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*Studying the Effects of Gliadin Protein Levels in Hybrid Wheats on the Segment Regeneration in Lumbriculus*

The purpose of this experiment was to study the effects of gliadin protein levels in hybrid wheat on the segment regeneration in *Lumbriculus*. The researcher hypothesized that the different types of hybrid wheat will cause a significant change in the segmentation regeneration of the black worms, and that the non-modified wheat seed will have the best resulting regeneration. First four different type of wheat seeds were obtained; non-modified corn, NU-Grain wheat, Denali Wheat, and Brawl; all common types of wheat seed. Hybrid wheat flour, Snowmass, was also obtained. Slurries were made out of each type of seed and flour type and exposed to California black worms. The seeds and flour were also tested using a gluten assay test to indicate the amount of gliadin/gluten in each type of seed. The results of regeneration were then compared to the levels of gliadin in each different type of hybrid wheat. The worms were cut and regeneration was recorded. It was found that the three types of wheat with the highest amounts of gluten (Snowmass, Non-Modified, and Nu-Grain) had the lowest growth percentage and the three types of wheat that had the lowest amount of gliadin (Brawl, Denali, and the control ) had the highest growth percentages. From this study, the researcher can conclude that the higher the amount of gliadin, the lower the growth percentages would be. This research suggests that high amounts of gluten found in particular types of wheat could decrease the growth and proliferation of cells in the digestive tract, specifically the small intestine.