

# Crop Production Strategies against Climate Change

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**Abstract**—*Climate change and agriculture are interrelated processes. There is significant impact of climate change on environmental condition such as temperature, precipitation, and glacial run off which affect agriculture. Temperature is expected to increase about 2<sup>o</sup> c till 2030 and about 4<sup>o</sup>c till 2090 relative to pre industrial level. These events will result in greater instability in food production and will also threaten to livelihood security of the farmers. Among crops wheat and rice yields are estimated to decrease by 15-17 percent for 2<sup>o</sup>c in temperature. Wheat and other crops generally grown in the winter are predicted to be affected more than rice. In wheat, grain number and weight is likely to reduce due to prolonged high temperature and drought conditions. Incidence of cold waves and frost events may decrease in future due to global warming. Agro-biodiversity will be threatened due to events increasing extreme weather such as floods, droughts cyclones and heat waves and decreasing rainfall. Hence the agriculture sector can cope with future climate change employing potential adoption strategies such as changing planting dates, planting different varieties of crop species, development and promotion of alternative crops, developing climate ready crops such as drought and heat resistant variety, efficient use of resources to mitigate against climate change to fulfil the increasing demand of exploding population.*

**Keywords**:-*Temperature, Global warming, Agro-biodiversity, Climate change, Exploding population.*