



**A REVIEW :**

## Impact of climate change on agriculture

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**ARTICLE CHRONICLE :**

**Received :**

14.07.2017;

**Accepted :**

29.07.2017

**How to cite this article :** Parthipan, T. and Ravi, V. (2017). Impact of climate change on agriculture. *Agric. Update*, 12 (TECHSEAR-4): 1150-1158; DOI: 10.15740/HAS/AU/12.TECHSEAR (4)2017/1150-1158.

**KEY WORDS:**

Climate change,  
Agriculture

### **BACKGROUND AND OBJECTIVES**

Climate change and agriculture are interrelated processes, both of which take place on a global scale. Global warming is projected to have significant impacts on conditions affecting agriculture, including temperature, carbon dioxide, glacial run-off, precipitation and the interaction of these elements. These conditions determine the carrying capacity of the biosphere to produce enough food for the human population and domesticated animals. The overall effect of climate change on agriculture will depend on the balance of these effects. Assessment on the effect of climate change on agriculture might help to anticipate and adapt farming to maximize agricultural production.

At the same time, agriculture has been shown to produce significant effects on climate change, primarily through the production and release of greenhouse gases such as carbon dioxide, methane and nitrous oxide, but also by altering the Earth's land cover, which can change its ability to absorb or reflect heat and light, thus, contributing to radiative forcing. Land use change such as deforestation and desertification, together with use of fossil

fuels, are the major anthropogenic sources of carbon dioxide; agriculture itself is the major contributor to increasing methane and nitrous oxide concentrations in Earth's atmosphere.

### **Impact of climate change on agriculture:**

Despite technological advances, such as improved varieties, genetically modified organisms and irrigation systems, weather is still a key factor in agricultural productivity, as well as soil properties and natural communities. The effect of climate on agriculture is related to variabilities in local climates rather than in global climate patterns. The Earth's average surface temperature has increased by 1.5°F {0.83°C} since 1880. Consequently, agronomists consider any assessment has to be individually consider each local area.

On the other hand, agricultural trade has grown in recent years, and now provides significant amounts of food, on a national level to major importing countries, as well as comfortable income to exporting ones. The international aspect of trade and security in terms of food implies the need to consider the effects of climate change on a global scale.

Climatic change could affect agriculture

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