

the mortality results by two method (SPSS,DPS)

Corrected mortality

| | | mortality(from raw data) | | | |
|-------------------|-----------------|--------------------------|-----|-------|-------|
| | | repetition | | | |
| | | 1 | 2 | 3 | |
| <i>P. lilacim</i> | 2nd instar nym | 1 | 90 | 77.78 | 66.67 |
| | 5th instar nymp | 2 | 80 | 60 | 66.67 |
| | adult | 3 | 60 | 70 | 60 |
| <i>B. bassiar</i> | 2nd instar nym | 4 | 100 | 77.78 | 88.89 |
| | 5th instar nymp | 5 | 80 | 66.67 | 80 |
| | adult | 6 | 60 | 66.67 | 70 |

SPSS17.0

描述

VAR00002

| | N | 均值 | 标准差 | 标准误 | 均值的 95% 置信区间 | | 极小值 | 极大值 | 分单间方差 |
|------|----|---------|----------|---------|--------------|----------|-------|--------|----------|
| | | | | | 下限 | 上限 | | | |
| 1.00 | 3 | 78.1481 | 11.67108 | 6.73830 | 49.1556 | 107.1407 | 66.67 | 90.00 | |
| 2.00 | 3 | 68.8889 | 10.18350 | 5.87945 | 43.5917 | 94.1861 | 60.00 | 80.00 | |
| 3.00 | 3 | 63.3333 | 5.77350 | 3.33333 | 48.9912 | 77.6755 | 60.00 | 70.00 | |
| 4.00 | 3 | 88.8889 | 11.11111 | 6.41500 | 61.2874 | 116.4904 | 77.78 | 100.00 | |
| 5.00 | 3 | 75.5556 | 7.69800 | 4.44444 | 56.4327 | 94.6785 | 66.67 | 80.00 | |
| 6.00 | 3 | 65.5556 | 5.09175 | 2.93972 | 52.9069 | 78.2042 | 60.00 | 70.00 | |
| 总数 | 18 | 73.3951 | 11.66883 | 2.75037 | 67.5923 | 79.1978 | 60.00 | 100.00 | |
| 模型 | | | | | | | | | |
| 固定效应 | | | 8.96189 | 2.11234 | 68.7927 | 77.9975 | | | |
| 随机效应 | | | | 3.87436 | 63.4357 | 83.3544 | | | 63.29218 |

ANOVA

VAR00002

| | 平方和 | df | 均方 | F | 显著性 |
|---------|----------|----|---------|-------|------|
| 组间 (组合) | 1350.960 | 5 | 270.192 | 3.364 | .039 |
| 线性项 对比 | 12.986 | 1 | 12.986 | .162 | .695 |
| 偏差 | 1337.974 | 4 | 334.493 | 4.165 | .024 |
| 组内 | 963.786 | 12 | 80.316 | | |
| 总数 | 2314.746 | 17 | | | |

多重比较

因变量:VAR00002

| | (I) VAR00001 | (J) VAR00001 | 均值差 (I-J) | 标准误 | 显著性 | 95% 置信区间 | |
|-----|--------------|--------------|-----------|---------|------|----------|---------|
| | | | | | | 下限 | 上限 |
| LSD | 1.00 | 2.00 | 9.25926 | 7.31735 | .230 | -6.6839 | 25.2024 |
| | | 3.00 | 14.81481 | 7.31735 | .066 | -1.1283 | 30.7580 |
| | | 4.00 | -10.74074 | 7.31735 | .168 | -26.6839 | 5.2024 |
| | | 5.00 | 2.59259 | 7.31735 | .729 | -13.3506 | 18.5357 |
| | | 6.00 | 12.59259 | 7.31735 | .111 | -3.3506 | 28.5357 |
| | 2.00 | 1.00 | -9.25926 | 7.31735 | .230 | -25.2024 | 6.6839 |
| | | 3.00 | 5.55556 | 7.31735 | .462 | -10.3876 | 21.4987 |

| | | | | | | |
|------|------|------------------------|---------|------|----------|---------|
| | 4.00 | -20.00000 [*] | 7.31735 | .018 | -35.9431 | -4.0569 |
| | 5.00 | -6.66667 | 7.31735 | .380 | -22.6098 | 9.2765 |
| | 6.00 | 3.33333 | 7.31735 | .657 | -12.6098 | 19.2765 |
| 3.00 | 1.00 | -14.81481 | 7.31735 | .066 | -30.7580 | 1.1283 |
| | 2.00 | -5.55556 | 7.31735 | .462 | -21.4987 | 10.3876 |
| | 4.00 | -25.55556 [*] | 7.31735 | .004 | -41.4987 | -9.6124 |
| | 5.00 | -12.22222 | 7.31735 | .121 | -28.1654 | 3.7209 |
| | 6.00 | -2.22222 | 7.31735 | .767 | -18.1654 | 13.7209 |
| 4.00 | 1.00 | 10.74074 | 7.31735 | .168 | -5.2024 | 26.6839 |
| | 2.00 | 20.00000 [*] | 7.31735 | .018 | 4.0569 | 35.9431 |
| | 3.00 | 25.55556 [*] | 7.31735 | .004 | 9.6124 | 41.4987 |
| | 5.00 | 13.33333 | 7.31735 | .093 | -2.6098 | 29.2765 |
| | 6.00 | 23.33333 [*] | 7.31735 | .008 | 7.3902 | 39.2765 |
| 5.00 | 1.00 | -2.59259 | 7.31735 | .729 | -18.5357 | 13.3506 |
| | 2.00 | 6.66667 | 7.31735 | .380 | -9.2765 | 22.6098 |
| | 3.00 | 12.22222 | 7.31735 | .121 | -3.7209 | 28.1654 |
| | 4.00 | -13.33333 | 7.31735 | .093 | -29.2765 | 2.6098 |
| | 6.00 | 10.00000 | 7.31735 | .197 | -5.9431 | 25.9431 |
| 6.00 | 1.00 | -12.59259 | 7.31735 | .111 | -28.5357 | 3.3506 |
| | 2.00 | -3.33333 | 7.31735 | .657 | -19.2765 | 12.6098 |
| | 3.00 | 2.22222 | 7.31735 | .767 | -13.7209 | 18.1654 |
| | 4.00 | -23.33333 [*] | 7.31735 | .008 | -39.2765 | -7.3902 |
| | 5.00 | -10.00000 | 7.31735 | .197 | -25.9431 | 5.9431 |

DPS

| | | | | | | | |
|------|----------------------------|---------|----------|--------|------------------|--|--|
| 计算结果 | 当前日期 2017-8-23 PM 12:06:14 | | | | | | |
| 处理 | 样本数 | 均值 | 标准差 | 标准误 | 95%置信区间 | | |
| 1 | 3 | 78.15 | 11.6694 | 6.7373 | 49.1616 107.1384 | | |
| 2 | 3 | 68.89 | 10.1831 | 5.8792 | 43.5937 94.1863 | | |
| 3 | 3 | 63.3333 | 5.7735 | 3.3333 | 48.9912 77.6755 | | |
| 4 | 3 | 88.89 | 11.11 | 6.4144 | 61.2912 116.4888 | | |
| 5 | 3 | 75.5567 | 7.6961 | 4.4433 | 56.4385 94.6748 | | |
| 6 | 3 | 65.5567 | 5.0921 | 2.9399 | 52.9072 78.2062 | | |
| | 方差分析表 | | | | | | |
| 变异来源 | 平方和 | 自由度 | 均方 | F 值 | p值 | | |
| 处理间 | 1351.0484 | 5 | 270.2097 | 3.365 | 0.0395 | | |
| 处理内 | 963.5919 | 12 | 80.2993 | | | | |
| 总变异 | 2314.6403 | 17 | | | | | |

average mortality

| | | | mortality(from raw data) | | | |
|--------------------|------------|-------|--------------------------|-----|----|----|
| | | | repetition | | | |
| | | | 1 | 2 | 3 | |
| <i>P. lilacini</i> | 2nd instar | nymph | 1 | 90 | 80 | 70 |
| | 5th instar | nymph | 2 | 80 | 60 | 70 |
| | adult | | 3 | 60 | 70 | 60 |
| <i>B. bassiar</i> | 2nd instar | nymph | 4 | 100 | 80 | 90 |
| | 5th instar | nymph | 5 | 80 | 70 | 80 |
| | adult | | 6 | 60 | 70 | 70 |

SPSS17.0

VAR00002

| | N | 均值 | 标准差 | 标准误 | 均值的 95% 置信区间 | | 极小值 | 极大值 | 分量间方差 |
|------|----|---------|----------|---------|--------------|----------|-------|--------|----------|
| | | | | | 下限 | 上限 | | | |
| 1.00 | 3 | 80.0000 | 10.00000 | 5.77350 | 55.1586 | 104.8414 | 70.00 | 90.00 | |
| 2.00 | 3 | 70.0000 | 10.00000 | 5.77350 | 45.1586 | 94.8414 | 60.00 | 80.00 | |
| 3.00 | 3 | 63.3333 | 5.77350 | 3.33333 | 48.9912 | 77.6755 | 60.00 | 70.00 | |
| 4.00 | 3 | 90.0000 | 10.00000 | 5.77350 | 65.1586 | 114.8414 | 80.00 | 100.00 | |
| 5.00 | 3 | 76.6667 | 5.77350 | 3.33333 | 62.3245 | 91.0088 | 70.00 | 80.00 | |
| 6.00 | 3 | 66.6667 | 5.77350 | 3.33333 | 52.3245 | 81.0088 | 60.00 | 70.00 | |
| 总数 | 18 | 74.4444 | 11.49026 | 2.70828 | 68.7305 | 80.1584 | 60.00 | 100.00 | |
| 模型 | | | 8.16497 | 1.92450 | 70.2513 | 78.6376 | | | |
| 随机效应 | | | | 4.00617 | 64.1463 | 84.7426 | | | 74.07407 |

ANOVA

VAR00002

| | 平方和 | df | 均方 | F | 显著性 |
|---------|----------|----|---------|-------|------|
| 组间 (组合) | 1444.444 | 5 | 288.889 | 4.333 | .017 |
| 线性项 | 17.143 | 1 | 17.143 | .257 | .621 |
| 对比 | 1427.302 | 4 | 356.825 | 5.352 | .010 |
| 组内 | 800.000 | 12 | 66.667 | | |
| 总数 | 2244.444 | 17 | | | |

多重比较

因变量:VAR00002

| | (I) VAR00001 | (J) VAR00001 | 均值差 (I-J) | 标准误 | 显著性 | 95% 置信区间 | |
|-----|--------------|--------------|-----------|-----------|---------|----------|----------|
| | | | | | | 下限 | 上限 |
| LSD | 1.00 | 2.00 | 10.00000 | 6.66667 | .159 | -4.5254 | 24.5254 |
| | | 3.00 | 16.66667* | 6.66667 | .028 | 2.1412 | 31.1921 |
| | | 4.00 | -10.00000 | 6.66667 | .159 | -24.5254 | 4.5254 |
| | | 5.00 | 3.33333 | 6.66667 | .626 | -11.1921 | 17.8588 |
| | | 6.00 | 13.33333 | 6.66667 | .069 | -1.1921 | 27.8588 |
| | | 2.00 | 1.00 | -10.00000 | 6.66667 | .159 | -24.5254 |
| | | 3.00 | 6.66667 | 6.66667 | .337 | -7.8588 | 21.1921 |

| | | | | | | | |
|---------|------|------------------------|----------|---------|----------|----------|---------|
| | 4.00 | -20.00000 [*] | 6.66667 | .011 | -34.5254 | -5.4746 | |
| | 5.00 | -6.66667 | 6.66667 | .337 | -21.1921 | 7.8588 | |
| | 6.00 | 3.33333 | 6.66667 | .626 | -11.1921 | 17.8588 | |
| 3.00 | 1.00 | -16.66667 [*] | 6.66667 | .028 | -31.1921 | -2.1412 | |
| | 2.00 | -6.66667 | 6.66667 | .337 | -21.1921 | 7.8588 | |
| | 4.00 | -26.66667 [*] | 6.66667 | .002 | -41.1921 | -12.1412 | |
| | 5.00 | -13.33333 | 6.66667 | .069 | -27.8588 | 1.1921 | |
| | 6.00 | -3.33333 | 6.66667 | .626 | -17.8588 | 11.1921 | |
| 4.00 | 1.00 | 10.00000 | 6.66667 | .159 | -4.5254 | 24.5254 | |
| | 2.00 | 20.00000 [*] | 6.66667 | .011 | 5.4746 | 34.5254 | |
| | 3.00 | 26.66667 [*] | 6.66667 | .002 | 12.1412 | 41.1921 | |
| | 5.00 | 13.33333 | 6.66667 | .069 | -1.1921 | 27.8588 | |
| | 6.00 | 23.33333 [*] | 6.66667 | .004 | 8.8079 | 37.8588 | |
| 5.00 | 1.00 | -3.33333 | 6.66667 | .626 | -17.8588 | 11.1921 | |
| | 2.00 | 6.66667 | 6.66667 | .337 | -7.8588 | 21.1921 | |
| | 3.00 | 13.33333 | 6.66667 | .069 | -1.1921 | 27.8588 | |
| | 4.00 | -13.33333 | 6.66667 | .069 | -27.8588 | 1.1921 | |
| | 6.00 | 10.00000 | 6.66667 | .159 | -4.5254 | 24.5254 | |
| 6.00 | 1.00 | -13.33333 | 6.66667 | .069 | -27.8588 | 1.1921 | |
| | 2.00 | -3.33333 | 6.66667 | .626 | -17.8588 | 11.1921 | |
| | 3.00 | 3.33333 | 6.66667 | .626 | -11.1921 | 17.8588 | |
| | 4.00 | -23.33333 [*] | 6.66667 | .004 | -37.8588 | -8.8079 | |
| | 5.00 | -10.00000 | 6.66667 | .159 | -24.5254 | 4.5254 | |
| Tamhane | 1.00 | 2.00 | 10.00000 | 8.16497 | .994 | -40.7354 | 60.7354 |
| | | 3.00 | 16.66667 | 6.66667 | .725 | -35.6241 | 68.9574 |

DPS

| | | | | | | | |
|------|--------------------------------------|---------|----------|--------|-------------|----------|--|
| 计算结果 | 当前日期 2017-8- 23 PM 12:17:23 | | | | | | |
| 处理 | 样本数 | 均值 | 标准差 | 标准误 | 95%置信 区间 | | |
| 1 | 3 | 80 | 10 | 5.7735 | 55.1586 | 104.8414 | |
| 2 | 3 | 70 | 10 | 5.7735 | 45.1586 | 94.8414 | |
| 3 | 3 | 63.3333 | 5.7735 | 3.3333 | 48.9912 | 77.6755 | |
| 4 | 3 | 90 | 10 | 5.7735 | 65.1586 | 114.8414 | |
| 5 | 3 | 76.6667 | 5.7735 | 3.3333 | 62.3245 | 91.0088 | |
| 6 | 3 | 66.6667 | 5.7735 | 3.3333 | 52.3245 | 81.0088 | |
| | 方差分析 表 | | | | | | |
| 变异来源 | 平方和 | 自由度 | 均方 | F 值 | p值 | | |
| 处理间 | 1444.444 | 5 | 288.8889 | 4.333 | 0.0174 | | |
| 处理内 | 800 | 12 | 66.6667 | | | | |
| 总变异 | 2244.444 | 17 | | | | | |

| | | | | | | | |
|---------------------------------|---------|---------|---------|---------|--------|--------|--------|
| | | | | | | | |
| LSD法多重比较 (下三角为均值差, 上三角为显著水平) | | | | | | | |
| No. | 均值 | 4 | 1 | 5 | 2 | 6 | 3 |
| 4 | 90 | | 0.1595 | 0.0687 | 0.0111 | 0.0044 | 0.0018 |
| 1 | 80 | 10 | | 0.6261 | 0.1595 | 0.0687 | 0.0279 |
| 5 | 76.6667 | 13.3333 | 3.3333 | | 0.337 | 0.1595 | 0.0687 |
| 2 | 70 | 20 | 10 | 6.6667 | | 0.6261 | 0.337 |
| 6 | 66.6667 | 23.3333 | 13.3333 | 10 | 3.3333 | | 0.6261 |
| 3 | 63.3333 | 26.6667 | 16.6667 | 13.3333 | 6.6667 | 3.3333 | |
| 字母标记表示结果 | | | | | | | |
| 处理 | 均值 | 5%显著水平 | | 1%极显著水平 | | | |
| 4 | 90 | a | | A | | | |
| 1 | 80 | ab | | AB | | | |
| 5 | 76.6667 | abc | | AB | | | |
| 2 | 70 | bc | | AB | | | |
| 6 | 66.6667 | bc | | B | | | |
| 3 | 63.3333 | c | | B | | | |
| | | | | | | | |
| | | | | | | | |

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