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"Current Status and Future Prospects of Climate Change in Horticulture Crops"

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Abstract—*Climate change is exacerbating the challenges faced by the agriculture sector, negatively affecting both crop and livestock systems in most regions, an increasing emphasis on food security and its regional impacts has come to forefront of the scientific community. Negative impacts from climate change are likely to be greatest in regions that are currently food insecure and may even be significant in those regions that have made large gains in reducing food insecurity over the past half-century. In response to this challenge, the crop simulation models along with other donor and development agencies, is developing strategies for addressing climate change adaptation and is providing assistance to study the impact of climate change on agricultural production and food security. Impacts of climate change are complex as they can be both direct and indirect, the biggest casualty being natural resources such as agriculture. Agriculture is a carefully manipulated ecological system, the productivity of which could increase because higher levels of carbon dioxide in the atmosphere could allow a higher rate of photosynthesis. However, many interacting factors are at work. At higher levels of warming, estimated monetary impacts generally become negative, and studies, allowing for disastrous possibilities, can reach high negative outcomes. Adaptation in the agricultural sector is being given a high priority within this effort because of the inherent sensitivity of food production to climate and the strong inter-linkages that exist between climate, agriculture, and economic growth and development. The output provided by the simulation models can be used to make appropriate crop management decisions and to provide farmers and others with alternative options for their farming system.*

Keywords: Climate, horticultural crops, disorder, yield.