Appendix 2. Analysis of Variance Tables testing for significant differences among lighting treatments for each development stage (JMP 11, SAS Institute, 2012).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  |
| **N1** | Model | 13 | 3.215993 | 0.247384 | 1.0209 | 0.4451 | N.S. |
|  | Error | 56 | 13.569721 | 0.242316 |  |  |  |
|  | Total | 69 | 16.785714 |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  |
|  |  | **Trt** | 6 | 1.8153917 | 1.2486 | 0.296 | N.S. |
|  |  | **Rep** | 1 | 0.0540125 | 0.2229 | 0.6387 | N.S. |
|  |  | **Trt \* Rep** | 6 | 0.473297 | 0.3255 | 0.9208 | N.S. |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  |
| **N2** | Model | 13 | 28.698995 | 2.20762 | 3.1873 | 0.0013 | \* |
|  | Error | 56 | 38.78719 | 0.69262 |  |  |  |
|  | Total | 69 | 67.485714 |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  |
|  |  | **Trt** | 6 | 10.450355 | 2.5147 | 0.0317 | \*M.S. |
|  |  | **Rep** | 1 | 0.420181 | 0.6067 | 0.4393 | N.S. |
|  |  | **Trt \* Rep** | 6 | 7.22029 | 1.7374 | 0.1292 | N.S. |
|  |  |  |  |  |  |  |  |
|  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  |
| **N3** | Model | 13 | 31.09008 | 2.39154 | 1.7158 | 0.0828 | N.S. |
|  | Error | 56 | 78.05635 | 1.39386 |  |  |  |
|  | Total | 69 | 109.14643 |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  |
|  |  | **Trt** | 6 | 7.7033212 | 0.9211 | 0.4869 | N.S. |
|  |  | **Rep** | 1 | 1.9802085 | 1.4207 | 0.2383 | N.S. |
|  |  | **Trt \* Rep** | 6 | 7.0538418 | 0.8434 | 0.5419 | N.S. |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
| Appendix 2. continued.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  | | **N4** | Model | 13 | 31.0734 | 2.39026 | 1.1703 | 0.3247 | N.S. | |  | Error | 56 | 114.37302 | 2.04238 |  |  |  | |  | Total | 69 | 145.44643 |  |  |  |  | |  |  |  |  |  |  |  |  | |  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  | |  |  | **Trt** | 6 | 25.472088 | 2.0786 | 0.0702 | N.S. | |  |  | **Rep** | 1 | 2.009837 | 0.9841 | 0.3255 | N.S. | |  |  | **Trt \* Rep** | 6 | 3.848424 | 0.314 | 0.927 | N.S. | |  |  |  |  |  |  |  |  | |  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  | | **N5** | Model | 8 | 445.57693 | 55.6971 | 25.9902 | 0.0001 | \* | |  | Error | 61 | 130.72307 | 2.143 |  |  |  | |  | Total | 69 | 576.3 |  |  |  |  | |  |  |  |  |  |  |  |  | |  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  | |  |  | **Block** | 1 | 23.44617 | 10.9408 | 0.0016 | \* | |  |  | **Trt** | 6 | 320.54745 | 24.9298 | <0.0001 | \* | |  |  | **Rep** | 1 | 1.35396 | 0.6318 | 0.4298 | N.S. | |  |  |  |  |  |  |  |  | |  | **Source** | **Degrees of Freedom** | **Sum of Squares** | **Mean Square** | **F Ratio** | **Prob > F** |  | | **N1-Adult** | Model | 8 | 1029.6705 | 128.709 | 45.4051 | <0.0001 | \* | |  | Error | 61 | 172.9152 | 2.835 |  |  |  | |  | Total | 69 | 1202.5857 |  |  |  |  | |  |  |  |  |  |  |  |  | |  | Effect tests(Model): | **Source** | **Degrees of Freedom** | **Sum of Squares** | **F Ratio** | **Prob > F** |  | |  |  | **Block** | 1 | 24.9325 | 8.7955 | 0.0043 | \* | |  |  | **Trt** | 6 | 768.70167 | 45.1963 | <0.0001 | \* | |  |  | **Rep** | 1 | 0.15617 | 0.0551 | 0.8152 | N.S. | |  |  |  |  |  |  |  |  | | N.S. = Not significant at alpha=0.05 level | | |  |  |  |  |  | | \* = significant at alpha =0.05 level | | |  |  |  |  |  | | M.S. = Marginally significant | | |  |  |  |  |  | | Trt=Treatment | |  |  |  |  |  |  | | |  |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |