



INTRODUCTION

1. The active ingredient in hormodin-1 is Indole-3-Butyric Acid (IBA).
2. IBA is the most widely used natural auxin (Srivastava, 2020).
3. IBA is primarily used as a rooting hormone however, In the past IBA has been used as a growth and development regulator in taller plants.

BACKGROUND INFORMATION

As global populations continue to rise, urban areas increase in density, combined with the continual loss of Earth's arable land, new answers to the question of "How will we produced food for everyone?" must be created. One such answer comes in the form of vertical farming. Vertical farms are able to produce fruits and vegetables faster than traditional farming techniques with a fraction of the land and water requirements.

HYPOTHESIS

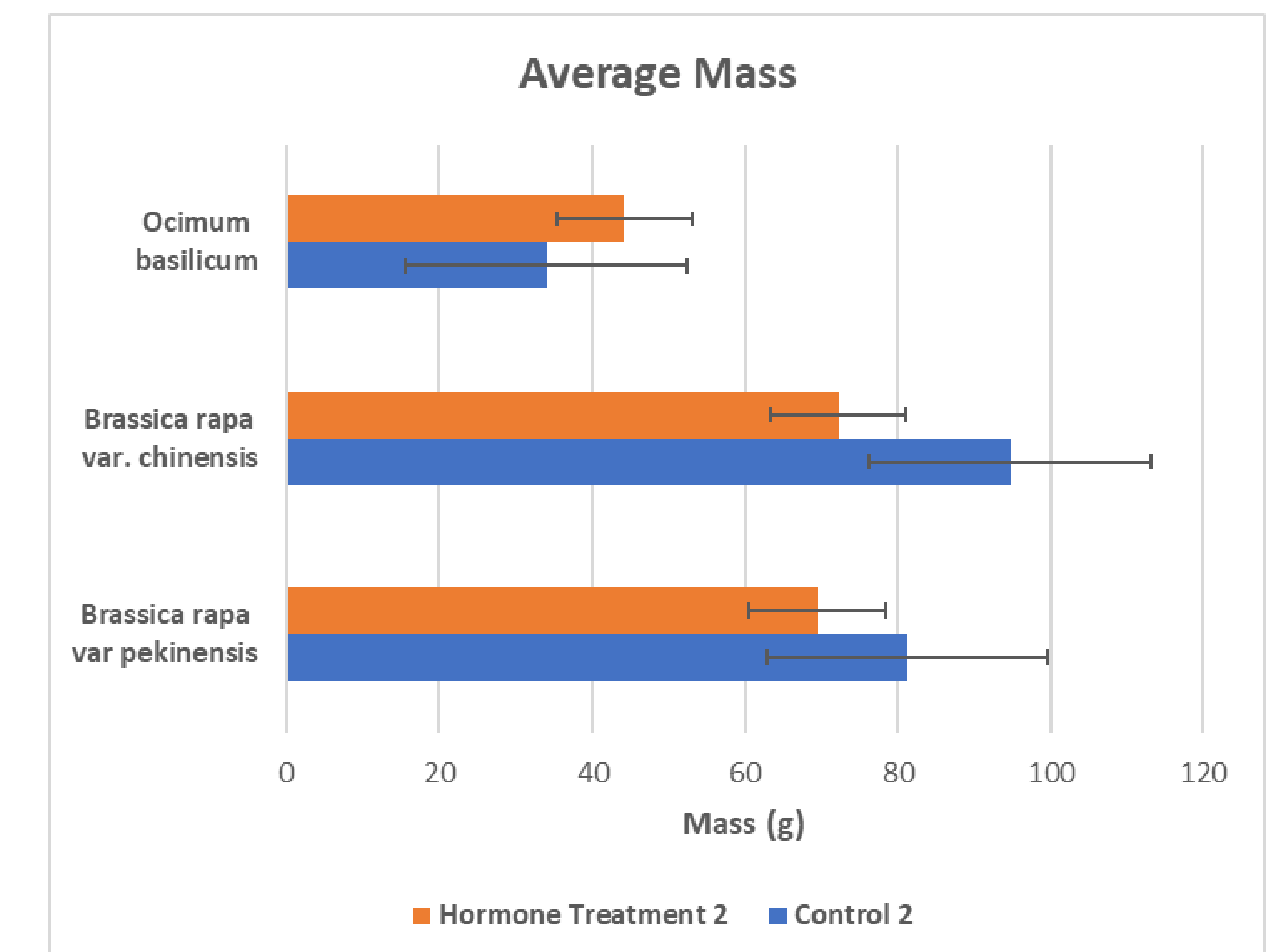
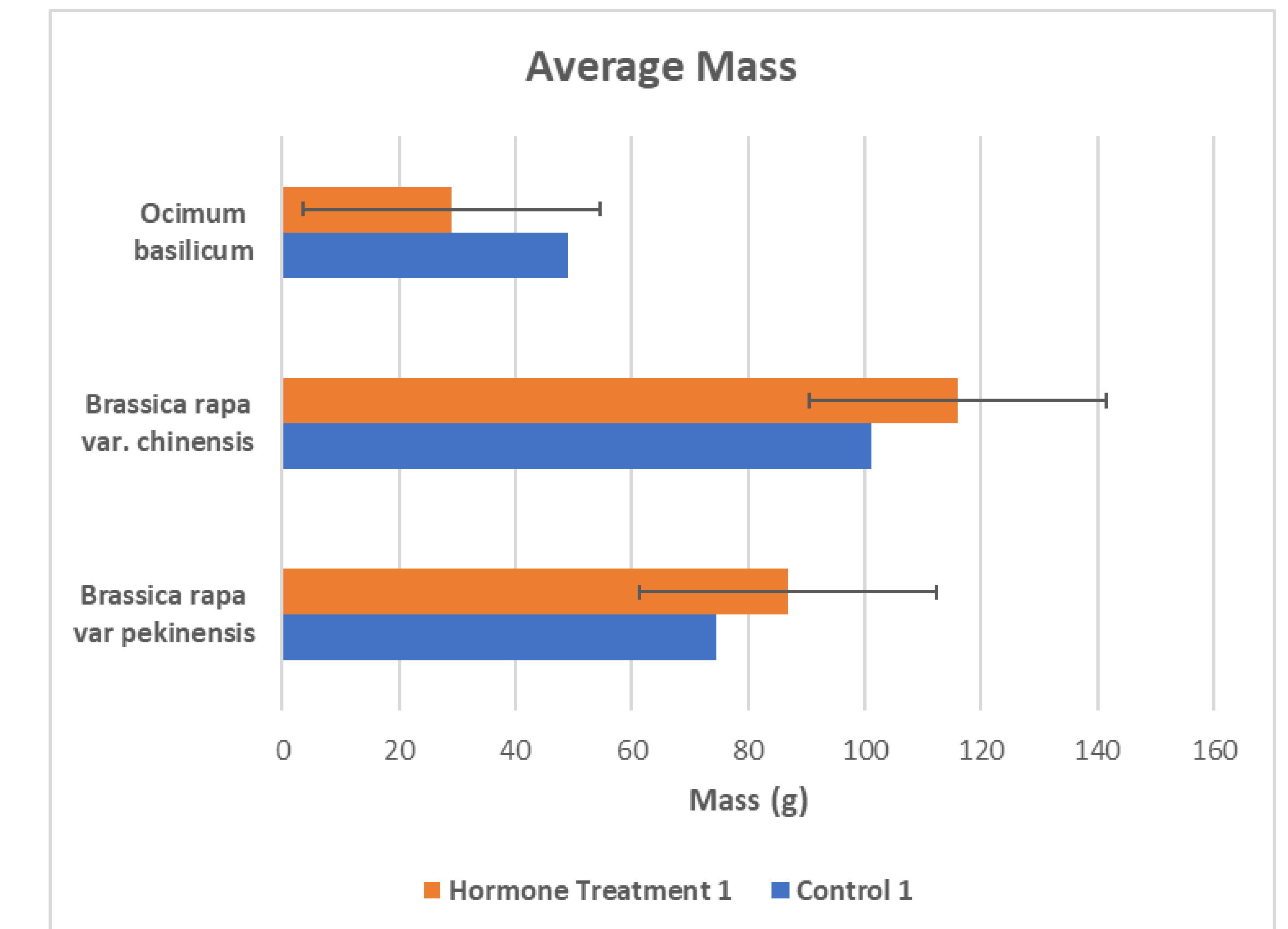
Plants growing in towers containing Hormodin-1 will exhibit altered yields in comparison to plants grown in the control towers without the hormone.



METHODS

1. *Brassica rapa var. chinensis*, *Brassica rapa var. pekinensis*, and *Ocimum basilicum* seedlings and start growing in a green house.
2. Construct four LA Urban Farms aeroponic vertical farming systems.
3. Fill the base of the towers with 20 gallons of water, 200mL each of both of the nutrient solutions.
4. Transplant seedlings into vertical farming towers.
5. In two of the towers add .75g of Hormodin-1 rooting hormone resulting in a ~38ppm concentration.
6. Harvest the plants after four weeks and compare biomass and root length between the control and hormone treatment.

RESULTS



CONCLUSIONS

I can neither confirm or deny my hypothesis. Results were inconclusive. I believe that the results may have been skewed by environmental factors. In future research more replications should be executed. I also propose that this be done indoors to mitigate environmental effects on the plants.