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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)**.** |  | Plants are thought to be the first living organisms to make the evolutionary leap between aquatic and terrestrial environments. One of the problems they had to over come through adaptation was the lack of strengthening tissues, which was not needed due to their buoyancy in water. Today, two main strengthening tissues give vascular plants the strength they need, collenchyma and sclenchyma, which is usually found in woody plants. Build up of these cells occur through cell elongation, differentiation and rapid cell division. What causes this build up to occur?      It has been shown through experiments that when plants are shaken, they deposit more strengthening tissues, so we hypothesized that wind would be a factor leading to the increase in collenchyma and sclenchyma. Furthermore this increase would be in varying degrees in a direct relation to the wind, more wind equals more strengthening tissues. To test this hypothesis, we planted 400 rapid seeds in 4 different groups. One group as the control was exposed to no wind, then low wind, medium wind and high wind. The diameter of the stem and its height was measured every two days.      The data clearly shows that there is a correlation between wind speed and stem diameter. The differences observed between the groups increased with wind speed. The probability that these differences occurred by chance becomes increasingly significant and shows that the groups could not be from the same population. This method of germinating and growing young plants can be applied to agriculture and the forestry industry. Plants are sturdier and have more strengthening tissues simply by their seedlings being exposed by wind as they germinate in the greenhouse. |
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