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BERITA ACARA BIMBINGAN SKRIPSI

1 NAMA : Adelia Chisa Amanda

2 NIM : 162500016

3 PRODI : Biologi

4 JUDUL : Pemanfaatan Bioaktivator Bonggol Pisang dan Penambahan Biochar Arang Sekam Padi Terhadap Pertumbuhan, Kadar Klorofil Total Dan Hasil Produksi Tanaman Kedelai (*Glycine max* (L) Merril) *var. anjasmoro*

5 TANGGAL PENGAJUAN: 09 Oktober 2019

6 PEMBIMBING 1 : Dr. Dra Sukarjati, M.Kes

7 PEMBIMBING 2 : Purity Sabila Ajiningrum, S.Si., M.Si

8 BERLAKU SEMESTER : Genap

9 PELAKSANAAN KONSULTASI BIMBINGAN:

NO.	TANGGAL	URAIAN KETERANGAN	PARAF	PARAF
1	16 Oktober 2019	Konsultasi judul		
2	13 November 2019	BAB I Latar Belakang		
3	17 Desember 2019	BAB II Tinjauan Pustaka		
4	28 Desember 2019	BAB III Kerangka Pikiran dan hipotesis		
5	08 Januari 2020	BAB IV Metodologi penelitian		
6	05 Maret 2020	Penelitian		
7	09 April 2020	Penelitian		
8	14 Mei 2020	BAB V Hasil penelitian		
9	27 Juni 2020	BAB VI Pembahasan		
10	11 Juni 2020	BAB VII Simpulan dan saran		

10 TANGGAL SELESAI : 28 Juli 2020

Surabaya, 28 Juli 2020

Pembimbing 1

Dr. Dra Sukarjati, M.Kes

Pembimbing 2

Purity Sabila Ajiningrum, S.Si., M.Si

Mengetahui,
Dekan Fakultas Sains Teknologi

UNIVERSITAS PGRI ADI BUANA SURABAYA FAKULTAS SAINS TEKNOLOGI

Dra. Diah Karunia Binawati, M.Si

UNIVERSITAS PGRI ADI BUANA SURABAYA
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PERBAIKAN/REVISI UJIAN SKRIPSI

1 NAMA : Adelia Chisa Amanda
2 NIM : 162500016
3 PRODI : Biologi
4 JUDUL : Pemanfaatan Bioaktivator Bonggol Pisang dan Penambahan Biochar Arang Sekam Padi Terhadap Pertumbuhan, Kadar Klorofil dan Hasil Produksi Kedelai *(Glycine max* L. Merril*) var. anjasmoro.*
5 PEMBIMBING 1 : Dr. Sukarjati, M.Kes
6 PEMBIMBING 2 : Purity Sabila Ajiningrum, S.Si, M.Si

Materi Perbaikan/ Revisi Skripsi	Tanda Tangan Dosen Penguji
Struktur Penulisan	
Abstrak	
Saran	
Daftar Pustaka	

Surabaya, 29 Juli 2020

Dosen Pembimbing 1

Dr. Sukarjati, M.Kes

Dosen Pembimbing 2

Purity Sabila Ajiningrum, S.Si, M.Si

LAMPIRAN 1

PENGAPLIKASIAN BIOAKTIVATOR

Menghitung konsentrasi bioaktivator dengan menggunakan rumus :

$$\frac{\text{Berat awal-berat akhir}}{\text{Berat awal}} \text{X100\%}$$

- Bonggol pisang 1 kg = 1.000 gr
- Tetes tebu 350 ml = 350 gr
- Air cucian beras 1 liter = 1.000 gr
- Air biasa 2,5 liter = 2.500 gr
- 1 buah pisang masak = 150 gr

Total berat awal = 5.000 gr

Berat akhir = 1.800 gr

Yang larut = 3.200 ml

$$\text{Konsentrasi pupuk} = \frac{\text{berat awal} - \text{berat akhir}}{\text{berat awal}} \times 100\%$$

$$= \frac{5.000 - 1.800}{5.000} \times 100\%$$

$$= \frac{3.200}{5.000} \times 100\%$$

$$= 0{,}64 \times 100\%$$

$$= 64\ \%$$

- Konsentrasi 0% = sebagai perlakuan kontrol
- Konsentrasi 10% = K1 × V1 = K2 × V2

$$64 \times V1 = 10 \times 200$$

$$V1 = \frac{2.000}{64}$$

$$V1 = 31,25 \text{ ml}$$

Jadi untuk membuat larutan 10% dengan mengambil 31,25 ml Bioaktivator dari stok 64% ditambahkan air sampai 200 ml.

- Konsentrasi 15% = K1 × V1 = K2 × V2

$$64 \times V1 = 15 \times 200$$

$$V1 = \frac{3.000}{64}$$

$$V1 = 46,87 \text{ ml}$$

Jadi untuk membuat larutan 15% dengan mengambil 46,87 ml Bioaktivator dari stok 64% ditambahkan air sampai 200 ml.

- Konsentrasi 20% = K1 × V1 = K2 × V2

$$64 \times V1 = 20 \times 200$$

$$V1 = \frac{4.000}{64}$$

$$V1 = 62,5 \text{ ml}$$

Jadi untuk membuat larutan 20% dengan mengambil 62,5 ml Bioaktivator dari stok 64% ditambahkan air sampai 200 ml.

LAMPIRAN 2

TINGGI TANAMAN

Univariate Analysis of Variance

Notes

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Between-Subjects Factors

		N
Perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: tinggi_tanaman

Perlakuan	Mean	Std. Deviation	N
kn	80,4000	6,69328	5
kp	85,2000	6,34035	5
p1	90,8000	5,63028	5
p2	104,2000	11,56287	5
p3	122,2000	9,98499	5
Total	96,5600	17,19515	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: tinggi_tanaman

F	df1	df2	Sig.
1,495	4	20	,241

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Perlakuan

Tests of Between-Subjects Effects

Dependent Variable: tinggi_tanaman

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5695,760[a]	4	1423,940	20,336	,000
Intercept	233095,840	1	233095,840	3328,989	,000
Perlakuan	5695,760	4	1423,940	20,336	,000
Error	1400,400	20	70,020		
Total	240192,000	25			
Corrected Total	7096,160	24			

a. R Squared = ,803 (Adjusted R Squared = ,763)

Estimated Marginal Means

Perlakuan

Dependent Variable: tinggi_tanaman

Perlakuan	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
kn	80,400	3,742	72,594	88,206
kp	85,200	3,742	77,394	93,006
p1	90,800	3,742	82,994	98,606
p2	104,200	3,742	96,394	112,006
p3	122,200	3,742	114,394	130,006

Post Hoc Tests

Perlakuan

Multiple Comparisons

Dependent Variable: tinggi_tanaman

	(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
LSD	kn	kp	-4,8000	5,29226	,375	-15,8395
		p1	-10,4000	5,29226	,063	-21,4395
		p2	-23,8000*	5,29226	,000	-34,8395
		p3	-41,8000*	5,29226	,000	-52,8395
	kp	kn	4,8000	5,29226	,375	-6,2395
		p1	-5,6000	5,29226	,303	-16,6395
		p2	-19,0000*	5,29226	,002	-30,0395
		p3	-37,0000*	5,29226	,000	-48,0395
	p1	kn	10,4000	5,29226	,063	-,6395
		kp	5,6000	5,29226	,303	-5,4395
		p2	-13,4000*	5,29226	,020	-24,4395
		p3	-31,4000*	5,29226	,000	-42,4395
	p2	kn	23,8000*	5,29226	,000	12,7605
		kp	19,0000*	5,29226	,002	7,9605
		p1	13,4000*	5,29226	,020	2,3605

		p3	-18,0000*	5,29226	,003	-29,0395
	p3	kn	41,8000*	5,29226	,000	30,7605
		kp	37,0000*	5,29226	,000	25,9605
		p1	31,4000*	5,29226	,000	20,3605
		p2	18,0000*	5,29226	,003	6,9605

Multiple Comparisons

Dependent Variable: tinggi_tanaman

			95% Confidence Interval
	(I) Perlakuan	(J) Perlakuan	Upper Bound
LSD	kn	kp	6,2395
		p1	,6395
		p2	-12,7605
		p3	-30,7605
	kp	kn	15,8395
		p1	5,4395
		p2	-7,9605
		p3	-25,9605
	p1	kn	21,4395
		kp	16,6395
		p2	-2,3605
		p3	-20,3605
	p2	kn	34,8395
		kp	30,0395
		p1	24,4395

		p3	-6,9605
	p3	kn	52,8395
		kp	48,0395
		p1	42,4395
		p2	29,0395

Based on observed means.

The error term is Mean Square(Error) = 70,020.

*. The mean difference is significant at the ,05 level.

Homogeneous Subsets

tinggi_tanaman

	Perlakuan	N	Subset		
			1	2	3
Duncan[a,b]	kn	5	80,4000		
	kp	5	85,2000		
	p1	5	90,8000		
	p2	5		104,2000	
	p3	5			122,2000
	Sig.		,076	1,000	1,000

Means for groups in homogeneous subsets are displayed.

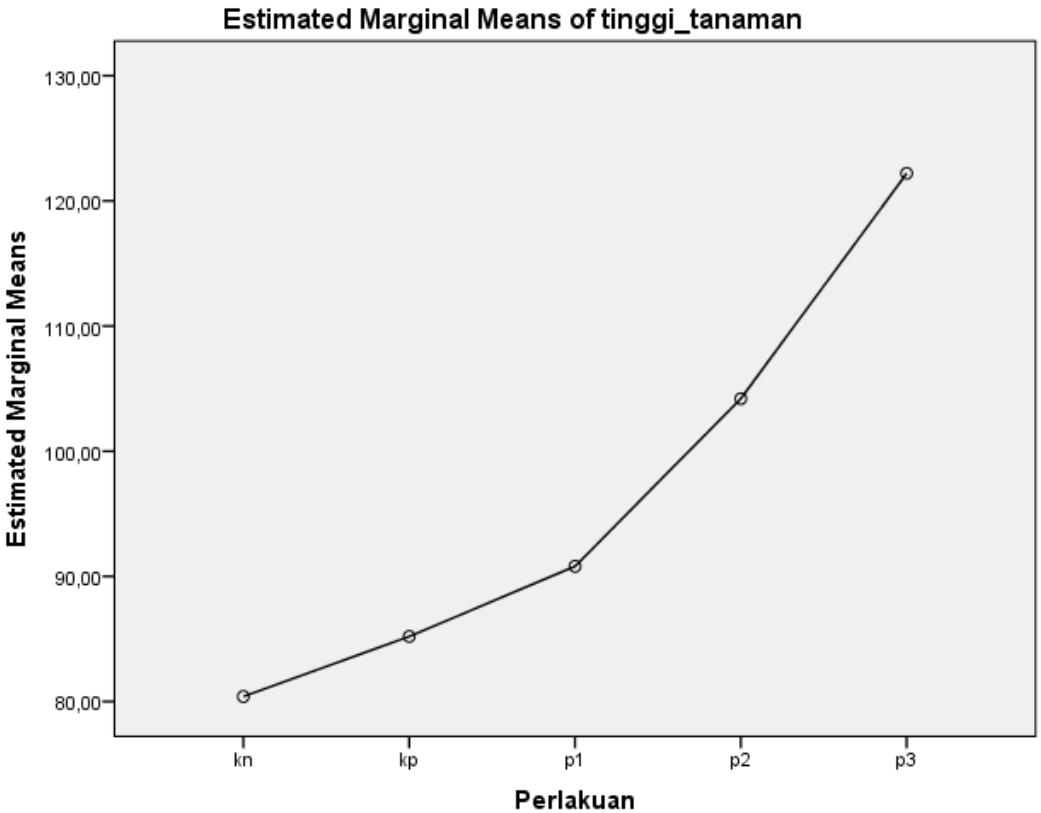
Based on observed means.

The error term is Mean Square(Error) = 70,020.

a. Uses Harmonic Mean Sample Size = 5,000.

b. Alpha = ,05.

Profile Plots




```
ONEWAY tinggi_tanaman BY Perlakuan
  /STATISTICS DESCRIPTIVES HOMOGENEITY
  /MISSING ANALYSIS
  /POSTHOC=DUNCAN LSD ALPHA(0.05).
```

Oneway

Notes

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Comments	

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY tinggi_tanaman BY Perlakuan /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /POSTHOC=DUNCAN LSD ALPHA(0.05).
Resources	Processor Time	00:00:00,08
	Elapsed Time	00:00:00,11

Descriptives

tinggi_tanaman

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	80,4000	6,69328	2,99333	72,0892	88,7108
2	5	85,2000	6,34035	2,83549	77,3274	93,0726
3	5	90,8000	5,63028	2,51794	83,8091	97,7909

4	5	104,2000	11,56287	5,17107	89,8428	118,5572
5	5	122,2000	9,98499	4,46542	109,8020	134,5980
Total	25	96,5600	17,19515	3,43903	89,4622	103,6578

Descriptives

tinggi_tanaman

	Minimum	Maximum
1	73,00	89,00
2	75,00	90,00
3	85,00	98,00
4	95,00	120,00
5	105,00	130,00
Total	73,00	130,00

Test of Homogeneity of Variances

tinggi_tanaman

Levene Statistic	df1	df2	Sig.
1,495	4	20	,241

ANOVA

tinggi_tanaman

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5695,760	4	1423,940	20,336	,000

Within Groups	1400,400	20	70,020		
Total	7096,160	24			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: tinggi_tanaman

	(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
LSD	1	2	-4,80000	5,29226	,375	-15,8395
		3	-10,40000	5,29226	,063	-21,4395
		4	-23,80000*	5,29226	,000	-34,8395
		5	-41,80000*	5,29226	,000	-52,8395
	2	1	4,80000	5,29226	,375	-6,2395
		3	-5,60000	5,29226	,303	-16,6395
		4	-19,00000*	5,29226	,002	-30,0395
		5	-37,00000*	5,29226	,000	-48,0395
	3	1	10,40000	5,29226	,063	-,6395
		2	5,60000	5,29226	,303	-5,4395
		4	-13,40000*	5,29226	,020	-24,4395
		5	-31,40000*	5,29226	,000	-42,4395
	4	1	23,80000*	5,29226	,000	12,7605
		2	19,00000*	5,29226	,002	7,9605

		3	13,40000*	5,29226	,020	2,3605
		5	-18,00000*	5,29226	,003	-29,0395
	5	1	41,80000*	5,29226	,000	30,7605
		2	37,00000*	5,29226	,000	25,9605
		3	31,40000*	5,29226	,000	20,3605
		4	18,00000*	5,29226	,003	6,9605

Multiple Comparisons

Dependent Variable: tinggi_tanaman

			95% Confidence Interval
	(I) Perlakuan	(J) Perlakuan	Upper Bound
LSD	1	2	6,2395
		3	,6395
		4	-12,7605
		5	-30,7605
	2	1	15,8395
		3	5,4395
		4	-7,9605
		5	-25,9605
	3	1	21,4395
		2	16,6395
		4	-2,3605
		5	-20,3605
	4	1	34,8395
		2	30,0395

		3	24,4395
		5	-6,9605
	5	1	52,8395
		2	48,0395
		3	42,4395
		4	29,0395

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

tinggi_tanaman

	Perlakuan	N	Subset for alpha = 0.05		
			1	2	3
Duncan[a]	1	5	80,4000		
	2	5	85,2000		
	3	5	90,8000		
	4	5		104,2000	
	5	5			122,2000
	Sig.		,076	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5,000.

JUMLAH DAUN

Between-Subjects Factors

		N
Perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: Jumlah_daun

perlakuan	Mean	Std. Deviation	N
kn	147,6000	11,69615	5
kp	159,0000	11,42366	5
p1	164,4000	14,60479	5
p2	175,2000	13,89964	5
p3	182,8000	12,35718	5
Total	165,8000	17,18769	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Jumlah_daun

F	df1	df2	Sig.
,234	4	20	,916

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: Jumlah_daun

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3784,000[a]	4	946,000	5,723	,003
Intercept	687241,000	1	687241,000	4157,538	,000
Perlakuan	3784,000	4	946,000	5,723	,003
Error	3306,000	20	165,300		
Total	694331,000	25			
Corrected Total	7090,000	24			

a. R Squared = ,534 (Adjusted R Squared = ,440)

Homogeneous Subsets

Jumlah_daun

	perlakuan	N	Subset		
			1	2	3
Duncan[a,b]	kn	5	147,6000		
	kp	5	159,0000	159,0000	
	p1	5	164,4000	164,4000	
	p2	5		175,2000	175,2000
	p3	5			182,8000

Sig.		,063	,073	,361

Means for groups in homogeneous subsets are displayed.

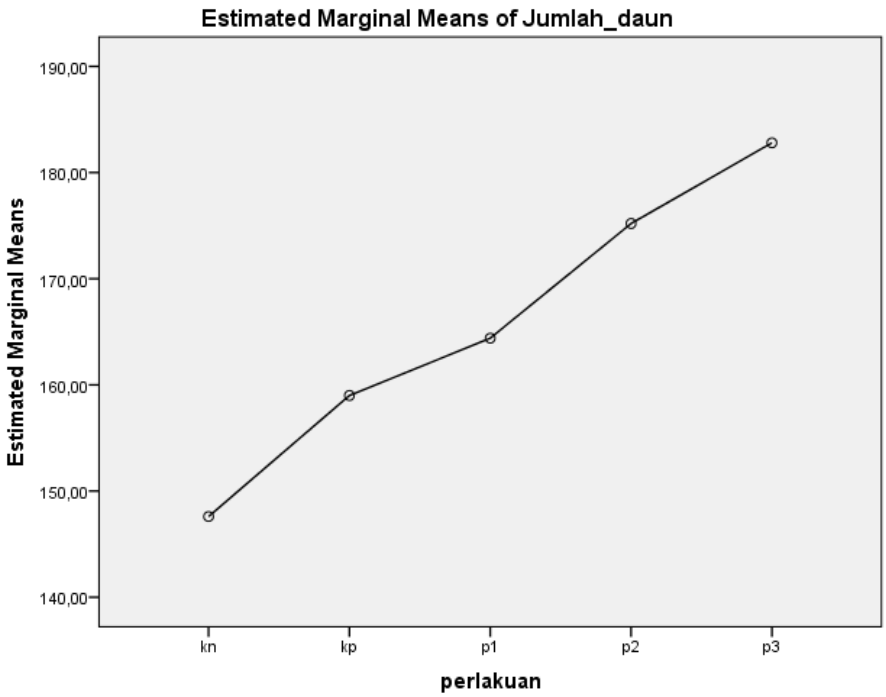
Based on observed means.

The error term is Mean Square(Error) = 165,300.

a. Uses Harmonic Mean Sample Size = 5,000.

b. Alpha = ,05.

Profile Plots



Descriptives

Jumlah_daun

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	147,6000	11,69615	5,23068	133,0773	162,1227
2	5	159,0000	11,42366	5,10882	144,8157	173,1843
3	5	164,4000	14,60479	6,53146	146,2658	182,5342
4	5	175,2000	13,89964	6,21611	157,9413	192,4587
5	5	182,8000	12,35718	5,52630	167,4565	198,1435
Total	25	165,8000	17,18769	3,43754	158,7053	172,8947

Descriptives

Jumlah_daun

	Minimum	Maximum

1	135,00	165,00
2	147,00	177,00
3	150,00	186,00
4	159,00	190,00
5	166,00	195,00
Total	135,00	195,00

Test of Homogeneity of Variances

Jumlah_daun

Levene Statistic	df1	df2	Sig.
,234	4	20	,916

ANOVA

Jumlah_daun

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3784,000	4	946,000	5,723	,003
Within Groups	3306,000	20	165,300		
Total	7090,000	24			

Homogeneous Subsets

Jumlah_daun

	Perlakuan	N	Subset for alpha = 0.05		
			1	2	3
Duncan[a]	1	5	147,6000		
	2	5	159,0000	159,0000	
	3	5	164,4000	164,4000	
	4	5		175,2000	175,2000
	5	5			182,8000
	Sig.		,063	,073	,361

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

KADAR KLOROFIL TOTAL

Between-Subjects Factors

		N
perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: kadar_klorofil

perlakuan	Mean	Std. Deviation	N
kn	73024,0200	903,47499	5
kp	73380,9720	95,47318	5

p1	73581,9760	378,23612	5
p2	74609,4040	636,80884	5
p3	76263,2980	909,69505	5
Total	74171,9340	1339,91398	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: kadar_klorofil

F	df1	df2	Sig.
3,133	4	20	,037

Tests of Between-Subjects Effects

Dependent Variable: kadar_klorofil

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	34282806,300[a]	4	8570701,575	19,465	,000
Intercept	137536894832,509	1	137536894832,509	312368,697	,000
Perlakuan	34282806,300	4	8570701,575	19,465	,000
Error	8806061,315	20	440303,066		
Total	137579983700,123	25			
Corrected Total	43088867,615	24			

a. R Squared = ,796 (Adjusted R Squared = ,755)

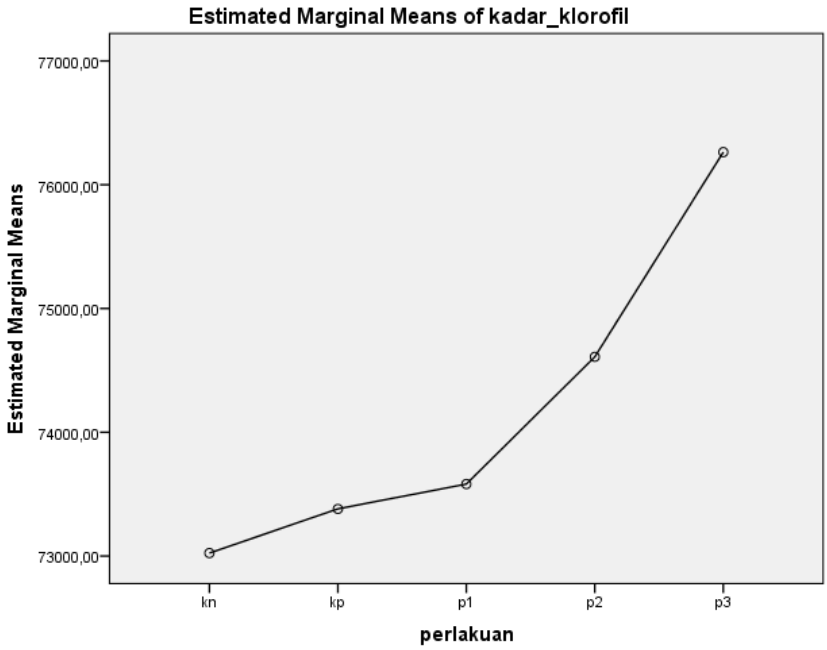
Homogeneous Subsets

kadar_klorofil

	perlakuan	N	Subset 1	Subset 2	Subset 3
Duncan[a,b]	kn	5	73024,0200		
	kp	5	73380,9720		
	p1	5	73581,9760		
	p2	5		74609,4040	
	p3	5			76263,2980
	Sig.		,223	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 440303,066.
a. Uses Harmonic Mean Sample Size = 5,000.
b. Alpha = ,05.

Profile Plots



Descriptives

kadar_klorofil

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	73024,0200	903,47499	404,04630	71902,2076	74145,8324
2	5	73380,9720	95,47318	42,69691	73262,4264	73499,5176
3	5	73581,9760	378,23612	169,15234	73112,3338	74051,6182
4	5	74609,4040	636,80884	284,78957	73818,7014	75400,1066
5	5	76263,2980	909,69505	406,82799	75133,7624	77392,8336
Total	25	74171,9340	1339,91398	267,98280	73618,8447	74725,0233

Test of Homogeneity of Variances

kadar_klorofil

Levene Statistic	df1	df2	Sig.
3,133	4	20	,037

ANOVA

kadar_klorofil

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34282806,300	4	8570701,575	19,465	,000
Within Groups	8806061,315	20	440303,066		
Total	43088867,615	24			

Homogeneous Subsets

kadar_klorofil

	Perlakuan	N	Subset for alpha = 0.05		
			1	2	3
Duncan[a]	1	5	73024,0200		
	2	5	73380,9720		
	3	5	73581,9760		
	4	5		74609,4040	
	5	5			76263,2980
	Sig.		,223	1,000	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

BERAT BASAH

Between-Subjects Factors

		N
perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: berat_basah

perlakuan	Mean	Std. Deviation	N
kn	464,8000	4,96991	5
kp	474,4000	4,39318	5
p1	480,8000	4,60435	5
p2	494,4000	14,97665	5
p3	516,6000	3,13050	5
Total	486,2000	19,67020	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: berat_basah

F	df1	df2	Sig.
4,645	4	20	,008

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]
a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: berat_basah

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8088,800[a]	4	2022,200	33,782	,000
Intercept	5909761,000	1	5909761,000	98726,378	,000
perlakuan	8088,800	4	2022,200	33,782	,000
Error	1197,200	20	59,860		
Total	5919047,000	25			
Corrected Total	9286,000	24			

a. R Squared = ,871 (Adjusted R Squared = ,845)

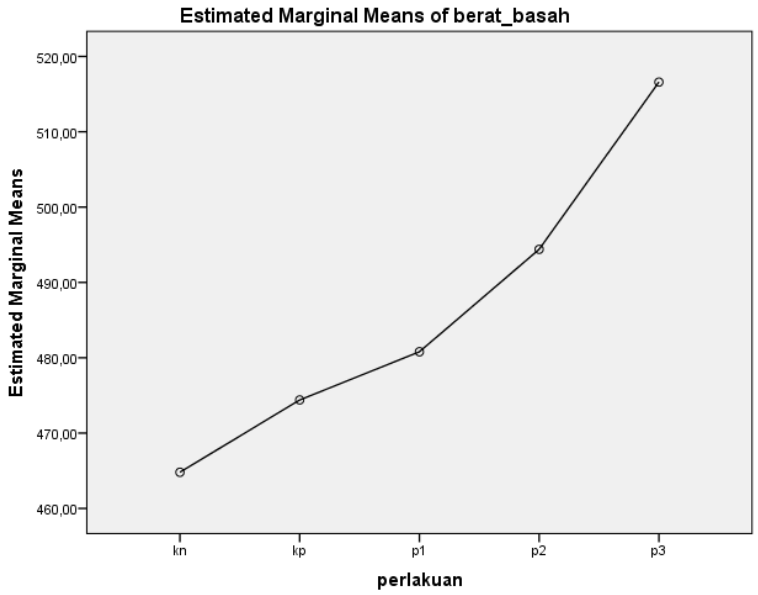
Homogeneous Subsets

berat_basah

	perlakuan	N	Subset			
			1	2	3	4
Duncan[a,b]	kn	5	464,8000			
	kp	5	474,4000	474,4000		
	p1	5		480,8000		
	p2	5			494,4000	
	p3	5				516,6000
	Sig.		,064	,206	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 59,860.
a. Uses Harmonic Mean Sample Size = 5,000.
b. Alpha = ,05.

Profile Plots



Descriptives

berat_basah

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	464,8000	4,96991	2,22261	458,6290	470,9710
2	5	474,4000	4,39318	1,96469	468,9452	479,8548
3	5	480,8000	4,60435	2,05913	475,0829	486,5171
4	5	494,4000	14,97665	6,69776	475,8040	512,9960
5	5	516,6000	3,13050	1,40000	512,7130	520,4870
Total	25	486,2000	19,67020	3,93404	478,0805	494,3195

Test of Homogeneity of Variances

berat_basah

Levene Statistic	df1	df2	Sig.
4,645	4	20	,008

ANOVA

berat_basah

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8088,800	4	2022,200	33,782	,000
Within Groups	1197,200	20	59,860		
Total	9286,000	24			

Homogeneous Subsets

berat_basah

	perlakuan	N	Subset for alpha = 0.05			
			1	2	3	4
Duncan[a]	1	5	464,8000			
	2	5	474,4000	474,4000		
	3	5		480,8000		
	4	5			494,4000	
	5	5				516,6000
	Sig.		,064	,206	1,000	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

JUMLAH POLONG

Between-Subjects Factors

		N
perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: jumlah_polong

perlakuan	Mean	Std. Deviation	N
kn	164,2000	8,43801	5
kp	177,6000	10,69112	5
p1	186,6000	5,45894	5
p2	205,0000	8,63134	5
p3	233,2000	15,92796	5
Total	193,3200	26,22772	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: jumlah_polong

F	df1	df2	Sig.
1,495	4	20	,241

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: jumlah_polong

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	14335,440[a]	4	3583,860	32,970	,000
Intercept	934315,560	1	934315,560	8595,359	,000
Perlakuan	14335,440	4	3583,860	32,970	,000
Error	2174,000	20	108,700		
Total	950825,000	25			
Corrected Total	16509,440	24			

a. R Squared = ,868 (Adjusted R Squared = ,842)

Homogeneous Subsets

jumlah_polong

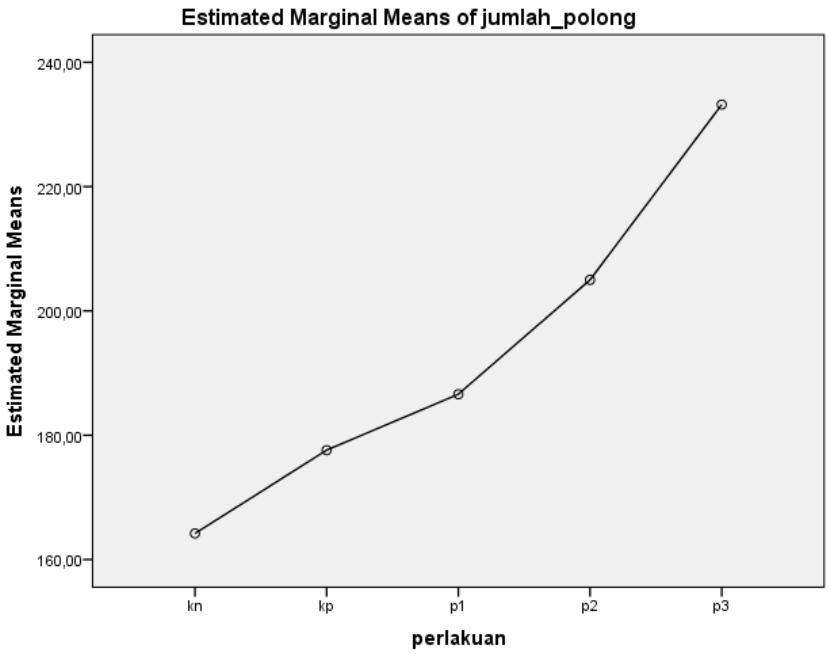
	perlakuan	N	Subset			
			1	2	3	4
Duncan[a,b]	kn	5	164,2000			
	kp	5	177,6000	177,6000		
	p1	5		186,6000		
	p2	5			205,0000	
	p3	5				233,2000
	Sig.		,056	,187	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 108,700.

a. Uses Harmonic Mean Sample Size = 5,000.

b. Alpha = ,05.

Profile Plots



Descriptives

jumlah_polong

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	164,2000	8,43801	3,77359	153,7228	174,6772
2	5	177,6000	10,69112	4,78121	164,3252	190,8748
3	5	186,6000	5,45894	2,44131	179,8218	193,3782
4	5	205,0000	8,63134	3,86005	194,2828	215,7172
5	5	233,2000	15,92796	7,12320	213,4228	252,9772
Total	25	193,3200	26,22772	5,24554	182,4937	204,1463

Test of Homogeneity of Variances

jumlah_polong

Levene Statistic	df1	df2	Sig.
1,495	4	20	,241

ANOVA

jumlah_polong

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14335,440	4	3583,860	32,970	,000
Within Groups	2174,000	20	108,700		
Total	16509,440	24			

Homogeneous Subsets

jumlah_polong

	perlakuan	N	Subset for alpha = 0.05			
			1	2	3	4
Duncan[a]	1	5	164,2000			
	2	5	177,6000	177,6000		
	3	5		186,6000		
	4	5			205,0000	
	5	5				233,2000
	Sig.		,056	,187	1,000	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

BERAT POLONG

Between-Subjects Factors

		N
perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: berat_polong

perlakuan	Mean	Std. Deviation	N
kn	127,4000	10,06479	5
kp	160,0000	9,19239	5
p1	170,4000	6,69328	5
p2	177,6000	5,02991	5
p3	192,0000	4,74342	5
Total	165,4800	23,17168	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: berat_polong

F	df1	df2	Sig.
1,052	4	20	,406

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]
a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: berat_polong

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11772,640[a]	4	2943,160	52,858	,000
Intercept	684590,760	1	684590,760	12295,093	,000
perlakuan	11772,640	4	2943,160	52,858	,000
Error	1113,600	20	55,680		

Total	697477,000	25			
Corrected Total	12886,240	24			

a. R Squared = ,914 (Adjusted R Squared = ,896)

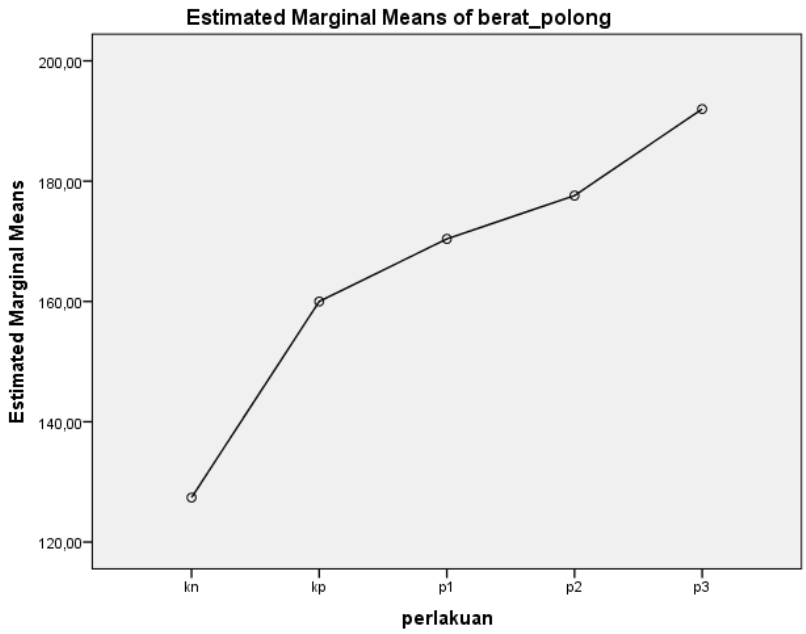
Homogeneous Subsets

berat_polong

	perlakuan	N	Subset			
			1	2	3	4
Duncan[a,b]	kn	5	127,4000			
	kp	5		160,0000		
	p1	5			170,4000	
	p2	5			177,6000	
	p3	5				192,0000
	Sig.		1,000	1,000	,143	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 55,680.
a. Uses Harmonic Mean Sample Size = 5,000.
b. Alpha = ,05.

Profile Plots



Oneway

Notes

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Descriptives

berat_polong

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	127,4000	10,06479	4,50111	114,9029	139,8971
2	5	160,0000	9,19239	4,11096	148,5861	171,4139
3	5	170,4000	6,69328	2,99333	162,0892	178,7108
4	5	177,6000	5,02991	2,24944	171,3545	183,8455
5	5	192,0000	4,74342	2,12132	186,1103	197,8897
Total	25	165,4800	23,17168	4,63434	155,9152	175,0448

Descriptives

berat_polong

	Minimum	Maximum
1	110,00	135,00
2	148,00	170,00
3	163,00	179,00
4	172,00	185,00
5	186,00	198,00
Total	110,00	198,00

Test of Homogeneity of Variances

berat_polong

Levene Statistic	df1	df2	Sig.
1,052	4	20	,406

ANOVA

berat_polong

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11772,640	4	2943,160	52,858	,000
Within Groups	1113,600	20	55,680		
Total	12886,240	24			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: berat_polong

	(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
LSD	1	2	-32,60000*	4,71932	,000	-42,4443
		3	-43,00000*	4,71932	,000	-52,8443
		4	-50,20000*	4,71932	,000	-60,0443
		5	-64,60000*	4,71932	,000	-74,4443
	2	1	32,60000*	4,71932	,000	22,7557
		3	-10,40000*	4,71932	,039	-20,2443
		4	-17,60000*	4,71932	,001	-27,4443
		5	-32,00000*	4,71932	,000	-41,8443
	3	1	43,00000*	4,71932	,000	33,1557
		2	10,40000*	4,71932	,039	,5557
		4	-7,20000	4,71932	,143	-17,0443
		5	-21,60000*	4,71932	,000	-31,4443
	4	1	50,20000*	4,71932	,000	40,3557
		2	17,60000*	4,71932	,001	7,7557
		3	7,20000	4,71932	,143	-2,6443
		5	-14,40000*	4,71932	,006	-24,2443
	5	1	64,60000*	4,71932	,000	54,7557
		2	32,00000*	4,71932	,000	22,1557
		3	21,60000*	4,71932	,000	11,7557
		4	14,40000*	4,71932	,006	4,5557

Multiple Comparisons

Dependent Variable: berat_polong

	(I) perlakuan	(J) perlakuan	95% Confidence Interval Upper Bound
LSD	1	2	-22,7557
		3	-33,1557
		4	-40,3557
		5	-54,7557
	2	1	42,4443
		3	-,5557
		4	-7,7557
		5	-22,1557
	3	1	52,8443
		2	20,2443
		4	2,6443
		5	-11,7557
	4	1	60,0443
		2	27,4443
		3	17,0443
		5	-4,5557
	5	1	74,4443

	2	41,8443
	3	31,4443
	4	24,2443

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

berat_polong

	perlakuan	N	Subset for alpha = 0.05			
			1	2	3	4
Duncan[a]	1	5	127,4000			
	2	5		160,0000		
	3	5			170,4000	
	4	5			177,6000	
	5	5				192,0000
	Sig.		1,000	1,000	,143	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

JUMLAH BIJI

Univariate Analysis of Variance

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
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	Elapsed Time	00:00:00,27

Between-Subjects Factors

		N
perlakuan	kn	5
	kp	5
	p1	5
	p2	5
	p3	5

Descriptive Statistics

Dependent Variable: jumlah_biji

perlakuan	Mean	Std. Deviation	N
kn	357,4000	31,12555	5
kp	389,4000	26,00577	5
p1	402,6000	14,92649	5
p2	426,8000	15,31992	5
p3	459,6000	12,70039	5
Total	407,1600	40,20539	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: jumlah_biji

F	df1	df2	Sig.
1,455	4	20	,253

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: jumlah_biji

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	29739,760[a]	4	7434,940	16,421	,000
Intercept	4144481,640	1	4144481,640	9153,411	,000
Perlakuan	29739,760	4	7434,940	16,421	,000
Error	9055,600	20	452,780		
Total	4183277,000	25			
Corrected Total	38795,360	24			

a. R Squared = ,767 (Adjusted R Squared = ,720)

Estimated Marginal Means

perlakuan

Dependent Variable: jumlah_biji

Perlakuan	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Kn	357,400	9,516	337,550	377,250
Kp	389,400	9,516	369,550	409,250
p1	402,600	9,516	382,750	422,450
p2	426,800	9,516	406,950	446,650
p3	459,600	9,516	439,750	479,450

Post Hoc Tests

perlakuan

Multiple Comparisons

Dependent Variable: jumlah_biji

	(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
LSD	Kn	Kp	-32,0000*	13,45779	,028	-60,0724
		p1	-45,2000*	13,45779	,003	-73,2724
		p2	-69,4000*	13,45779	,000	-97,4724
		p3	-102,2000*	13,45779	,000	-130,2724
	Kp	Kn	32,0000*	13,45779	,028	3,9276
		p1	-13,2000	13,45779	,338	-41,2724
		p2	-37,4000*	13,45779	,012	-65,4724
		p3	-70,2000*	13,45779	,000	-98,2724
	p1	Kn	45,2000*	13,45779	,003	17,1276
		Kp	13,2000	13,45779	,338	-14,8724
		p2	-24,2000	13,45779	,087	-52,2724
		p3	-57,0000*	13,45779	,000	-85,0724
	p2	Kn	69,4000*	13,45779	,000	41,3276
		Kp	37,4000*	13,45779	,012	9,3276
		p1	24,2000	13,45779	,087	-3,8724
		p3	-32,8000*	13,45779	,024	-60,8724
	p3	Kn	102,2000*	13,45779	,000	74,1276
		Kp	70,2000*	13,45779	,000	42,1276
		p1	57,0000*	13,45779	,000	28,9276
		p2	32,8000*	13,45779	,024	4,7276

Multiple Comparisons

Dependent Variable: jumlah_biji

	(I) perlakuan	(J) perlakuan	95% Confidence Interval Upper Bound
LSD	Kn	kp	-3,9276
		p1	-17,1276
		p2	-41,3276
		p3	-74,1276
	Kp	kn	60,0724
		p1	14,8724
		p2	-9,3276
		p3	-42,1276
	p1	kn	73,2724
		kp	41,2724
		p2	3,8724
		p3	-28,9276
	p2	kn	97,4724
		kp	65,4724
		p1	52,2724
		p3	-4,7276
	p3	kn	130,2724
		kp	98,2724
		p1	85,0724

p2	60,8724

Based on observed means.
The error term is Mean Square(Error) = 452,780.
*. The mean difference is significant at the ,05 level.

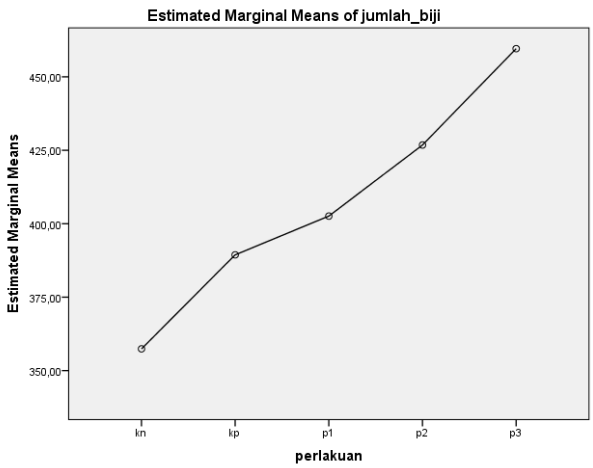
Homogeneous Subsets

jumlah_biji

	perlakuan	N	Subset			
			1	2	3	4
Duncan[a,b]	Kn	5	357,4000			
	Kp	5		389,4000		
	p1	5		402,6000	402,6000	
	p2	5			426,8000	
	p3	5				459,6000
	Sig.		1,000	,338	,087	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 452,780.
a. Uses Harmonic Mean Sample Size = 5,000.
b. Alpha = ,05.

Profile Plots



Descriptives

jumlah_biji

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	357,4000	31,12555	13,91977	318,7525	396,0475
2	5	389,4000	26,00577	11,63013	357,1096	421,6904
3	5	402,6000	14,92649	6,67533	384,0663	421,1337
4	5	426,8000	15,31992	6,85128	407,7778	445,8222
5	5	459,6000	12,70039	5,67979	443,8304	475,3696
Total	25	407,1600	40,20539	8,04108	390,5640	423,7560

Descriptives

jumlah_biji

	Minimum	Maximum
1	328,00	410,00
2	365,00	420,00
3	386,00	420,00
4	406,00	440,00
5	446,00	478,00
Total	328,00	478,00

Test of Homogeneity of Variances

jumlah_biji

Levene Statistic	df1	df2	Sig.
1,455	4	20	,253

ANOVA

jumlah_biji

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29739,760	4	7434,940	16,421	,000
Within Groups	9055,600	20	452,780		
Total	38795,360	24			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: jumlah_biji

	(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
LSD	1	2	-32,00000*	13,45779	,028	-60,0724
		3	-45,20000*	13,45779	,003	-73,2724
		4	-69,40000*	13,45779	,000	-97,4724
		5	-102,20000*	13,45779	,000	-130,2724
	2	1	32,00000*	13,45779	,028	3,9276
		3	-13,20000	13,45779	,338	-41,2724
		4	-37,40000*	13,45779	,012	-65,4724
		5	-70,20000*	13,45779	,000	-98,2724
	3	1	45,20000*	13,45779	,003	17,1276
		2	13,20000	13,45779	,338	-14,8724
		4	-24,20000	13,45779	,087	-52,2724
		5	-57,00000*	13,45779	,000	-85,0724
	4	1	69,40000*	13,45779	,000	41,3276
		2	37,40000*	13,45779	,012	9,3276
		3	24,20000	13,45779	,087	-3,8724
		5	-32,80000*	13,45779	,024	-60,8724
	5	1	102,20000*	13,45779	,000	74,1276
		2	70,20000*	13,45779	,000	42,1276
		3	57,00000*	13,45779	,000	28,9276
		4	32,80000*	13,45779	,024	4,7276

Multiple Comparisons

Dependent Variable: jumlah_biji

	(I) perlakuan	(J) perlakuan	95% Confidence Interval Upper Bound
LSD	1	2	-3,9276
		3	-17,1276
		4	-41,3276
		5	-74,1276
	2	1	60,0724
		3	14,8724
		4	-9,3276
		5	-42,1276
	3	1	73,2724
		2	41,2724
		4	3,8724
		5	-28,9276
	4	1	97,4724
		2	65,4724
		3	52,2724
		5	-4,7276
	5	1	130,2724
		2	98,2724
		3	85,0724
		4	60,8724

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

jumlah_biji

	perlakuan	N	Subset for alpha = 0.05			
			1	2	3	4
Duncan[a]	1	5	357,4000			
	2	5		389,4000		
	3	5		402,6000	402,6000	
	4	5			426,8000	
	5	5				459,6000
	Sig.		1,000	,338	,087	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

BERAT BIJI

Univariate Analysis of Variance

Descriptive Statistics

Dependent Variable: berat_biji

perlakuan	Mean	Std. Deviation	N
kn	81,6000	4,61519	5
kp	87,6000	2,30217	5
p1	90,6000	3,20936	5
p2	97,2000	4,76445	5

p3	103,2000	4,96991	5
Total	92,0400	8,53171	25

Levene's Test of Equality of Error Variances[a]

Dependent Variable: berat_biji

F	df1	df2	Sig.
,919	4	20	,472

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + perlakuan

Tests of Between-Subjects Effects

Dependent Variable: berat_biji

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1409,760[a]	4	352,440	20,904	,000
Intercept	211784,040	1	211784,040	12561,331	,000
perlakuan	1409,760	4	352,440	20,904	,000
Error	337,200	20	16,860		
Total	213531,000	25			
Corrected Total	1746,960	24			

a. R Squared = ,807 (Adjusted R Squared = ,768)

Estimated Marginal Means

perlakuan

Dependent Variable: berat_biji

perlakuan	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
kn	81,600	1,836	77,770	85,430
kp	87,600	1,836	83,770	91,430
p1	90,600	1,836	86,770	94,430
p2	97,200	1,836	93,370	101,030
p3	103,200	1,836	99,370	107,030

Post Hoc Tests

perlakuan

Multiple Comparisons

Dependent Variable: berat_biji

	(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
						Lower Bound
LSD	kn	Kp	-6,0000*	2,59692	,032	-11,4171
		p1	-9,0000*	2,59692	,002	-14,4171
		p2	-15,6000*	2,59692	,000	-21,0171
		p3	-21,6000*	2,59692	,000	-27,0171

	kp	Kn	6,0000*	2,59692	,032	,5829
		p1	-3,0000	2,59692	,262	-8,4171
		p2	-9,6000*	2,59692	,001	-15,0171
		p3	-15,6000*	2,59692	,000	-21,0171
	p1	Kn	9,0000*	2,59692	,002	3,5829
		Kp	3,0000	2,59692	,262	-2,4171
		p2	-6,6000*	2,59692	,019	-12,0171
		p3	-12,6000*	2,59692	,000	-18,0171
	p2	Kn	15,6000*	2,59692	,000	10,1829
		Kp	9,6000*	2,59692	,001	4,1829
		p1	6,6000*	2,59692	,019	1,1829
		p3	-6,0000*	2,59692	,032	-11,4171
	p3	Kn	21,6000*	2,59692	,000	16,1829
		Kp	15,6000*	2,59692	,000	10,1829
		p1	12,6000*	2,59692	,000	7,1829
		p2	6,0000*	2,59692	,032	,5829

Multiple Comparisons

Dependent Variable: berat_biji

	(I) perlakuan	(J) perlakuan	95% Confidence Interval Upper Bound
LSD	Kn	kp	-,5829
		p1	-3,5829
		p2	-10,1829
		p3	-16,1829
	Kp	kn	11,4171
		p1	2,4171
		p2	-4,1829
		p3	-10,1829
	p1	kn	14,4171
		kp	8,4171
		p2	-1,1829
		p3	-7,1829
	p2	kn	21,0171
		kp	15,0171
		p1	12,0171
		p3	-,5829
	p3	kn	27,0171
		kp	21,0171
		p1	18,0171
		p2	11,4171

Based on observed means.
The error term is Mean Square(Error) = 16,860.
*. The mean difference is significant at the ,05 level.

Homogeneous Subsets

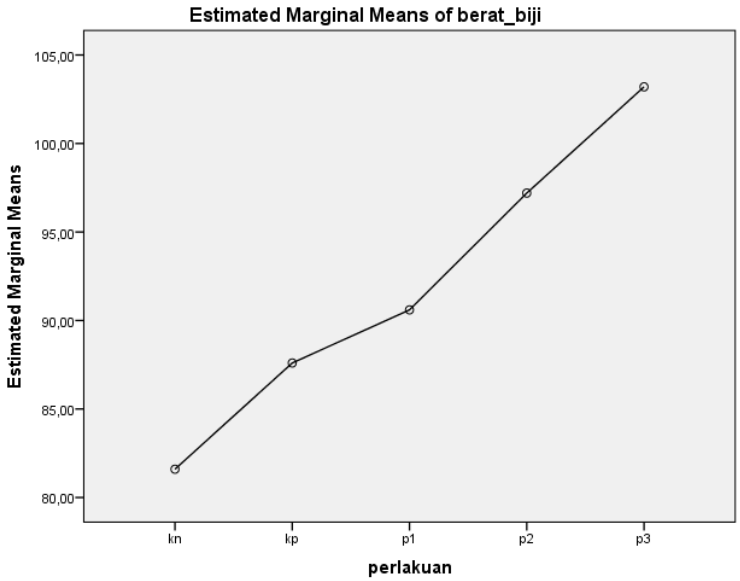
berat_biji

perlakuan	N	Subset			
		1	2	3	4

Duncan[a,b]	kn	5	81,6000			
	kp	5		87,6000		
	p1	5		90,6000		
	p2	5			97,2000	
	p3	5				103,2000
	Sig.		1,000	,262	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 16,860.
a. Uses Harmonic Mean Sample Size = 5,000.
b. Alpha = ,05.

Profile PlotsOneway



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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY berat_biji BY perlakuan /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /POSTHOC=DUNCAN LSD ALPHA(0.05).

Resources	Processor Time	00:00:00,08
	Elapsed Time	00:00:00,09

Descriptives

berat_biji

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1	5	81,6000	4,61519	2,06398	75,8695	87,3305
2	5	87,6000	2,30217	1,02956	84,7415	90,4585
3	5	90,6000	3,20936	1,43527	86,6151	94,5849
4	5	97,2000	4,76445	2,13073	91,2842	103,1158
5	5	103,2000	4,96991	2,22261	97,0290	109,3710
Total	25	92,0400	8,53171	1,70634	88,5183	95,5617

Descriptives

berat_biji

	Minimum	Maximum
1	76,00	87,00
2	84,00	90,00
3	87,00	95,00
4	93,00	105,00
5	98,00	110,00
Total	76,00	110,00

Test of Homogeneity of Variances

berat_biji

Levene Statistic	df1	df2	Sig.
,919	4	20	,472

ANOVA

berat_biji

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1409,760	4	352,440	20,904	,000
Within Groups	337,200	20	16,860		
Total	1746,960	24			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: berat_biji

	(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
						Lower Bound
LSD	1	2	-6,00000*	2,59692	,032	-11,4171
		3	-9,00000*	2,59692	,002	-14,4171
		4	-15,60000*	2,59692	,000	-21,0171
		5	-21,60000*	2,59692	,000	-27,0171
	2	1	6,00000*	2,59692	,032	,5829
		3	-3,00000	2,59692	,262	-8,4171
		4	-9,60000*	2,59692	,001	-15,0171
		5	-15,60000*	2,59692	,000	-21,0171

	3	1	9,00000*	2,59692	,002	3,5829
		2	3,00000	2,59692	,262	-2,4171
		4	-6,60000*	2,59692	,019	-12,0171
		5	-12,60000*	2,59692	,000	-18,0171
	4	1	15,60000*	2,59692	,000	10,1829
		2	9,60000*	2,59692	,001	4,1829
		3	6,60000*	2,59692	,019	1,1829
		5	-6,00000*	2,59692	,032	-11,4171
	5	1	21,60000*	2,59692	,000	16,1829
		2	15,60000*	2,59692	,000	10,1829
		3	12,60000*	2,59692	,000	7,1829
		4	6,00000*	2,59692	,032	,5829

Multiple Comparisons

Dependent Variable: berat_biji

	(I) perlakuan	(J) perlakuan	95% Confidence Interval Upper Bound
LSD	1	2	-,5829
		3	-3,5829
		4	-10,1829
		5	-16,1829
	2	1	11,4171
		3	2,4171
		4	-4,1829
		5	-10,1829
	3	1	14,4171
		2	8,4171
		4	-1,1829
		5	-7,1829
	4	1	21,0171
		2	15,0171
		3	12,0171
		5	-,5829
	5	1	27,0171
		2	21,0171
		3	18,0171
		4	11,4171

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

berat_biji

	Perlakuan	N	Subset for alpha = 0.05			
			1	2	3	4
Duncan[a]	1	5	81,6000			
	2	5		87,6000		
	3	5		90,6000		
	4	5			97,2000	
	5	5				103,2000
	Sig.		1,000	,262	1,000	1,000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 5,000.

LAMPIRAN 3

Dokumentasi Skripsi

Proses penyemaian benih kedelai

 Biji kedelai varietas anjarsmoro	 Proses pemilihan biji kedelai dengan air hangat (35-40° C) selama 20 menit untuk mencegah penyakit tular benih sekaligus memecah masa dormansi.
 Proses pembuatan dan pengisian media tanam	 menaburkan beberapa biji pada *polybag* kecil ukuran 5 × 5 cm persemaian media tanah

Proses pindah tanam

 Benih kedelai yang sudah siap untuk pindah tanam	 Media tanam tersebut yaitu arang sekam padi, tanah dan kompos dengan perbandingan 1:1:1
 Proses pemindahan benih kedelai secara tegak lurus pada lubang tanaman dengan kedalaman kurang lebih 3 cm	 Tanaman kedelai yang sudah pindah tanam

Pembuatan bioaktivator bonggol pisang

  Satu buah pisang dengan berat 150 gr dan buah pisang yang sudah dihaluskan	 Air cucian beras dengan berat 1 liter
 Tetes tebu dengan berat 350 gr	 bonggol pisang dengan berat 1 kg

 Bonggol pisang yang sudah dipotong kecil-kecil	 Masukkan bonggol pisang yang sudah dipotong kecil-kecil ke dalam baskom
 Masukkan satu buah pisang yang sudah dihaluskan	 Masukkan 350 gr tetes tebu

 Masukkan 1 liter air cucian beras	 Tambah kan 2.5 liter air biasa
 Campur dan aduk semua hingga merata	 Tutup rapat biarkan selama 7 hari hingga berbau seperti tape berarti sudah jadi dan siap diaplikasikan

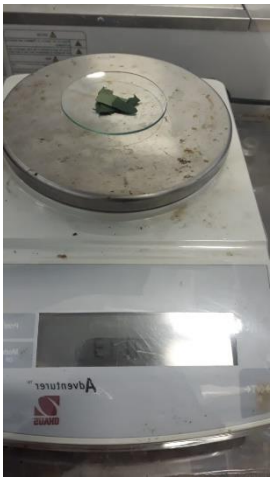
Perlakuan yang akan diaplikasikan ke tanaman

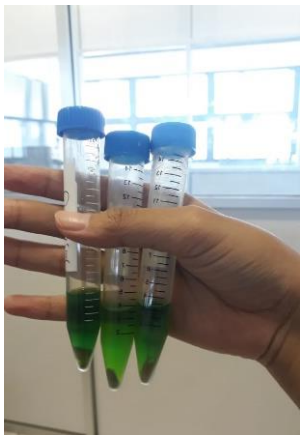
 Bioaktivator bonggol pisang yang sudah difermentasi dan disaring	 Bioakivator EM4 sebagai Konsentrasi (kontrol positif)

Penyiraman perlakuan ke tanaman

Penyiraman bioaktivator bonggol pisang setelah 7 hst, seminggu sekali

Uji kadar klorofil

 Daun ditimbang untuk dijadikan bahan sampel uji klorofil	 Aqua bides digunakan untuk pelarut pada proses penghalusan sampel
 Proses penghalusan daun kedelai dengan penambahan aqua bides	 Proses mengambil sampel yang sudah larut dengan pipet yang akan dimasukkan ke tabung reaksi

 Sampel yang sudah dimasukkan ke tabung reaksi akan dimasukkan ke dalam *Centrifuge* untuk proses homogen	 Sampel yang sudah dihomogen di dalam *Centrifuge*
 Pengambilan sampel menggunakan pipet dan dimasukkan ke dalam *kufet*	 *Kufet* dimasukkan ke dalam *Spektrofotometer* agar memperoleh kadar klorofil

Proses panen tanaman kedelai

 Tanaman Kedelai yang siap panen	 Proses pemanenan tanaman kedelai
 Mengukur tinggi tanaman kedelai	 Menimbang berat basah tanaman kedelai
 Menimbang jumlah polong	 Hasil biji kedelai yang dipanen