

Question

Whenever *Epipremnum Aureum* or 'pothos' is being sold, it is always considered a houseplant. However, in climate zones 9 and up, mature pothos are hardy enough to stay outdoors throughout Florida (Meshram & Srivastava, 2014). So, in what direction should pothos face to grow the best outdoors, if any?

Hypothesis

Most resources claim pothos grow best in a south-facing window, as this provides 12 hours of high light. In order to best recreate that sweet spot of light, I expect that east-facing pothos will grow the best. I do not think the light intensity will limit photosynthesis like it can in some plants (Poorter, 1999).

Experiment

To create the different light environments, I made a box with each side directly facing north, south, east, and west. The groups were under the same conditions for 7 weeks and compared to the indoor group for results.

Outdoor Groups and Box



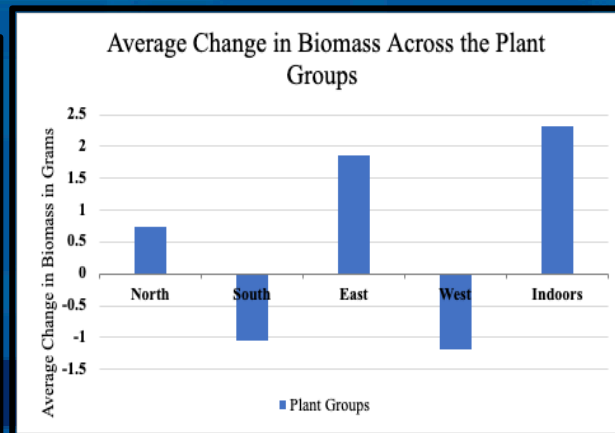
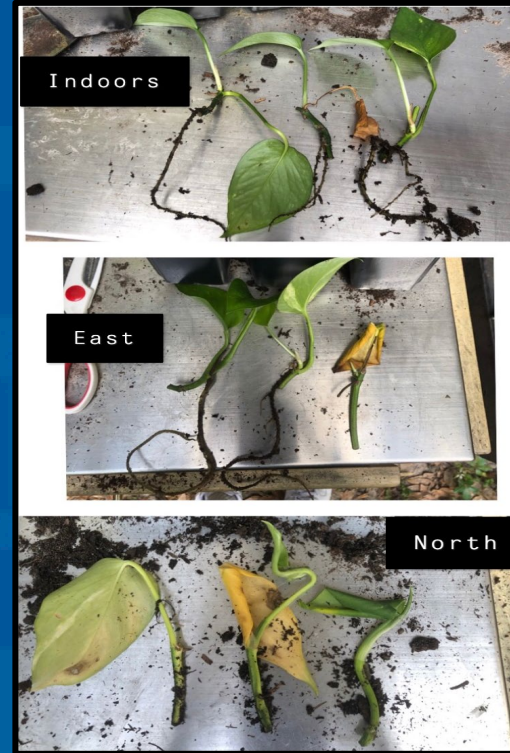
Versus: Control Group in South-Facing Window



Pothos

To Be, Or Not To Be: A Houseplant

Groups With Positive Growth



Conclusion

The only groups that showed positive growth were the control, east, and north groups with 2.31, 1.84, and 0.73 grams of average growth respectively. My hypothesis was incorrect, but the east facing group had the best growth outdoors presumably from the less intense morning sun, and afternoon shade.

Impact

With the east-facing group showing solid growth only 20% slower than the recommended environment control, this could have large implications on our landscapes in south and central Florida and make it easy to add a tropical plant.

References

- Meshram, A., & Srivastava, N. (2014). Molecular and physiological role of *Epipremnum aureum*. *International Journal of Green Pharmacy*, 8(2), 73.
- L. Poorter. (1999). Growth Responses of 15 Rain-Forest Tree Species to a Light Gradient: The Relative Importance of Morphological and Physiological Traits. *Functional Ecology*, 13(3), 396-410.

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