

## **BAB V**

### **KESIMPULAN DAN SARAN**

#### **5.1 Kesimpulan**

1. Konsentrasi  $\text{KNO}_3$  tidak berpengaruh nyata terhadap pematangan dormansi benih palem ekor tupai.
2. Lama perendaman  $\text{KNO}_3$  tidak berpengaruh nyata terhadap pematangan dormansi benih ekor tupai.
3. Tidak terdapat interaksi antara konsentrasi dan lama perendaman  $\text{KNO}_3$  terhadap pematangan dormansi benih palem ekor tupai.

#### **5.2 Saran**

Metode perlakuan awal seperti skarifikasi diperlukan untuk mematahkan dormansi benih palem ekor tupai. Perlu penelitian lanjutan mengenai konsentrasi dan lama perendaman  $\text{KNO}_3$  dengan variasi yang berbeda untuk mengetahui pematangan dormansi benih palem ekor tupai.

## DAFTAR PUSTAKA

- Adelina E, 2009. Penentuan Stadia Kemasakan Buah Nangka Toaya Melalui Kajian Morfologi dan Fisiologi Benih. *Jurnal*. Fakultas Pertanian. Universitas Tadulako. Palu. Hal. 58.
- Fahmi ZI, 2010. studi teknik pematihan dormansi dan media perkecambahan terhadap viabilitas benih aren (*arenga pinnata* ( wurmb.) merr.). *Jurnal*. Balai Besar Perbenihan dan Proteksi Tanaman Perkebunan. Surabaya. Hal. 5
- Fahmi ZI, 2012. Studi Perlakuan Pematihan Dormansi Benih Dengan Skarifikasi Mekanik dan Kimiawi. *Jurnal*. Balai Besar Perbenihan dan Proteksi Tanaman Perkebunan. Surabaya. Hal. 3.
- Faustina E, P. yudoyono and R. rabaniyah. 2001. Pengaruh Cara Pelepasan Aril dan Konsentrasi  $KNO_3$  Terhadap Pematihan Dormansi Benih Pepaya (*Carica papaya L.*). *Jurnal*. Fakultas pertanian UGM. Yogyakarta. Hal. 3.
- Haryuni, and Harjanto. 2007. Pengaruh Skarifikasi Sistem Oven Terhadap Perkecambahan dan Pertumbuhan Awal Benih Tanaman Jati (*Tectona grandis L.F.*). *Jurnal*. Fakultas Pertanian. Universitas Tunas Pembangunan Surakarta. Hal. 15
- Justice OL, and Louis N. Bass. 2002. Prinsip dan praktek penyimpanan benih. *Buku*. PT RajaGrafindo Persada. Jakarta. Hal. 33
- Kusfebriani, Novia AS, Noor AI, V. Wuryaningrum, and R. Rachmadini. 2008. Perkecambahan dan dormansi. *Jurnal*. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Negeri Jakarta. Jakarta. Hal. 15.
- Lestari SI, 2009. Pematihan Dormansi Benih Palem Raja (*Roystonea oleracea Jacq.*) Dengan Beberapa Perlakuan Fisik dan Kimia. *Skripsi*. Fakultas Ilmu Matematika dan Ilmu Pengetahuan Alam. Universitas Andalas. Padang. Hal.3
- Mukhlis A. 2002. Pengaruh Tingkat Kadar Air Benih dan Metode Perontokan Terhadap Viabilitas Benih Jagung Manis (*Zea Mays saccharata sturt*). *Skripsi*. Fakultas Pertanian. IPB. Bogor. Hal. 8

- Purba R. 2000. Pengaruh Perlakuan Mekanis Dan Konsentrasi Giberelin Serta Lama Perendaman Terhadap Perkecambahan Biji Palem Kol (*Licuala Grandis*). *Skripsi*. Fakultas pertanian. Universitas Sumatera Utara. Medan.
- Puspaningrum C, A. Muin, RS. Wulandari. 2006. Pengaruh Beberapa Perlakuan Terhadap Masa Dormansi Bij Belian (*Eusideroxylon zwageri T.et.B*). *Jurnal*. Fakultas Kehutanan. Universitas Tanjung Pura. Pontianak. Hal. 100
- Ruliyansyah A, 2011. Peningkatan Performansi Benih Kacangan Dengan Perlakuan Invigorasi. *Jurnal*. Teknologi Perkebunan. Universitas Tanjung Pura. Pontianak. Hal 17.
- Rusmin D, 2009. Peningkatan Viabilitas Benih Jambu Mete (*Anacardium occidentale L.*) Melalui Invigorasi. *Jurnal*. Balai Penelitian Tanaman Obat dan Aromatik. Hal. 61-62.
- Saleh MS, E. Adelina, E. Murniati, and T. Budiarti. 2008. Pengaruh Skarifikasi Dan Media Tumbuh Terhadap Viabilitas Benih Dan Vigor Kecambah Aren. *Jurnal*. Fakultas Pertanian. Universitas Tadulako. Palu. Hal. 58
- Siregar EBM. 2005. Potensi Palem Indonesia. *Jurnal*. Fakultas Pertanian. USU. Medan. Hal. 2.
- Sujarwati, and Santosa. 2004. Perkecambahan dan Pertumbuhan Palem Jepang (*Actinophloeus macarthurii* Becc.) Akibat Perendaman Biji Dalam Lumpur. *Jurnal*. Fakultas Biologi. Universitas Gadjah mada. Yogyakarta. Hal. 99.
- Sumiasri N, D. priyadi and INK kabinawa. 2010. Pertumbuhan Biji Palem Putri (*Veitchia merillii* (Becc) H.F. Moors Pada Berbagai Media Tumbuhan. *Jurnal*. Puslit Bioteknologi. Bogor. Hal. 53.
- Suryawati A. 2005. The Effect Of Osmoconditioning And Organik Foliar Fertilizer Supplement On Vigour, Viability And Growth Of Bastard Cedar (*Guazoma ulmifolia lamk*). *Skripsi*. Fakultas Pertanian UPN 'Veteran'. Yogyakarta.

- Suryawati A, and Endah BI. 2007. Daya Simpan Benih Jarak Pagar (*Jatropha Curcas* L. ) dan Perbaikan Mutu Benih Dengan “Priming”. *Jurnal. Fakultas Pertanian. UPN. Yogyakarta. Hal. 3.*
- Sutopo L. 2002. Teknologi Benih. *Buku. PT RajaGrafindo Persada. Jakarta. Hal. 79 – 80.*
- Sutopo L. 1993. Teknologi Benih. *Buku. Fakultas Pertanian UNBRAW. Malang. Hal. 47.*
- Utami, N W and Hartutiningsih m. siregar. 2001. Beberapa Cara Untuk Menginduksi Perkecambahan Biji Palem Kuning (*Chrysalidocarpus lutescens h. wendland*). *Jurnal. Puslitbang Biologi-Lipi. Bogor. Hal. 60.*
- Viarini SA. 2007. Perlakuan  $KNO_3$  dan Suhu Inkubasi Pengaruhnya Terhadap Pematangan Dormansi Benih Kelapa Sawit ( *Elaeis guineensis* Jacq var Tenera ). *Tesis. Fakultas Ilmu-Ilmu Pertanian. Universitas Gadjah Mada. Yogyakarta.*
- Winarni TB. 2009. Pengaruh Perlakuan Pendahuluan Dan Berat Benih Terhadap Perkecambahan Benih Kayu Afrika (*Maesopsis Eminii* Engl.). *Jurnal. Fakultas kehutanan. Institute Pertanian Bogor. Bogor. Hal. 10.*



## LAMPIRAN

### Lampiran 1. Persentase Perkecambahan

The SAS System 03:07 Thursday, December 21, 2013 5

The ANOVA Procedure

Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3

Number of Observations Read	72
Number of Observations Used	72

The SAS System 03:07 Thursday, December 21, 2013 6

The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	33750.00000	1467.39130	1.08	0.3953
Error	48	65000.00000	1354.16667		
Corrected Tot	71	98750.00000			

R-Square	Coeff Var	Root MSE	inter Mean
0.341772	98.13068	36.79900	37.50000

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	4583.33333	916.66667	0.68	0.6430
l	3	4027.77778	1342.59259	0.99	0.4048
k*l	15	25138.88889	1675.92593	1.24	0.2784

The SAS System 03:07 Thursday, December 21, 2013 7

The ANOVA Procedure

## t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	1354.167
Critical Value of t	2.01063
Least Significant Difference	30.206

Means with the same letter are not significantly different.

t Grouping	Mean	N	k
A	45.83	12	K5
A			
A	45.83	12	K3
A			
A	41.67	12	K1
A			
A	37.50	12	K4
A			
A	29.17	12	K0
A			
A	25.00	12	K2

The SAS System 03:07 Thursday, December 21, 2013 8

## The ANOVA Procedure

## t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	1354.167
Critical Value of t	2.01063
Least Significant Difference	24.663

Means with the same letter are not significantly different.

t Grouping	Mean	N	l
A	47.22	18	L1
A			
A	41.67	18	L3
A			
A	33.33	18	L0
A			
A	27.78	18	L2

**Lampiran 2. Laju Perkecambahan**

The SAS System 03:07 Thursday, December 21, 2013 9

## The ANOVA Procedure

## Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3
Number of Observations Read		72
Number of Observations Used		72

The SAS System 03:07 Thursday, December 21, 2013 10

## The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	32447.6111	1410.7657	0.70	0.8205
Error	48	96539.5000	2011.2396		
Corrected Total	71	128987.1111			

R-Square	Coeff Var	Root MSE	inter Mean
0.251557	93.64771	44.84685	47.88889

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	3974.40278	794.88056	0.40	0.8497
l	3	1637.22222	545.74074	0.27	0.8457
k*l	15	26835.98611	1789.06574	0.89	0.5796

The SAS System 03:07 Thursday, December 21, 2013 11

## The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	2011.24
Critical Value of t	2.01063
Least Significant Difference	36.812

Means with the same letter are not significantly different.

t Grouping	Mean	N	k
A	58.83	12	K3
A			
A	53.96	12	K5
A			
A	49.33	12	K0
A			
A	48.00	12	K1
A			
A	38.79	12	K4
A			
A	38.42	12	K2

The SAS System 03:07 Thursday, December 21, 2013 12

#### The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	2011.24
Critical Value of t	2.01063
Least Significant Difference	30.057

Means with the same letter are not significantly different.

t Grouping	Mean	N	l
A	53.11	18	L1
A			
A	51.28	18	L3
A			
A	46.33	18	L0
A			
A	40.83	18	L2

**Lampiran 3. Nilai Perkecambahan**

The SAS System 03:07 Thursday, December 21, 2013 1

## The ANOVA Procedure

## Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3

Number of Observations Read	72
Number of Observations Used	72

The SAS System 03:07 Thursday, December 21, 2013 2

## The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	1.91534350	0.08327580	1.21	0.2843
Error	48	3.30974400	0.06895300		
Corrected Total	71	5.22508750			

R-Square	Coeff Var	Root MSE	inter Mean
0.366567	115.6355	0.262589	0.227083

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	0.33498183	0.06699637	0.97	0.4447
l	3	0.14999161	0.04999720	0.73	0.5420
k*l	15	1.43037006	0.09535800	1.38	0.1943

The SAS System 03:07 Thursday, December 21, 2013 3

## The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	0.068953
Critical Value of t	2.01063
Least Significant Difference	0.2155

Means with the same letter are not significantly different.

t Grouping	Mean	N	k
A	0.3140	12	K5
A			
A	0.2933	12	K1
A			
A	0.2464	12	K3
A			
A	0.2286	12	K4
A			
A	0.1557	12	K0
A			
A	0.1246	12	K2

The SAS System 03:07 Thursday, December 21, 2013 4

#### The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	0.068953
Critical Value of t	2.01063
Least Significant Difference	0.176

Means with the same letter are not significantly different.



t Grouping	Mean	N	l
A	0.29644	18	L1
A			
A	0.23956	18	L3
A			
A	0.18917	18	L2
A			
A	0.18317	18	L0

**Lampiran 4. Tinggi tanaman 13 MST**

The SAS System 03:07 Thursday, December 21, 2013 13

## The ANOVA Procedure

## Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3
Number of Observations Read		72
Number of Observations Used		72

The SAS System 03:07 Thursday, December 21, 2013 14

## The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	52.9644444	2.3028019	0.92	0.5767
Error	48	120.4133333	2.5086111		
Corrected Total	71	173.3777778			

R-Square	Coeff Var	Root MSE	inter Mean
0.305486	134.1622	1.583860	1.180556

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	15.97236111	3.19447222	1.27	0.2908
l	3	5.63527778	1.87842593	0.75	0.5284
k*l	15	31.35680556	2.09045370	0.83	0.6374

The SAS System 03:07 Thursday, December 21, 2013 15

## The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	2.508611
Critical Value of t	2.01063
Least Significant Difference	1.3001

Means with the same letter are not significantly different.

t	Grouping	Mean	N	k
	A	1.8125	12	K5
	A			
B	A	1.6167	12	K4
B	A			
B	A	1.3292	12	K1
B	A			
B	A	1.1333	12	K3
B	A			
B	A	0.7250	12	K0
B				
B		0.4667	12	K2

The SAS System 03:07 Thursday, December 21, 2013 16

The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	2.508611
Critical Value of t	2.01063
Least Significant Difference	1.0615

Means with the same letter are not significantly different.

t	Grouping	Mean	N	l
A		1.5944	18	L3
A				
A		1.1750	18	L2
A				
A		1.1472	18	L1
A				
A		0.8056	18	L0

**Lampiran 5. Tinggi Tanaman 15 MST**

The SAS System 03:07 Thursday, December 21, 2013 17

## The ANOVA Procedure

## Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3

Number of Observations Read	72
Number of Observations Used	72

The SAS System 03:07 Thursday, December 21, 2013 18

## The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	134.7332986	5.8579695	0.82	0.6958
Error	48	344.4483333	7.1760069		
Corrected Total	71	479.1816319			

R-Square	Coeff Var	Root MSE	inter Mean
0.281174	114.1605	2.678807	2.346528

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	37.08600694	7.41720139	1.03	0.4088
l	3	9.84538194	3.28179398	0.46	0.7134
k*l	15	87.80190972	5.85346065	0.82	0.6556

The SAS System 03:07 Thursday, December 21, 2013 19

## The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	7.176007
Critical Value of t	2.01063
Least Significant Difference	2.1989

Means with the same letter are not significantly different.

t Grouping	Mean	N	k
A	3.279	12	K5
A			
A	2.792	12	K4
A			
A	2.608	12	K1
A			
A	2.558	12	K3
A			
A	1.733	12	K0
A			
A	1.108	12	K2

The SAS System 03:07 Thursday, December 21, 2013 20

#### The ANOVA Procedure

t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	7.176007
Critical Value of t	2.01063
Least Significant Difference	1.7954

Means with the same letter are not significantly different.

t	Grouping	Mean	N	l
A		2.8861	18	L3
A				
A		2.3667	18	L2
A				
A		2.2889	18	L1
A				
A		1.8444	18	L0

**Lampiran 6. Data Tinggi Tanaman 17 MST**

The SAS System 03:07 Thursday, December 21, 2013 21

## The ANOVA Procedure

## Class Level Information

Class	Levels	Values
k	6	K0 K1 K2 K3 K4 K5
l	4	L0 L1 L2 L3
Number of Observations Read		72
Number of Observations Used		72

The SAS System 03:07 Thursday, December 21, 2013 22

## The ANOVA Procedure

Dependent Variable: inter

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	417.829861	18.166516	0.80	0.7109
Error	48	1085.600000	22.616667		
Corrected Total	71	1503.429861			

R-Square	Coeff Var	Root MSE	inter Mean
0.277918	107.4397	4.755698	4.426389

Source	DF	Anova SS	Mean Square	F Value	Pr > F
k	5	94.7119444	18.9423889	0.84	0.5297
l	3	26.8712500	8.9570833	0.40	0.7564
k*l	15	296.2466667	19.7497778	0.87	0.5963

The SAS System 03:07 Thursday, December 21, 2013 23

## The ANOVA Procedure

## t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error



rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	22.61667
Critical Value of t	2.01063
Least Significant Difference	3.9037

Means with the same letter are not significantly different.

t Grouping	Mean	N	k
A	5.842	12	K5
A			
A	5.113	12	K4
A			
A	4.979	12	K3
A			
A	4.817	12	K1
A			
A	3.308	12	K0
A			
A	2.500	12	K2

The SAS System 03:07 Thursday, December 21, 2013 24

#### The ANOVA Procedure

#### t Tests (LSD) for inter

NOTE: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	48
Error Mean Square	22.61667
Critical Value of t	2.01063
Least Significant Difference	3.1873

Means with the same letter are not significantly different.

t	Grouping	Mean	N	l
A		5.414	18	L3
A				
A		4.281	18	L2
A				
A		4.272	18	L1
A				
A		3.739	18	L0

**Lampiran 7. Denah Penelitian**

K1L2	K0L0	K5L1	K2L2	K1L3	K2L3	K2L1	K4L2
K4L1	K0L1	K5L3	K4L0	K3L2	K3L0	K2L0	K1L1
K0L3	K3L3	K5L0	K0L2	K1L0	K3L1	K5L2	K4L3
K5L0	K0L3	K0L0	K2L1	K2L3	K1L3	K2L2	K3L1
K4L3	K0L1	K4L2	K4L0	K5L3	K3L2	K3L0	K1L1
K5L2	K0L2	K5L1	K3L3	K1L0	K2L0	K4L1	K1L2
K0L0	K1L2	K0L2	K5L3	K5L1	K3L0	K4L2	K1L3
K4L0	K4L1	K2L0	K5L0	K0L1	K1L1	K3L3	K3L2
K2L2	K1L0	K2L1	K4L3	K3L1	K0L3	K5L2	K2L3

## Lampiran 8. Tabel Data Mentah Hasil Pengamatan

## 1. Persentase Benih Berkecambah Umur 15 Mst

FAKTOR 1 (KONSENTRASI KNO3)	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
K0	L0	50	50	50	150	50
	L1	0	50	50	100	33.33333333
	L2	50	0	0	50	16.66666667
K1	L3	0	50	0	50	16.66666667
	L0	50	0	0	50	16.66666667
	L1	100	0	100	200	66.66666667
K2	L2	100	50	50	200	66.66666667
	L3	0	50	0	50	16.66666667
	L0	50	100	0	150	50
K3	L1	50	0	0	50	16.66666667
	L2	0	0	0	0	0
	L3	50	0	50	100	33.33333333
K4	L0	0	0	50	50	16.66666667
	L1	100	0	50	150	50
	L2	0	50	50	100	33.33333333
K5	L3	100	100	50	250	83.33333333
	L0	0	50	0	50	16.66666667
	L1	100	0	50	150	50
TOTAL	L2	0	50	0	50	16.66666667
	L3	100	0	100	200	66.66666667
	L0	50	0	100	150	50
TOTAL	L1	100	0	100	200	66.66666667
	L2	0	50	50	100	33.33333333
	L3	0	50	50	100	33.33333333
TOTAL					2300	37.5

## 2. Laju Perkecambahan (Hari)

FAKTOR 1 (KONSENTRASI KNO <sub>3</sub> )	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
K0	L0	73	92	86	251	83.66666667
	L1	0	89	91	180	60
	L2	78	0	0	78	26
	L3	0	83	0	83	27.66666667
K1	L0	78	0	0	78	26
	L1	85	0	81	166	55.33333333
	L2	71	79	97	247	82.33333333
	L3	0	85	0	85	28.33333333
K2	L0	88	93	0	181	60.33333333
	L1	97	0	0	97	32.33333333
	L2	0	0	0	0	0
	L3	77	0	106	183	61
K3	L0	0	0	91	91	30.33333333
	L1	95	0	99	194	64.66666667
	L2	0	70	88	158	52.66666667
	L3	75	80	108	263	87.66666667
K4	L0	0	72	0	72	24
	L1	70.5	0	101	171.5	57.16666667
	L2	0	77	0	77	25.66666667
	L3	71.5	0	73.5	145	48.33333333
K5	L0	88	0	73	161	53.66666667
	L1	71.5	0	76	147.5	49.16666667
	L2	0	85	90	175	58.33333333
	L3	0	79	85	164	54.66666667
<b>TOTAL</b>					<b>2778</b>	<b>47.88888889</b>

## 3. Nilai Perkecambahan (Kecambah/Hari)

FAKTOR 1 (KONSENTRASI KNO3)	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
<b>K0</b>	L0	0.306	0.243	0.261	0.81	0.27
	L1	0	0.252	0.247	0.499	0.166333333
	L2	0.288	0	0	0.288	0.096
	L3	0	0.271	0	0.271	0.090333333
<b>K1</b>	L0	0.288	0	0	0.288	0.096
	L1	0.616	0	0.569	1.185	0.395
	L2	1.267	0.284	0.231	1.782	0.594
	L3	0	0.264	0	0.264	0.088
<b>K2</b>	L0	0.255	0.505	0	0.76	0.253333333
	L1	0.231	0	0	0.231	0.077
	L2	0	0	0	0	0
	L3	0.292	0	0.212	0.504	0.168
<b>K3</b>	L0	0	0	0.247	0.247	0.082333333
	L1	0.504	0	0.227	0.731	0.243666667
	L2	0	0.321	0.208	0.529	0.176333333
	L3	0.642	0.6	0.208	1.45	0.483333333
<b>K4</b>	L0	0	0.312	0	0.312	0.104
	L1	0.642	0	0.222	0.864	0.288
	L2	0	0.292	0	0.292	0.097333333
	L3	0.642	0	0.633	1.275	0.425
<b>K5</b>	L0	0.255	0	0.625	0.88	0.293333333
	L1	0.642	0	1.184	1.826	0.608666667
	L2	0	0.264	0.25	0.514	0.171333333
	L3	0	0.284	0.264	0.548	0.182666667
<b>TOTAL</b>					<b>14.194</b>	<b>0.227083333</b>

## 4. Tinggi Tanaman 13 Mst

FAKTOR 1 (KONSENTRASI KNO3)	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
K0	L0	2.9	0	1.2	4.1	1.366666667
	L1	0	1	0	1	0.333333333
	L2	2.2	0	0	2.2	0.733333333
	L3	0	1.4	0	1.4	0.466666667
K1	L0	1.3	0	0	1.3	0.433333333
	L1	3	0	3	6	2
	L2	4.25	2.4	0	6.65	2.216666667
	L3	0	2	0	2	0.666666667
K2	L0	1.1	1	0	2.1	0.7
	L1	0	0	0	0	0
	L2	0	0	0	0	0
	L3	3.5	0	0	3.5	1.166666667
K3	L0	0	0	0	0	0
	L1	1	0	0	1	0.333333333
	L2	0	4.4	1	5.4	1.8
	L3	3.75	3.45	0	7.2	2.4
K4	L0	0	3	0	3	1
	L1	4	0	0	4	1.333333333
	L2	0	3.6	0	3.6	1.2
	L3	4.25	0	4.55	8.8	2.933333333
K5	L0	1.1	0	2.9	4	1.333333333
	L1	4.25	0	4.4	8.65	2.883333333
	L2	0	2	1.3	3.3	1.1
	L3	0	3.4	2.4	5.8	1.933333333
<b>TOTAL</b>					<b>85</b>	<b>1.180555556</b>

## 5. Tinggi Tanaman 15 Mst

FAKTOR 1 (KONSENTRASI KNO3)	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
K0	L0	5.9	1.4	2.3	9.6	3.2
	L1	0	2.1	1.9	4	1.333333333
	L2	4.3	0	0	4.3	1.433333333
	L3	0	2.9	0	2.9	0.966666667
K1	L0	2.5	0	0	2.5	0.833333333
	L1	4	0	5.2	9.2	3.066666667
	L2	6.8	5.7	2.3	14.8	4.933333333
	L3	0	4.8	0	4.8	1.6
K2	L0	2.3	3	0	5.3	1.766666667
	L1	2.3	0	0	2.3	0.766666667
	L2	0	0	0	0	0
	L3	5.7	0	0	5.7	1.9
K3	L0	0	0	2.1	2.1	0.7
	L1	2.1	0	2.1	4.2	1.4
	L2	0	6.6	3.1	9.7	3.233333333
	L3	6.9	7.8	0	14.7	4.9
K4	L0	0	6.1	0	6.1	2.033333333
	L1	6.45	0	1.7	8.15	2.716666667
	L2	0	5.7	0	5.7	1.9
	L3	6.35	0	7.2	13.55	4.516666667
K5	L0	2.3	0	5.3	7.6	2.533333333
	L1	6.15	0	7.2	13.35	4.45
	L2	0	4.1	4	8.1	2.7
	L3	0	5.4	4.9	10.3	3.433333333
TOTAL					168.95	2.346527778



## 6. Tinggi Tanaman 17 Mst

FAKTOR 1 (KONSENTRASI KNO3)	FAKTOR 2 (LAMA PERENDAMAN)	ULANGAN			TOTAL	RATA-RATA
		1	2	3		
K0	L0	11.2	3.2	5.2	19.6	6.533333333
	L1	0	4.3	3.9	8.2	2.733333333
	L2	8.8	0	0	8.8	2.933333333
	L3	0	3.1	0	3.1	1.033333333
K1	L0	5.3	0	0	5.3	1.766666667
	L1	6.75	0	10.4	17.15	5.716666667
	L2	10.35	10.5	4.2	25.05	8.35
	L3	0	10.3	0	10.3	3.433333333
K2	L0	4.8	6.2	0	11	3.666666667
	L1	5	0	0	5	1.666666667
	L2	0	0	0	0	0
	L3	11	0	3	14	4.666666667
K3	L0	0	0	4.3	4.3	1.433333333
	L1	5.4	0	4.2	9.6	3.2
	L2	0	11.6	6.9	18.5	6.166666667
	L3	11.8	13.05	2.5	27.35	9.116666667
K4	L0	0	11.9	0	11.9	3.966666667
	L1	10.05	0	4.2	14.25	4.75
	L2	0	10	0	10	3.333333333
	L3	12.1	0	13.1	25.2	8.4
K5	L0	5.3	0	9.9	15.2	5.066666667
	L1	10.5	0	12.2	22.7	7.566666667
	L2	0	7.7	7	14.7	4.9
	L3	0	10	7.5	17.5	5.833333333
TOTAL					318.7	4.426388889

## Lampiran 9. Gambar Selama Penelitian

### 1. gambar alat dan bahan penelitian



### 2. gambar persiapan larutan



### 3. perendaman benih



#### 4. penanaman benih di media tanam



#### 5. proses pengamatan persentase, laju, dan nilai kecambah







## 6. Proses Pengamatan Tinggi Tanaman

