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# LAMPIRAN

**Tabel Lampiran 1.** Terjadi perbedaan nyata terhadap serangga PBK yang terperangkap pada masing-masing perlakuan pada pengamatan 1, 2, 4, 8 dan 13

| Perlakuan | Pengamatan Ke- | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| P1K0 | $0,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $5,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ |
| P1K1 | $1,0^{a}$ | $1,0^{ab}$ | $2,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $3,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ |
| P1K2 | $1,0^{a}$ | $2,0^{abc}$ | $2,0^{a}$ | $11,0^{bc}$ | $0,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $13,0^{b}$ | $2,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $0,0^{a}$ | **$8,0^{b}$** | $3,0^{a}$ | **$2,0^{a}$** | $1,0^{a}$ |
| P1K3 | **$4,0^{b}$** | **$5,0^{c}$** | $0,0^{a}$ | $7,0^{b}$ | $0,0^{a}$ | $0,0^{a}$ | $2,0^{a}$ | $6,0^{a}$ | $0,0^{a}$ | **$2,0^{a}$** | $1,0^{a}$ | $1,0^{a}$ | $2,0^{a}$ | $2,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ |
| P2K0 | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $3,0^{a}$ | $3,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ |
| P2K1 | $0,0^{a}$ | $1,0^{ab}$ | $0,0^{a}$ | $2,0^{a}$ | **$3,0^{a}$** | $2,0^{a}$ | $1,0^{a}$ | $6,0^{a}$ | **$3,0^{a}$** | $1,0^{a}$ | $1,0^{a}$ | $3,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ |
| P2K2 | $1,0^{a}$ | $4,0^{bc}$ | $2,0^{a}$ | $8,0^{bc}$ | $0,0^{a}$ | $0,0^{a}$ | **$3,0^{a}$** | $5,0^{a}$ | $1,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $1,0^{a}$ | $3,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ | $0,0^{a}$ |
| P2K3 | $1,0^{a}$ | $3,0^{abc}$ | **$4,0^{a}$** | **$12,0^{c}$** | $1,0^{a}$ | **$2,0^{a}$** | $2,0^{a}$ | **$14,0^{b}$** | $1,0^{a}$ | $1,0^{a}$ | **$4,0^{a}$** | **$4,0^{a}$** | **$8,0^{b}$** | **$4,0^{a}$** | $1,0^{a}$ | **$2,0^{a}$** |

**Tabel Lampiran 2a.** Populasi tangkapan *c.cramerella* selama 16 kali pengamatan pada 2 jenis ekstrak tanaman

| Perlakuan | Ulangan | | | | | Jumlah | Rata-rata |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Kontrol | 0 | 1 | 3 | 4 | 1 | 9 | 1,8 |
| Eks.Kopi | 25 | 9 | 27 | 15 | 24 | 100 | 20 |
| Eks.Wortel | 46 | 18 | 10 | 18 | 24 | 116 | 23,2 |
| Total | 71 | 28 | 40 | 37 | 49 | 225 | 45 |

**Tabel Lampiran 2b**. Hasil sidik ragam populasi hama penggerek buah kakao pada 2 jenis ekstrak

| SK | DB | JK | KT | F Hitung | | F Tabel | |
|---|---|---|---|---|---|---|---|
| | | | | | | 0,05 | 0,01 |
| **Ulangan** | 4 | 356,67 | 89,17 | 1,12 | tn | 3,84 | 7,01 |
| **Perlakuan** | 2 | 1332,40 | 666,20 | 8,34 | * | 4,46 | 8,65 |
| **Galat** | 8 | 638,93 | 79,87 | | | | |
| **Total** | 14 | 2328,00 | | | | | |

**Tabel Lampiran 3a.** Populasi tangkapan *c.cramerella* selama 16 kali pengamatan pada masng-masing konsentrasi 2 jenis ekstrak tanaman

| Jenis ekstrak tanaman | Konsentrasi | Ulangan | | | | | Total | Rata-rata |
|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | V | | |
| P1 | K1 | 2 | 0 | 9 | 1 | 3 | 15 | 3 |
| | K2 | 13 | 4 | 12 | 6 | 16 | 51 | 10,2 |
| | K3 | 9 | 5 | 6 | 8 | 5 | 33 | 6,6 |
| P2 | K1 | 8 | 3 | 0 | 6 | 8 | 25 | 5 |
| | K2 | 9 | 4 | 4 | 6 | 4 | 27 | 5,4 |
| | K3 | 29 | 11 | 6 | 6 | 12 | 64 | 12,8 |

**Tabel Lampiran 3b**. Hasil sidik ragam populasi hama penggerek buah kakao pada setiap konsentrasi jenis ekstrak

| SK | DB | JK | KT | F Hitung | | F Tabel | |
|---|---|---|---|---|---|---|---|
| | | | | | | **0,05** | **0,01** |
| **Ulangan** | 4 | 191,00 | 47,75 | 2,39 | tn | 2,87 | 4,43 |
| **Perlakuan** | 5 | 332,17 | 66,43 | 3,33 | * | 2,71 | 4,10 |
| **Galat** | 20 | 399,00 | 19,95 | | | | |
| **Total** | 29 | 922,17 | | | | | |

**Tabel Lampiran 4a.** Populasi tangkapan *c.cramerella* dengan membandingkan konsentrasi terbaik

| Perlakuan | Ulangan | | | Total | Rata-rata |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | | |
| Kontrol | 0 | 0 | 0 | 0 | 0,00 |
| Kopi 10% | 2 | 4 | 4 | 10 | 3,33 |
| Kopi 15% | 3 | 2 | 1 | 6 | 2,00 |
| Wortel 10% | 0 | 3 | 3 | 6 | 2,00 |
| Wortel 15% | 2 | 0 | 2 | 4 | 1,33 |

**Tabel Lampiran 4b.** Anova rata-rata jumlah tangkapan *c.cramerella* selama 8 kali pengamatan

**Tests of Between-Subjects Effects**

Dependent Variable: populasi

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| perlakuan | Hypothesis | 17.600 | 4 | 4.400 | 2.839 | .098 |
| | Error | 12.400 | 8 | 1.550[a] | | |
| ulangan | Hypothesis | .933 | 2 | .467 | .301 | .748 |
| | Error | 12.400 | 8 | 1.550[a] | | |

**ANOVA**

populasi

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 17.600 | 4 | 4.400 | 3.300 | .057 |
| Within Groups | 13.333 | 10 | 1.333 | | |
| Total | 30.933 | 14 | | | |

**Tabel Lampiran 4c.** Uji lanjut Duncan rata-rata jumlah tangkapan *c.cramerella*

**populasi**

| | perlakuan | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
| | | | 1 | 2 |
| Duncan[a] | Kontrol | 3 | .00 | |
| | wortel15% | 3 | 1.33 | 1.33 |
| | kopi15% | 3 | 2.00 | 2.00 |
| | wortel10% | 3 | 2.00 | 2.00 |
| | Kopi10% | 3 | | 3.33 |
| | Sig. | | .076 | .076 |

**Tabel Lampiran 5a.** Populasi tangkapan *c.cramerella* dengan membandingkan kombinasi dan konsentrasi ekstrak

| Kombinasi | Konsentrasi | Pengamatan Ke- | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| A1 (1:1) | B1 (Kontrol) | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| | B2 (10%) | 1,00 | 0,00 | 1,00 | 0,00 | 3,00 | 1,00 | 1,00 | 0,00 |
| | B3 (15%) | 1,00 | 1,00 | 1,00 | 1,00 | 2,00 | 0,00 | 2,00 | 1,00 |
| A2 (1:2) | B1 (Kontrol) | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| | B2 (10%) | 3,00 | 2,00 | 1,00 | 1,00 | 3,00 | 1,00 | 1,00 | 1,00 |
| | B3 (15%) | 1,00 | 2,00 | 0,00 | 0,00 | 1,00 | 1,00 | 2,00 | 1,00 |
| A3 (2:1) | B1 (Kontrol) | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| | B2 (10%) | 2,00 | 1,00 | 0,00 | 0,00 | 2,00 | 2,00 | 1,00 | 0,00 |
| | B3 (15%) | 0,00 | 0,00 | 0,00 | 0,00 | 6,00 | 0,00 | 0,00 | 1,00 |

**Tabel Lampiran 5b.** ANOVA rata-rata jumlah tangkapan *c.cramerella* pada kombinasi dan konsentrasi ekstrak

a. Pengamatan 1

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P1

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .296 | 2 | .148 | .516 | .606 |
| | Error | 4.593 | 16 | .287[a] | | |
| Konsentrasi | Hypothesis | 2.074 | 2 | 1.037 | 3.613 | .051 |
| | Error | 4.593 | 16 | .287[a] | | |
| Ulangan | Hypothesis | 2.074 | 2 | 1.037 | 3.613 | .051 |
| | Error | 4.593 | 16 | .287[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .593 | 4 | .148 | .516 | .725 |
| | Error | 4.593 | 16 | .287[a] | | |

**ANOVA**

Populasi_P1

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 2.963 | 8 | .370 | 1.000 | .469 |
| Within Groups | 6.667 | 18 | .370 | | |
| Total | 9.630 | 26 | | | |

b. Pengamatan 2

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P2

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .667 | 2 | .333 | 2.000 | .168 |
| | Error | 2.667 | 16 | .167[a] | | |
| Konsentrasi | Hypothesis | .667 | 2 | .333 | 2.000 | .168 |
| | Error | 2.667 | 16 | .167[a] | | |
| Ulangan | Hypothesis | .000 | 2 | .000 | .000 | 1.000 |
| | Error | 2.667 | 16 | .167[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .667 | 4 | .167 | 1.000 | .436 |
| | Error | 2.667 | 16 | .167[a] | | |

**ANOVA**

Populasi_P2

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 2.000 | 8 | .250 | 1.688 | .170 |
| Within Groups | 2.667 | 18 | .148 | | |
| Total | 4.667 | 26 | | | |

c. Pengamatan 3

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P3

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .222 | 2 | .111 | 1.000 | .390 |
| | Error | 1.778 | 16 | .111[a] | | |
| Konsentrasi | Hypothesis | .222 | 2 | .111 | 1.000 | .390 |
| | Error | 1.778 | 16 | .111[a] | | |
| Ulangan | Hypothesis | .222 | 2 | .111 | 1.000 | .390 |
| | Error | 1.778 | 16 | .111[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .222 | 4 | .056 | .500 | .736 |
| | Error | 1.778 | 16 | .111[a] | | |

**ANOVA**

Populasi_P3

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .667 | 8 | .083 | .750 | .649 |
| Within Groups | 2.000 | 18 | .111 | | |
| Total | 2.667 | 26 | | | |

d. Pengamatan 4

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P4

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .074 | 2 | .037 | .471 | .633 |
| | Error | 1.259 | 16 | .079[a] | | |
| Konsentrasi | Hypothesis | .074 | 2 | .037 | .471 | .633 |
| | Error | 1.259 | 16 | .079[a] | | |
| Ulangan | Hypothesis | .074 | 2 | .037 | .471 | .633 |
| | Error | 1.259 | 16 | .079[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .370 | 4 | .093 | 1.176 | .358 |
| | Error | 1.259 | 16 | .079[a] | | |

**ANOVA**

Populasi_P4

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .519 | 8 | .065 | .875 | .555 |
| Within Groups | 1.333 | 18 | .074 | | |
| Total | 1.852 | 26 | | | |

e. Pengamatan 5

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P5

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .963 | 2 | .481 | .491 | .621 |
| | Error | 15.704 | 16 | .981[a] | | |
| Konsentrasi | Hypothesis | 5.407 | 2 | 2.704 | 2.755 | .094 |
| | Error | 15.704 | 16 | .981[a] | | |
| Ulangan | Hypothesis | .296 | 2 | .148 | .151 | .861 |
| | Error | 15.704 | 16 | .981[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | 3.926 | 4 | .981 | 1.000 | .436 |
| | Error | 15.704 | 16 | .981[a] | | |

**ANOVA**

Populasi_P5

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 10.296 | 8 | 1.287 | 1.448 | .244 |
| Within Groups | 16.000 | 18 | .889 | | |
| Total | 26.296 | 26 | | | |

f. Pengamatan 6

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P6

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .074 | 2 | .037 | .229 | .798 |
| | Error | 2.593 | 16 | .162[a] | | |
| Konsentrasi | Hypothesis | .963 | 2 | .481 | 2.971 | .080 |
| | Error | 2.593 | 16 | .162[a] | | |
| Ulangan | Hypothesis | .074 | 2 | .037 | .229 | .798 |
| | Error | 2.593 | 16 | .162[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .370 | 4 | .093 | .571 | .687 |
| | Error | 2.593 | 16 | .162[a] | | |

**ANOVA**

Populasi_P6

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 1.407 | 8 | .176 | 1.188 | .359 |
| Within Groups | 2.667 | 18 | .148 | | |
| Total | 4.074 | 26 | | | |

g. Pengamatan 7

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P7

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .296 | 2 | .148 | .492 | .620 |
| | Error | 4.815 | 16 | .301[a] | | |
| Konsentrasi | Hypothesis | .963 | 2 | .481 | 1.600 | .233 |
| | Error | 4.815 | 16 | .301[a] | | |
| Ulangan | Hypothesis | .519 | 2 | .259 | .862 | .441 |
| | Error | 4.815 | 16 | .301[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .593 | 4 | .148 | .492 | .742 |
| | Error | 4.815 | 16 | .301[a] | | |

**ANOVA**

Populasi_P7

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 1.852 | 8 | .231 | .781 | .625 |
| Within Groups | 5.333 | 18 | .296 | | |
| Total | 7.185 | 26 | | | |

h. Pengamatan 8

**Tests of Between-Subjects Effects**

Dependent Variable: Populasi_P8

| Source | | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Kombinasi | Hypothesis | .074 | 2 | .037 | .229 | .798 |
| | Error | 2.593 | 16 | .162[a] | | |
| Konsentrasi | Hypothesis | .519 | 2 | .259 | 1.600 | .233 |
| | Error | 2.593 | 16 | .162[a] | | |
| Ulangan | Hypothesis | .074 | 2 | .037 | .229 | .798 |
| | Error | 2.593 | 16 | .162[a] | | |
| Kombinasi * Konsentrasi | Hypothesis | .148 | 4 | .037 | .229 | .918 |
| | Error | 2.593 | 16 | .162[a] | | |

**ANOVA**

Populasi_P8

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .741 | 8 | .093 | .625 | .746 |
| Within Groups | 2.667 | 18 | .148 | | |
| Total | 3.407 | 26 | | | |

**Tabel Lampiran 5c.** Uji lanjut Duncan rata-rata jumlah tangkapan *c.cramerella* pada kombinasi dan konsentrasi ekstrak pada pengamatan ke 5

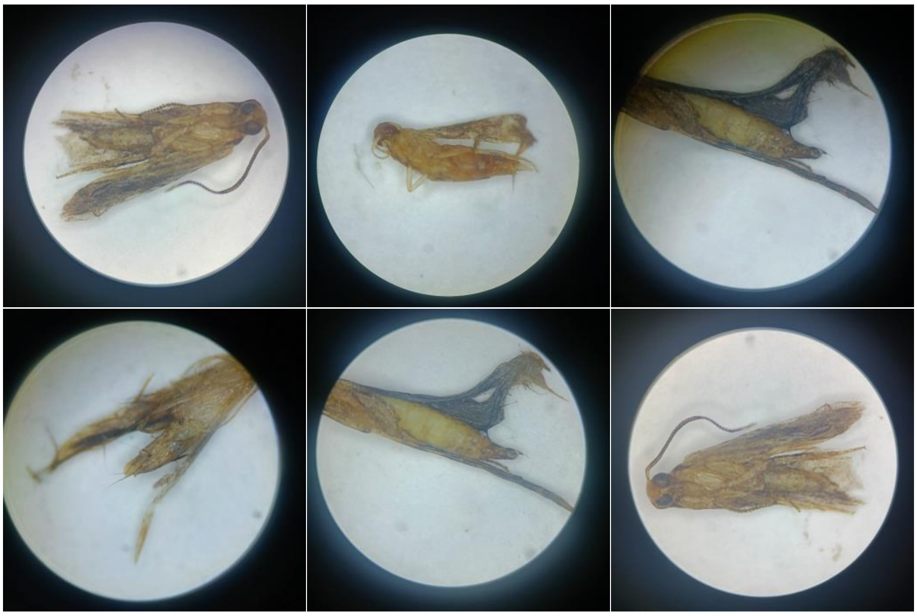
**Populasi**

| | Interaksi | N | Subset for alpha = 0.05 | |
|---|---|---|---|---|
| | | | 1 | 2 |
| Duncan[a] | A1B1 | 3 | .00 | |
| | A2B1 | 3 | .00 | |
| | A3B1 | 3 | .00 | |
| | A1B2 | 3 | 2.33 | 2.33 |
| | A3B3 | 3 | 2.33 | 2.33 |
| | A2B3 | 3 | 2.67 | 2.67 |
| | A3B2 | 3 | 2.67 | 2.67 |
| | A1B3 | 3 | 3.00 | 3.00 |
| | A2B2 | 3 | | 4.33 |
| | Sig. | | .147 | .318 |


**Gambar Lampiran 1.** Proses pembuatan ekstrak tanaman

**Gambar Lampiran 2.** Pemasangan alat di lapangan

**Gambar Lampiran 3.** Imago Penggerek Buah Kakao secara makroskopis



**Gambar Lampiran 4.** Imago Betina Penggerek Buah Kakao secara mikroskopis

a. Buah terserang berat

b. Buah terserang sedang

c. Buah terserang ringan

d. Buah sehat

**Gambar Lampiran 5.** Intensitas Buah Terserang