

Faith Sears

*The Current Growing Conditions of and the Effects of Growth Hormones on Corn/Wheat*

The purpose of this experiment was to determine a) current growing conditions of corn and b) how growth hormones affect corn and wheat plants.

Soil nutrition at multiple Colorado farms was tested through soil samples. The average pH was 6, and the average of nitrate, nitrite, phosphorus, and potassium was also found. After testing the soil nutrition, conditions were matched to a growing media, and corn and wheat plants were grown in test tubes using growth hormones. Sterilization methods were used. The growth hormone used was BAP, which is made of the plant hormone Cytokin. Corn was shown to grow better than wheat in two trials. Incubated plants were also shown to grow less than those left under florescent lights at room temperature. Corn grew better with less growth hormone, while the wheat needed more growth hormone in order to grow. The average observed growth for corn for .85 mm and the observed average for wheat was .41 mm.

Corn was concluded to grow better because the pH and media was matched to growing conditions of corn, and not that of wheat. Wheat requires a lower pH than corn, and thus struggled to survive. Incubated plants were concluded to have more difficulty growing because there was no temperature variance and it was not similar to natural conditions of the plants.