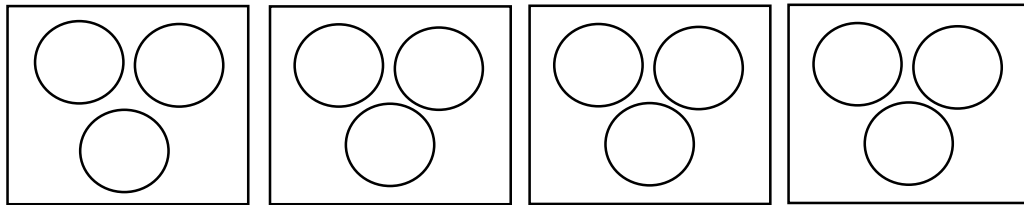
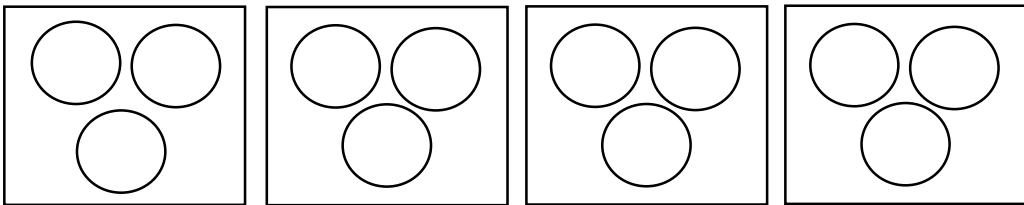
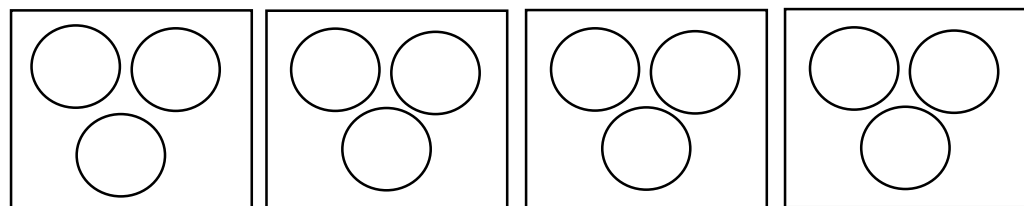
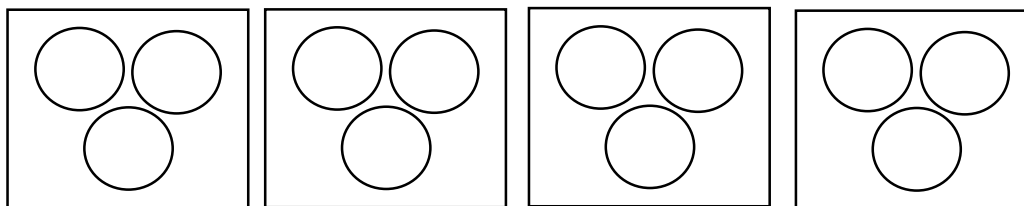


LAMPIRAN

Lampiran 1. Lay Out Penelitian**K4 U1****K0 U1****K1 U3****K1 U2****K3 U2****K0 U2****K2 U1****K1 U1****K0 U3****K3 U1****K4 U3****K2 U3****K4 U2****K2 U2****K3 U3****K1 U2**

Keterangan :

- K0 = 0 gram / 100 gram benih jagung
K1 = 10 gram / 100 gram benih jagung
K2 = 20 gram / 100 gram benih jagung
K3 = 30 gram / 100 gram benih jagung
K4 = 0,0009 gram phostoxin / 100 gram benih jagung
U1, 2, 3 = Ulangan perlakuan

Lampiran 2. Perhitungan bahan

a. Benih

$$\begin{aligned} \text{Kebutuhan benih} &= \text{perlakuan benih} \times \text{total perlakuan} \\ &= 100 \text{ gram benih jagung} \times 45 \text{ unit} \\ &= 4500 \text{ gram} \\ &= 4,5 \text{ kg} \end{aligned}$$

b. Serbuk kunyit

- Perlakuan 10 gram

$$\begin{aligned} \text{Kebutuhan serbuk} &= \text{perlakuan serbuk} \times \text{total perlakuan} \\ &= 10 \text{ gram serbuk kunyit} \times 12 \text{ unit} \\ &= 120 \text{ gram} \end{aligned}$$

- Perlakuan 20 gram

$$\begin{aligned} \text{Kebutuhan serbuk} &= \text{perlakuan serbuk} \times \text{total perlakuan} \\ &= 20 \text{ gram serbuk kunyit} \times 12 \text{ unit} \\ &= 240 \text{ gram} \end{aligned}$$

- Perlakuan 30 gram

$$\begin{aligned} \text{Kebutuhan serbuk} &= \text{perlakuan serbuk} \times \text{total perlakuan} \\ &= 30 \text{ gram serbuk kunyit} \times 12 \text{ unit} \\ &= 360 \text{ gram} \end{aligned}$$

- Total kebutuhan serbuk kunyit

$$\begin{aligned} \text{Kebutuhan serbuk} &= \text{perlakuan 10 gram} + 20 \text{ gram} + 30 \text{ gram} + 40 \text{ gram} \\ &= 120 \text{ gram} + 240 \text{ gram} + 360 \text{ gram} + 480 \text{ gram} \\ &= 1200 \text{ gram} \\ &= 1,2 \text{ kg serbuk kunyit} \end{aligned}$$

- Pestisida sintetik phostoxin

$$\text{Dosis phostoxin} = 3 - 5 \text{ tablet/ton}$$

$$\text{Berat 1 tablet} = 3,1 \text{ gram}$$

- Kebutuhan phostoxin = dosis phostoxin x berat 1 tablet

$$= 3 \times 3,1 \text{ gram}$$

$$= 9,3 \text{ gram}$$

- Kebutuhan per perlakuan

$$\frac{\text{Dosis phostoxin}}{1000 \text{ kg}} = \frac{x \text{ gram}}{1 \text{ kg}}$$

$$\frac{9,3 \text{ gram}}{1000 \text{ kg}} = \frac{x \text{ gram}}{1 \text{ kg}}$$

$$\frac{9,3 \text{ gram} \times 1 \text{ kg}}{1000 \text{ kg}} = x \text{ gram}$$

$$0,0093 \text{ gram} = \text{perlakuan/kg}$$

$$\frac{9,3 \text{ gram}}{1000 \text{ gram}} = \frac{\text{perlakuan}}{1000 \text{ gram}}$$

$$\frac{\text{perlakua}}{100 \text{ gram}} = \frac{0,0093 \text{ gram}:10}{1000 \text{ gram}:10}$$

$$\text{perlakuan} = 0,00093 \text{ gram}/100 \text{ gram}$$

Lampiran 3. Sidik ragam

a. Mortalitas hama *Sitophilus zeamais*

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	13500.74371	3375.18593	28.84	<.0001 s
Perl	4	13500.74371	3375.18593	28.84	<.0001 s
Error	10	1170.25193	117.02519		
Corrected Total	14	14670.99564			
R-Square		Coeff Var	Root MSE	Mortalitas Mean	
0.920234		26.60032	10.81782	40.66800	

Keterangan : s (signifikan)

b. Efikasi hama *Sitophilus zeamais*

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	14186.07909	3546.51977	31.55	<.0001 s
Perl	4	14186.07909	3546.51977	31.55	<.0001 s
Error	10	1124.03400	112.40340		
Corrected Total	14	15310.11309			
R-Square		Coeff Var	Root MSE	Efikasi Mean	
0.926582		26.88646	10.60205	39.43267	

Keterangan : s (signifikan)

c. Uji Pertumbuhan dan Perkembangan *Sitophilus zeamais*

1. Imago yang muncul

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	2.11417333	0.52854333	11.66	< 0.0009 s
Perl	4	2.11417333	0.52854333	11.66	< 0.0009 s
Error	10	0.45340000	0.04534000		
Corrected Total	14	2.56757333			
R-Square		Coeff Var	Root MSE	Hama Baru Mean	
0.823413		9.525734	0.212932	2.235333	

Keterangan : ns (non signifikan)

d. Susut Bobot Benih Jagung

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	4.42340000	1.10585000	2.08	0.1592 ns
Perl	4	4.42340000	1.10585000	2.08	0.1592 ns
Error	10	0.45340000	0.04534000		
Corrected Total	14	2.56757333			
R-Square		Coeff Var	Root MSE	Susut Bobot Mean	
0.453608		17.50468	0.729945	4.170000	

Keterangan : s (signifikan)

e. Kadar Air Benih Jagung

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	2.11417333	0.52854333	11.66	< 0.0009 s
Perl	4	2.11417333	0.52854333	11.66	< 0.0009 s
Error	10	0.45340000	0.04534000		
Corrected Total	14	2.56757333			
R-Square		Coeff Var	Root MSE	Kadar Air Mean	
0.823413		9.525734	0.212932	2.235333	

Keterangan : s (signifikan)

f. Daya Kecambah Benih Jagung

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	0.00444000	0.00111000	1.75	0.2149 ns
Perl	4	0.00444000	0.00111000	1.75	0.2149 ns
Error	10	0.00633333	0.00063333		
Corrected Total	14	0.01077333			
R-Square		Coeff Var	Root MSE	DK Mean	
0.412129		2.617834	0.025166	0.961333	

Keterangan : ns (non signifikan)

g. Indeks Vigor

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	3.73333333	0.93333333	0.58	0.6819 ns
Perl	4	3.73333333	0.93333333	0.58	0.6819 ns
Error	10	598.406667	59.840667		
Corrected Total	14	8198.589333			
R-Square		Coeff Var	Root MSE	Indeks Vigor Mean	
0.189189		6.704476	1.264911	18.86667	

Keterangan : ns (non signifikan)

h. Kecepatan Berkecambah

Source	DF	Sum of quares	Mean Square	F value	Pr > F
Model	4	0.01113333	0.00278333	1.93	0.1814 ns
Perl	4	0.01113333	0.00278333	1.93	0.1814 ns
Error	10	0.01440000	0.00144000		
Corrected Total	14	0.02553333			
R-Square		Coeff Var	Root MSE	KB Mean	
0.436031		4.109819	0.037947	0.923333	

Keterangan : ns (non signifikan)

Lampiran 4. Hasil Perhitungan Mortalitas, efikasi, uji pertumbuhan dan perkembangan *Sitophilus zeamais*, Susut bobot benih jagung, kadar air, Daya kecambah, Indeks vigor, Kecepatan berkecambah

a. Mortalitas hama bubuk jagung

Perlakuan	Ulangan	Mortalitas
K0	1	0 %
K0	2	0 %
K0	3	6,67 %
K1	1	23,33 %
K1	2	26,67 %
K1	3	16,67 %
K2	1	40,00 %
K2	2	36,67 %
K2	3	46,67 %
K3	1	40,00 %
K3	2	26,67 %
K3	3	70,00 %
K4	1	86,67 %
K4	2	96,67 %
K4	3	93,33 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

b. Efikasi hama bubuk jagung

Perlakuan	Ulangan	Efikasi
K0	1	0 %
K0	2	0 %
K0	3	0 %
K1	1	23,33 %
K1	2	26,67 %
K1	3	10,47 %
K2	1	40,00 %
K2	2	36,67 %
K2	3	42,59 %
K3	1	40,00 %
K3	2	26,67 %
K3	3	68,52 %
K4	1	86,67 %
K4	2	96,67 %
K4	3	92,96 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

- c. Uji Pertumbuhan dan Perkembangan hama bubuk jagung (imago yang muncul)

Perlakuan	Ulangan	Imago yang muncul
K0	1	27 %
K0	2	47 %
K0	3	50 %
K1	1	33 %
K1	2	43 %
K1	3	33 %
K2	1	47 %
K2	2	37 %
K2	3	40 %
K3	1	47 %
K3	2	13 %
K3	3	50 %
K4	1	77 %
K4	2	60 %
K4	3	13 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

d. Susut bobot benih jagung

Perlakuan	Ulangan	Susut bobot benih jagung
K0	1	8,09 gram
K0	2	14,83 gram
K0	3	13,67 gram
K1	1	17,78 gram
K1	2	21,42 gram
K1	3	41,68 gram
K2	1	16,98 gram
K2	2	14,67 gram
K2	3	16,37 gram
K3	1	15,44 gram
K3	2	16,08 gram
K3	3	15,31 gram
K4	1	14,16 gram
K4	2	29,61 gram
K4	3	14,41 gram

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

e. Kadar air benih jagung

Perlakuan	Ulangan	Kadar air
K0	1	1,48 %
K0	2	2,04 %
K0	3	1,88 %
K1	1	2,71 %
K1	2	2,58 %
K1	3	2,71 %
K2	1	2,71 %
K2	2	2,38 %
K2	3	2,54 %
K3	1	2,38 %
K3	2	2,48 %
K3	3	2,31 %
K4	1	1,91 %
K4	2	2,01 %
K4	3	1,41 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

f. Daya kecambah benih jagung

Perlakuan	Ulangan	Daya kecambah
K0	1	98 %
K0	2	97 %
K0	3	90 %
K1	1	93 %
K1	2	94 %
K1	3	93 %
K2	1	99 %
K2	2	98 %
K2	3	95 %
K3	1	99 %
K3	2	98 %
K3	3	94 %
K4	1	97 %
K4	2	98 %
K4	3	99 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

g. Indeks vigor benih jagung

Perlakuan	Ulangan	Indeks vigor
K0	1	19
K0	2	19
K0	3	17
K1	1	19
K1	2	19
K1	3	17
K2	1	18
K2	2	18
K2	3	21
K3	1	20
K3	2	19
K3	3	18
K4	1	19
K4	2	21
K4	3	19

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

h. Kecepatan berkecambah

Perlakuan	Ulangan	Kecepatan berkecambah (%)
K0	1	95 %
K0	2	95 %
K0	3	92 %
K1	1	85 %
K1	2	91 %
K1	3	87 %
K2	1	94 %
K2	2	87 %
K2	3	93 %
K3	1	98 %
K3	2	95 %
K3	3	86 %
K4	1	98 %
K4	2	96 %
K4	3	93 %

Keterangan :

K0 = 0 gram / 100 gram benih jagung

K1 = 10 gram / 100 gram benih jagung

K2 = 20 gram / 100 gram benih jagung

K3 = 30 gram / 100 gram benih jagung

K4 = 0,0009 gram phostoxin / 100 gram benih jagung.

Etmal = (1 etmal = 24 jam)

Lampiran 5. Penelitian dan proses pembuatan ekstrak serbuk kunyit

Pembersihan Kunyit



Kunyit dipotong tipis-tipis



Penjemuran kunyit



Blender kunyit



Penimbangan serbuk kunyit



Penyortiran benih jagung



Penimbangan benih jagung



Aplikasi serbuk kunyit



Pengamatan



Uji Mutu Benih



Serangan *Sitophilus zeamais*



Serangan *Sitophilus zeamais*