Lampiran 1. Deskripsi Varietas Kacang Tunggak Kt-6

KT 6

Dilepas tanggal	: 4 November 1998
SK Mentan	: 873/Kpts/Tp.11/98
Nomor Galur	: 191/VITA4/91-B-33
Asal	: Hasil persilangan antara varietas lokal No.191 dengan varietas introduksi VITA4 yang berasal dari IITA, dimasukan ke Indonesia tahun 1986
Daya Hasil	: 1,95 t/ha
Hasil Rata-Rata	: 1,19 t/ha
Warna Bunga	: Ungu
Warna Polong Tua	: Coklat
Bentuk Polong	: Kaku dan sukar pecah
Jumlah Polong /Tanaman	: 14-20 buah
Panjang Polong	: 10-15 cm
Kedudukan Polong	: Miring ke bawah
Warna Biji Tua	: Coklat medu
Bentuk Biji	: Persegi
Umur Tanaman	: Mulai berbunga 40-46 hari, Polong masak 65 hari, Panen 65-70 hari
Tinggi Tanaman	: 48 cm
Bentuk Tanaman	: Pendek, kadang bersulur
Bentuk Batang	: Bulat
Bentuk Daun	:Ovate

Bentuk Bunga : Kupu-kupu

Bobot 1000 biji : 112-116 g

Kadar Protein : 21,56%

Ketahanan Terhadap Hama : Toleran terhadap hama polong

Daerah Adaptasi : Lahan kering beriklim kering, lahan sawah pada MK II dan lahan masam

Pemulia : Trustinah, Moedjiono dan Astanto Kasno

Lampiran 2. Layout Percobaan

$K4S3_{(1)}$	$K4S1_{(2)}$	$K1S3_{(1)}$
$K4S3_{(3)}$	$K4S2_{(1)}$	$K1S1_{(3)}$
$K1S2_{(3)}$	$K3S1_{(1)}$	$K1S3_{(3)}$
$K2S1_{(3)}$	$K3S2_{(2)}$	$K3S3_{(2)}$
$K1S1_{(2)}$	$K2S3_{(1)}$	$K1S3_{(2)}$
$K2S1_{(1)}$	$K4S2_{(3)}$	$K4S1_{(1)}$
$K2S3_{(2)}$	$K4S2_{(2)}$	$K1S1_{(1)}$
$K2S3_{(3)}$	$K3S1_{(2)}$	$K2S1_{(2)}$
$K3S3_{(1)}$	$K2S2_{(3)}$	$K4S3_{(2)}$
$K4S1_{(3)}$	$K3S2_{(1)}$	$K1S2_{(2)}$
$K3S3_{(3)}$	$K2S2_{(2)}$	$K2S2_{(1)}$
$K3S2_{(3)}$	$K1S2_{(1)}$	$K3S1_{(3)}$

Keterangan:
K1 = KL 100% air tersedia
K2 = KL 75% air tersedia
K3 = KL 50% air tersedia
K4 = KL 25% air tersedia
S1 = Stadia vegetatif
S2 = Stadia pembungaan
S3 = Stadia pengisian polong
(1,2,3) = ulangan

Lampiran 3. Penetapan Kadar Lengas Tanah

1. Kadar Lengas Kering Udara (KL-KU)

Sampel	a	b	C
I	20,05	35,38	35,01
II	24,09	41,45	41,00
III	25,56	43,07	42,64

KL = $\frac{b-c}{c-a}\ x\ 100\%$

I = $\frac{35,38-35,01}{35,01-20,05}\ x\ 100\% = \frac{0,37}{14,96}\ x\ 100\% = 2,47\%$

II = $\frac{41,45-41,00}{41,00-24,09}\ x\ 100\% = \frac{0,45}{16,91}\ x\ 100\% = 2,66\%$

III = $\frac{43,07-42,64}{42,64-25,56}\ x\ 100\% = \frac{0,43}{17,08}\ x\ 100\% = 2,52\%$

KL-KU = $\frac{2,47\%+2,66\%+2,52\%}{3} = 2,55\%$

2. Kadar Lengas Kapasitas Lapang (KL-KL)

Sampel	a	b	C
I	21,17	35,15	32,05
II	25,29	41,23	37,81
III	18,16	33,21	29,93

I = $\frac{35,15-32,05}{32,05-21,17}\ x\ 100\% = \frac{3,1}{10,88}\ x\ 100\% = 28,49\%$

II = $\frac{41,23-37,81}{37,81-25,29}\ x\ 100\% = \frac{3,42}{12,52}\ x\ 100\% = 27,32\%$

III = $\frac{33,21-29,93}{29,93-18,16}\ x\ 100\% = \frac{3,28}{11,77}\ x\ 100\% = 28,03\%$

KL-KL = $\frac{28,49\%+27,32\%+28,03\%}{3} = 27,95\%$

3. Dokumentasi Penetapan Kadar Lengas

(a) Sampel tanah regosol

(b) Pencelupan sampel tanah

(c) Meniriskan sampel tanah

(d) Menimbang sampel tanah

Lampiran 4. Kebutuhan Tanah Per Polybag

1. Kebutuhan tanah per polybag:

Jarak tanam x kedalaman akar tanaman x BV tanah regosol

= (25 cm x 10 cm) x 30 cm x 1,3 g/cm^3

= 250 cm^2 x 30 cm x 1,3 g/cm^3

= 7.500 cm^3 x 1,3 g/cm^3

= 9.750 gram

= 9,75 kg

Kebutuhan tanah per polybag adalah 10 kg

2. Menghitung berat tanah 1 hektar

Volume x BV

= luas x kedalaman x BV

= 10000 m^2 x 30 cm x BV

= 10^8 cm^2 x 30 cm x 1,3 g/cm^3

= 3,9 x 10^9 g

= 3.900.000 kg

Lampiran 5. Kebutuhan Pupuk Per Polybag

1. Menghitung kebutuhan pupuk per polybag

- Bobot tanah 10 kg/polybag
- Pupuk kompos 5 ton/hektar

PK = $\frac{10}{39 \text{ x } 10^5}$ x 5000 kg = $\frac{5 \text{ x } 10^4}{39 \text{ x } 10^5}$ = 0,0128 kg = 12,82 g/polybag

- SP-36 100 kg/hektar

SP-36 = $\frac{10}{39 \text{ x } 10^5}$ x 100 kg = $\frac{10^3}{39 \text{ x } 10^5}$ = 0,00026 kg = 0,26 g/polybag

- KCl 50 kg/hektar

KCl = $\frac{10}{39 \text{ x } 10^5}$ x 50 kg = $\frac{5 \text{ x } 10^2}{3 \text{ x } 10^6}$ = 0,00013 kg = 0,13 g/polybag

- Urea 50 kg/hektar

Urea = $\frac{10}{39 \text{ x } 10^5}$ x 50 kg = $\frac{5 \text{ x } 10^2}{3 \text{ x } 10^6}$ = 0,00013 kg = 0,13 g/polybag

2. Dokumentasi

(a) Penimbangan pupuk kompos

(b) Pemupukan dasar

Lampiran 6. Perhitungan Kebutuhan Air

- Kadar lengas kering udara (KLKU) = 2,55%
- Kadar lengas kapasitas lapang (KLKL) = 27,95%
- Bobot tanah (BT) = 10 kg =10.000 g
- Kebutuhan air pada air tersedia

  = (KLKL – KLKU) x BT

  = (27,95% - 2,55%) x 10.000 g

  = 25,4% x 10.000 g

  = 2.540 g

  Volume air

  = 2540 g x 1 g/cm^3

  = 2540 cm^3

  = 2540 dm^3

  = 2,540 L

  = 2.540 ml

- Kebutuhan air:

  Kadar lengas 100% air tersedia = 100% x 2.540 ml = 2.540 ml

  Kadar lengas 75% air tersedia = 75% x 2.540 ml = 1.905 ml

  Kadar lengas 50% air tersedia = 50% x 2.540 ml = 1.270 ml

  Kadar lengas 25% air tersedia = 25% x 2.540 ml = 635 ml

- Bobot tanah:

  Kadar lengas 100% air tersedia = 10.000 g + 2.540 g = 12.540 g = 12,5 kg

  Kadar lengas 75% air tersedia = 10.000 g + 1.905 g = 11.905 g = 11,9 kg

  Kadar lengas 50% air tersedia = 10.000 g + 1.270 g = 11.270 g =11,3 kg

  Kadar lengas 25% air tersedia = 10.000 g + 635 g = 10.635 g = 10,6 kg

Lampiran 7. Dokumentasi Pengukuran Tinggi Tanaman dan Diameter Batang

(a) Pengukuran tinggi tanaman kacang tunggak

(b) Pengukuran diameter batang tanaman kacang tunggak

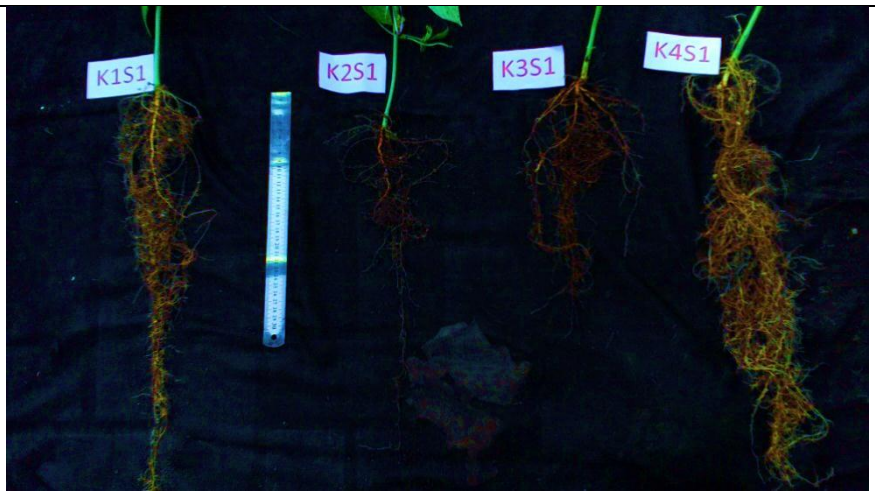
Lampiran 8. Tajuk Tanaman Kacang Tunggak

(a) Tajuk tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia vegetatif

(b) Tajuk tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pembungaan

(c) Tajuk tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pengisian polong

Lampiran 9. Akar Tanaman Kacang Tunggak



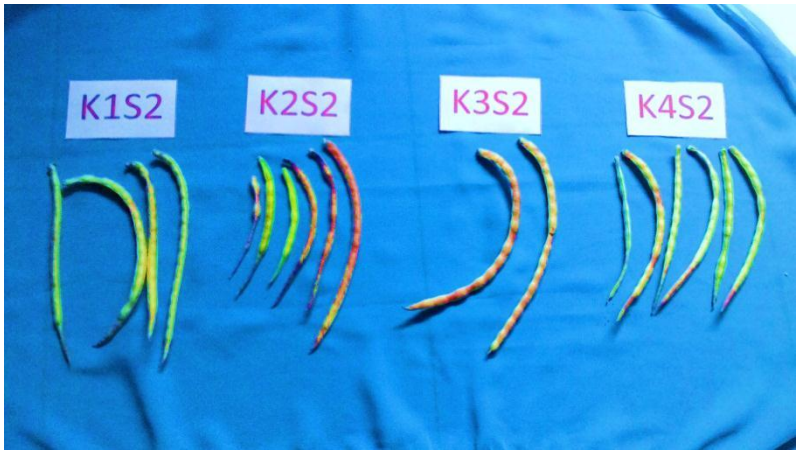
(a) Akar tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia vegetatif

(b) Akar tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pembungaan

(c) Akar Tanaman kacang tunggak umur 5 mst perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pengisian polong

Lampiran 10. Dokumentasi Polong Tanaman Kacang Tunggak

(a) Jumlah polong per tanaman perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia vegetatif



(b) Jumlah polong per tanaman perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pembungaan

(c) Jumlah polong per tanaman perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia pengisian polong

Lampiran 11. Dokumentasi Biji Tanaman Kacang Tunggak

(a) Jumlah biji per tanaman perlakuan kadar lengas 100%, 75%, 50%, 25% air tersedia pada stadia vegetatif, pembungaan dan pengisian polong

Lampiran 12. Tabel Hasil Sidik Ragam

12. a. Tinggi Tanaman

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	518.275118	47.115920	1.36	0.2537	ns
Error	24	831.311370	34.637974			
Corrected Total	35	1349.586489				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	295.3917284	26.8537935	0.95	0.5114	ns
Error	24	676.6829628	28.1951235			
Corrected Total	35	972.0746913				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	293.4725588	26.6793235	0.96	0.5064	ns
Error	24	667.8393408	27.8266392			
Corrected Total	35	961.3118996				

12. b. Diameter Batang

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.16538889	0.01503535	1.73	0.1274	ns
Error	24	0.20900000	0.00870833			
Corrected Total	35	0.37438889				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.19568889	0.01778990	2.15	0.0569	ns
Error	24	0.19873333	0.00828056			
Corrected Total	35	0.39442222				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.18603333	0.01691212	2.19	0.0522	ns
Error	24	0.18506667	0.00771111			
Corrected Total	35	0.37110000				

12. c. Jumlah Daun

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	98.6475639	8.9679604	0.91	0.5460	ns
Error	24	236.5809333	9.8575389			
Corrected Total	35	335.2284972				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	98.2561729	8.9323794	0.62	0.7920	ns
Error	24	344.3703704	14.3487654			
Corrected Total	35	442.6265433				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	394.527778	35.866162	0.90	0.5507	ns
Error	24	952.222222	39.675926			
Corrected Total	35	1346.750000				

12. d. Luas Daun

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2965382.750	269580.250	0.94	0.5195	ns
Error	24	6865472.000	286061.333			
Corrected Total	35	9830854.750				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	3264973.417	296815.765	1.58	0.1676	ns
Error	24	4502809.333	187617.056			
Corrected Total	35	7767782.750				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2885294.972	262299.543	0.91	0.5489	ns
Error	24	6947009.33	289458.722			
Corrected Total	35	9832304.306				

12. e. Umur Berbunga

Source	DF	SS	MS	F Value	Pr > F	
Model	11	53.63888889	4.87626263	2.79	0.0173	s
Error	24	42.00000000	1.75000000			
Corrected Total	35	95.63888889				

12. f. Bobot Segar Tajuk

umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	9190.99343	835.54486	1.55	0.1771	ns
Error	24	12912.02160	538.00090			
Corrected Total	35	22103.01503				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	7634.57940	694.05267	1.41	0.2332	ns
Error	24	11848.08015	493.67001			
Corrected Total	35	19482.65955				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	12244.19370	1113.10852	1.11	0.3948	ns
Error	24	24044.92380	1001.87183			
Corrected Total	35	36289.11750				

12. g. Bobot Kering Tajuk

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	157.6662556	14.3332960	1.40	0.2355	ns
Error	24	245.6114000	10.2338083			
Corrected Total	35	403.2776556				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	201.1490889	18.2862808	1.42	0.2258	ns
Error	24	308.3578667	12.8482444			
Corrected Total	35	509.5069556				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	144.8088222	13.1644384	1.98	0.0789	ns
Error	24	159.7995333	6.6583139			
Corrected Total	35	304.6083556				

12. h. Bobot Segar Akar

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	1126.877667	2011.138333	1.22	0.3252	ns
Error	24	2011.138333	83.797431			
Corrected Total	35	3138.016000				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	215.6280083	19.6025462	0.82	0.6259	ns
Error	24	577.0040667	24.0418361			
Corrected Total	35	792.6320750				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	193.3101333	17.5736485	2.08	0.0644	ns
Error	24	202.4314667	8.4346444			
Corrected Total	35	395.7416000				

12. i. Bobot Kering Akar

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	13.04836389	1.18621490	1.04	0.4434	ns
Error	24	27.33226667	1.13884444			
Corrected Total	35	40.38063056				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	10.42923056	0.94811187	0.86	0.5855	ns
Error	24	26.38166667	1.09923611			
Corrected Total	35	36.81089722				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	7.16528889	0.65138990	1.70	0.1333	ns
Error	24	9.18153333	0.38256389			
Corrected Total	35	16.34682222				

12. j. Volume Akar

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	1030.555556	93.686869	0.48	0.8964	ns
Error	24	4666.666667	194.444444			
Corrected Total	35	5697.222222				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2013.638889	183.058081	0.68	0.7456	ns
Error	24	6483.333333	270.138889			
Corrected Total	35	8496.972222				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2504.750000	227.704545	2.05	0.0684	ns
Error	24	2664.000000	111.000000			
Corrected Total	35	5168.750000				
Source	DF	SS	MS	F Value	Pr > F	
Model	11	45.3503935	4.1227630	0.74	0.6898	ns
Error	24	133.3575925	5.5565664			
Corrected Total	35	178.7079860				

12. k. Laju Asimilasi Bersih (LAB)

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.03458014	0.00314365	0.52	0.8697	ns
Error	24	0.14464908	0.00602705			
Corrected Total	35	0.17922922				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.00535041	0.00048640	0.34	0.9668	ns
Error	24	0.03425675	0.00142736			
Corrected Total	35	0.03960716				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	0.00196978	0.00017907	0.38	0.9511	ns
Error	24	0.01128379	0.00047016			
Corrected Total	35	0.01325357				

12. l. Laju Pertumbuhan Relatif (LPR)

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2.7371579	0.24883254	3.52	0.0048	s
Error	24	1.69468080	0.07061170			
Corrected Total	35	4.43183871				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	1.30867040	0.11897004	1.34	0.2635	ns
Error	24	2.13177256	0.08882386			
Corrected Total	35	3.44044296				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	3.72662688	0.33878426	1.02	0.4572	ns
Error	24	7.94949784	0.33122908			
Corrected Total	35	11.67612473				

12. m. Nisbah Luas Daun

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	9657.38102	877.94373	1.92	0.0877	ns
Error	24	10965.97281	456.91553			
Corrected Total	35	20623.35383				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	8238.25728	748.93248	0.68	0.7473	ns
Error	24	26602.92444	1108.45518			
Corrected Total	35	34841.18172				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	11700.0481	1063.64074	1.02	0.4594	ns
Error	24	25031.58176	1042.98257			
Corrected Total	35	36731.62988				

12. n. Luas Daun Khas

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	298.0175328	27.0925030	0.94	0.5222	ns
Error	24	692.4996105	28.8541504			
Corrected Total	35	990.5171433				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	1191.415161	108.310469	1.91	0.0901	ns
Error	24	1362.560619	56.773359			
Corrected Total	35	2553.975780				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	813.140136	73.921831	1.38	0.2437	ns
Error	24	1283.793912	53.491413			
Corrected Total	35	2096.934047				

12. o. Nisbah Tajuk Akar

Umur 5 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	39.6603956	3.6054905	0.87	0.5804	ns
Error	24	99.6260129	4.1510839			
Corrected Total	35	139.2864086				

Umur 6 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	110.1893788	10.0172163	1.14	0.3785	ns
Error	24	211.7124393	8.8213516			
Corrected Total	35	321.9018180				

Umur 8 mst

Source	DF	SS	MS	F Value	Pr > F	
Model	11	118.9250077	10.8113643	0.81	0.6310	ns
Error	24	320.5471767	13.3561324			
Corrected Total	35	439.4721843				
Source	DF	SS	MS	F Value	Pr > F	
Model	11	2.58057704	0.23459791	1.38	0.2460	ns
Error	24	4.08939024	0.17039126			
Corrected Total	35	6.66996728				

12. p. Jumlah polong per tanaman

Source	DF	SS	MS	F Value	Pr > F	
Model	11	14.22222222	1.29292929	0.99	0.4818	ns
Error	24	31.33333333	1.30555556			
Corrected Total	35	45.55555556				

12. q. Jumlah biji per tanaman

Source	DF	SS	MS	F Value	Pr > F	
Model	11	1763.416667	160.310606	1.35	0.2588	ns
Error	24	2851.333333	118.805556			
Corrected Total	35	4614.750000				

12. r. Jumlah biji per polong

Source	DF	SS	MS	F Value	Pr > F	
Model	11	45.3503935	4.1227630	0.74	0.6898	ns
Error	24	133.3575925	5.5565664			
Corrected Total	35	178.7079860				

12. s. Bobot polong per tanaman

Source	DF	SS	MS	F Value	Pr > F	
Model	11	189.9351222	17.2668293	0.87	0.5784	ns
Error	24	475.8321333	19.8263389			
Corrected Total	35	665.7672556				

12. t. Bobot biji per tanaman

Source	DF	SS	MS	F Value	Pr > F	
Model	11	29.50796389	2.68254217	1.72	0.1280	ns
Error	24	37.34973333	1.55623889			
Corrected Total	35	66.85769722				

12. u. Bobot biji per polong

Source	DF	SS	MS	F Value	Pr > F	
Model	11	2.58057704	0.23459791	1.38	0.2460	ns
Error	24	4.08939024	0.17039126			
Corrected Total	35	6.66996728				

12. v. Hasil Per Hektar

Source	DF	SS	MS	F Value	Pr > F	
Model	11	4.72127422	0.42920675	1.72	0.1280	ns
Error	24	5.97595733	0.24899822			
Corrected Total	35	10.69723156				