

Title: Tomato pinworm (*Keiferia lycopersicella*) distribution and plant damage over time in Indiana high tunnels; an observational study.

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Abstract:

High tunnels provide shelter for plants as well as lengthen the growing season, making them advantageous for growers, and resulting in an increase in their implementation. Additionally, the use of high tunnels in urban agriculture has increased, due to their efficient use of space and the security they provide crops. However, plant pests that dwell in warmer areas, such as the tomato pinworm (*Keiferia lycopersicella*), may find the shelter and warmth that the high tunnels provide extremely beneficial. As a result, their populations flourish in these spaces and their damage becomes challenging to manage. This observational study investigates the distribution of tomato pinworm in high tunnel environments over the course of the growing season in Indiana. Through damage analysis and month-long trap counts, we will analyze the density of tomato pinworms found in locations throughout Indiana, comparing their distribution over time with the amount of relative damage recorded in these locations. Furthermore, we will examine the differences between densities and damage in both rural and urban Indiana farms to compare behaviors and emergence patterns between communities. This study will provide new insights into tomato pinworm activity in high tunnels, with implications for the effects they have on farms of differing communities.

Travel request:

Support from the department is important as it will enable me to attend OVEA. Attending OVEA is beneficial because it will allow me to gain experience presenting research in a professional setting as an undergraduate. As an undergraduate with plans to continue onto graduate school, gaining experience presenting research at scientific meeting in front of my peers would give me great insight into the experience as well as make connections with fellow undergraduates in the same field.