

ABSTRACT

This research demonstrates how the pervasive use of highly toxic concentrations of Fenvalerate insecticides can affect the external morphological structure of the roots of *Allium cepa* L. (onion). It used the Randomized Complete Block Design (RCBD) to evaluate the results on the three treatments (with five replicates each) prepared for the study; $T_1= 0.5\%$, $T_2= 1.0\%$, $T_3= 2.0\%$ concentrations of the test chemical plus having T_0 as a negative control. The results show that the exposure to fenvalerate insecticide brought about two or more external morphological abnormalities in onion roots such as bending, twisting, and swelling. Significant differences on the length and number of roots were also noted between the control and experimental groups. Statistical analysis using ANOVA, Duncan's Multiple Range and Chi-Square tests, however reveal that the highest number of external morphological abnormalities is observed in T_3 (2.0%) concentration.