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Impact of Climate Change on Harmful Crop Insects Population

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Abstract

Climate change, resulting from environmental fluctuations and human activities, has a significant impact on agricultural pests by altering their life cycles and infestation trends. Increasing levels of greenhouse gases, high temperatures, unpredictable rainfall, and droughts affect both crops and pests. As temperatures rise, pests can develop more quickly because they receive the necessary amount of heat exposure required for their development. These weather variations influence pest growth, virulence, multiplication, persistence, and range expansion favourably, leading to more severe infestations. Crop yields depend on effective pest and disease management, which can be improved by adopting methods that consider the impact of climate change on plants and pests. In this article, we attempt to present information addressing the issues related to the impact of climate change on crop pests. The influence of basic climatic factors like greenhouse gas emission and temperature on insects are discussed, specifically about the possible effects of climate change, i.e., the gradual increase in the average temperature. The analysis reveals that pests have caused significant crop damage, leading to yield losses and posing a threat to food security. However, strategies such as proper monitoring of insect populations and their invasion patterns can help to adapt to crop health crises caused by climate change.

Key Words: *Climate change, Crop production, Pest population, Greenhouse gas, Environment*