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| [**Home**](http://docs.google.com/home.htm)  [**Abstract**](http://docs.google.com/abstract.htm)  [**Introduction**](http://docs.google.com/introduction.htm)  [**Review of Literature**](http://docs.google.com/literature_review.htm)  [**Procedure**](http://docs.google.com/procedure.htm)  [**Data**](http://docs.google.com/data.htm)  [**Conclusion**](http://docs.google.com/conclusion.htm)  [**Cross Sections**](http://docs.google.com/cross_sections.htm)  [**Journal**](http://docs.google.com/journal.htm)  [**References**](http://docs.google.com/references.htm)  [**bonus..**](http://docs.google.com/bonus.htm)**.** |  | Day 10   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | cell | Control | cell | low | cell | medium | cell | high | | 1 | 1 | 1.20 | 1 | - | 4 | 1.29 | 5 | 1.45, 1.56 | | 2 | 3 | 1.19 | 1 | 1.24 | 3 | 1.38 | 3 | - | | 3 | 4 | 1.37 | 5 | 1 | 2 | 1.7 | 4 | 1.15 | | 4 | 4 | 1.32 | 3 | - | 1 | 1.31, 1.42 | 1 | 1.56 | | 5 | 3 | 1.26 | 4 | 1.34 | 6 | 1.33, 1.34 | 1 | 1.04 | | 6 | 2 | - | 3 | 1.34 | 2 | 1.32 | 5 | - | | 7 | 2 | 1.80 | 6 | 1.45 | 1 | - | 3 | - | | 8 | 6 | 1.15 | 3 | 1.14 | 6 | 1.52 | 4 | 1.36 | | 9 | 2 | 0.8 | 2 | 1.10 | 3 | 1.38 | 3 | 1.4 | | 10 | 4 | 1.04 | 3 | 1.51 | 3 | 1.17 | 1 | 0.7 | | 11 | 2 | 1.41, 1.32 | 6 | 1.10 | 4 | 1.32 | 3 | 1.64 | | 12 | 5 | 1.29,1.26 | 2 | 1.48 | 2 | 1.53 | 2 | - | | 13 | 6 | - | 3 | - | 4 | 1.18 | 1 | 1.44 | | 14 | 6 | 1.26 | 1 | 1.40 | 2 | - | 1 | 1.37 | | 15 | 4 | 1.18, 1.27 | 6 | - | 5 | 1.59 | 1 | 1.53 | | 16 | 5 | 1.24, 1.31 | 2 | 1.38, 1.48 | 3 | 1.15 | 4 | 1.54 |   \*The cell number is randomly chosen through the use of a TI-83 plus calculator's random number generator. The cells are labeled and then randInt (1,6) selects which cell's plants'  stem diameter will be recorded.  \* Measurements are taken in mm with the use of a micrometer.  Control:  Mean – 1.2594 standard Deviation – 0.19163 number – 18  5 number summary: Min – 1.04 Q1 – 1.195 Med – 1.26 Q3 – 1.315 Max – 1.41  Low:  Mean – 1.3026 Standard Deviation – 0.17076 Number – 13  5 number summary: Min – 1 Q1 – 1.12 Med – 1.34 Q3 – 1.465 Max – 1.51  Medium:  Mean – 1.37 Standard Deviation – 0.1528 Number – 16  Box Plot shows data to be approximately normal with no outliers  5 number summary –  Min – 1.15 Q1 – 1.245 Med – 1.335 Q3 – 1.47 Max – 1.7  High:  Mean – 1.3646 Standard Deviation - 0.261 Number – 13  5 number summary: Min – 1.04 Q1 – 1.255 Med – 1.44 Q3 – 1.55 Max – 1.64  Comparison of diameter between wind speeds  \* outliers were not included in average calculations  Chart of probabilities \*   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Y X | Control | Low | Medium | High | | Control | N / A | 0.1754 | 0.0126 | 0.000276 | | Low | 0.8246 | N / A | 0.1761 | 0.0126 | | Medium | 0.9875 | 0.8239 | N / A | 0.0601 | | High | 0.9997 | 0.9874 | 0.9399 | N / A |   \*probability that X is greater than Y by chance alone  significant probability levels are highlighted in green  Calculations use the statistics formula for calculating using 2-sample T test. Table and formulas can be found in Appendix. No outliers were included in the tests.  T – Tests  Checks:   1. SRS – given 2. population normal or N> 30 – see box plots 3. standard deviation given – no, use T statistics for test   Significance level set at 5%   |  |  |  |  | | --- | --- | --- | --- | |  | T value | Probability | Degree of Freedom | | Low > Control | 0.9588 | 0.1754 | 17.2845 | | Medium> Control | 2.391 | 0.0126 | 23.7292 | | High > Control | 4.3129 | 0.000276 | 16.0218 | | Control > Low | -0.9588 | 0.8246 | 17.2845 | | Medium > Low | 0.9481 | 0.1761 | 24.8949 | | High > Low | 2.4024 | 0.0126 | 21.9178 | | Control > medium | -2.3914 | 0.9875 | 23.7292 | | Low > Medium | -0.9481 | 0.8239 | 24.8949 | | High > medium | 1.6118 | 0.0601 | 23.7294 | | Control > High | -4.313 | 0.9997 | 16.0218 | | Low > High | -2.4024 | 0.9874 | 21.9178 | | Medium > High | -1.6118 | 0.9399 | 23.7294 |   \* Probability represents the probability that the event occurred by chance alone.  \* Corresponding probability for T value can be found in Table C in Appendix.  \* outliers are not included in T calculations  [Day 9](http://docs.google.com/diameter9.htm)   [Day 10](http://docs.google.com/diameter10.htm)    [Day 11](http://docs.google.com/diameter11.htm) |