DR	FR	DTR	DR	FR	DTR	DR	FR	DTR	DR	FR	DTR									
1.	<i>Acanthospermum hispidum</i>	-	-	-	0.98	4.01	1.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	<i>Blimia lacera</i>	-	-	-	8.20	3.11	3.33	0.87	8.13	4.28	1.89	1.80	4.92	1.63	0.40	2.78	0.38	-	-	-	-	-
3.	<i>Brachiaria ericiformis</i>	11.03	12.92	7.42	10.43	8.36	10.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.	<i>Cynodon dactylon</i>	14.70	9.48	10.33	9.03	4.01	7.05	7.27	7.32	6.73	2.29	1.40	2.20	0.58	-	-	-	-	-	-	-	-
5.	<i>Cyperus rotundus</i>	10.14	16.37	14.08	8.53	10.51	9.13	10.27	9.96	9.93	7.89	5.60	8.87	5.24	7.20	8.33	4.20	-	-	-	-	-
6.	<i>Digitaria ciliaris</i>	17.03	19.83	22.84	13.63	10.51	14.17	17.27	9.96	13.89	18.89	18.78	2.20	18.58	13.40	11.11	14.89	-	-	-	-	-
7.	<i>Echinochloa colonum</i>	14.23	6.04	4.08	14.03	10.51	11.31	17.07	12.59	17.73	33.09	32.02	11.09	26.64	41.20	13.89	37.28	-	-	-	-	-
8.	<i>Eleutheranthera ruderalis</i>	-	-	-	-	-	-	0.80	4.69	2.38	0.40	-	-	-	-	-	-	-	-	-	-	-
9.	<i>Eragrostis tenella</i>	-	-	-	-	-	-	-	-	-	-	0.40	2.61	0.57	1.40	5.56	2.04	-	-	-	-	-
10.	<i>Euphorbia hirta</i>	-	-	-	3.41	3.11	0.84	4.67	7.32	5.83	3.49	3.40	6.65	4.66	2.80	11.11	3.05	-	-	-	-	-
11.	<i>Euphorbia pruriifolia</i>	-	-	-	0.98	1.83	0.93	1.00	2.06	0.38	0.60	0.60	2.20	0.82	-	-	-	-	-	-	-	-
12.	<i>Imperata cylindrica</i>	-	-	-	-	-	-	0.40	2.06	0.64	0.89	1.40	4.42	1.63	2.00	2.78	1.91	-	-	-	-	-
13.	<i>Lindernia crustacea</i>	-	-	-	-	-	-	-	-	-	-	3.00	8.87	3.85	5.40	5.56	5.34	-	-	-	-	-
14.	<i>Mitracarpus villosus</i>	12.28	9.48	10.76	3.68	8.36	7.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.	<i>Paspalum conjugatum</i>	-	-	-	-	-	-	12.26	1.90	2.36	1.69	2.80	6.65	2.45	-	-	-	-	-	-	-	-
16.	<i>Polygala glomerata</i>	-	-	-	0.98	4.01	4.05	1.27	2.06	2.00	0.40	1.00	2.20	2.10	0.40	2.78	0.76	-	-	-	-	-
17.	<i>Phyllanthus niruri</i>	-	-	-	4.68	6.56	3.33	2.47	4.69	3.28	2.89	2.80	11.09	4.43	2.80	8.33	3.05	-	-	-	-	-
18.	<i>Phyllanthus virgatus</i>	11.62	6.04	5.13	6.93	10.51	10.17	1.27	9.96	3.66	2.09	3.40	11.09	4.20	2.60	11.11	3.05	-	-	-	-	-
19.	<i>Richardia brasiliensis</i>	-	-	-	-	-	-	-	-	-	-	2.00	2.20	1.05	-	-	-	-	-	-	-	-
20.	<i>Spigelia anthelmia</i>	8.98	19.83	25.33	13.92	10.51	14.08	20.85	12.59	23.86	22.09	15.00	11.09	18.07	16.80	13.89	22.14	-	-	-	-	-
21.	<i>Triticum procumbens</i>	-	-	-	0.80	4.01	1.58	2.27	4.69	3.02	1.49	4.60	2.20	2.91	3.60	2.78	1.91	-	-	-	-	-
	Jumlah	100.01	99.99	99.97	100.03	99.92	100.00	100.01	99.98	99.97	100.08	100.00	100.05	99.94	100.00	100.01	100.00	99.41	100.00	99.91	100.01	100.00

Keterangan :  
DR : Dominansi Relatif  
FR : Frekuensi Relatif  
DTR : Densitas Relatif

