

Global climate change and its impact on biodiversity, pest management and food security in Iraq - a review

Author:**Ahmad M. Tariq****Institution:**

Assistant Professor,
Institute Medical Technical
Al-Mansur, Middle
Technical University,
Baghdad, Iraq.

Corresponding author:**Ahmad M. Tariq****ABSTRACT:**

The global climate changes through the usual climatic conditions such as temperature, wind patterns and precipitation characterize regions of the earth. The frequency and magnitude of overall climate changes in the long run have tremendous impacts on the natural ecosystems. The consequences of global climate change include the spread of agricultural pests and the emergence of new pests and the emergence of changes in the dates of emergence, which affects the decline in the production of agricultural crops, which adversely affect food security.

In recent years, many impacts of global climate change on the insect environment have been recorded within Iraq's agro-ecosystem, many invasive pests have entered and some of them have changed and they have caused serious damages to agricultural production. In 2006 there was a widespread outbreak of the Mediterranean fruit fly *Ceratitidis capitata*, which caused significant losses exceeding 80% of the *citrus* crop and some other fruits. In 2010, for the first time, the spread of tomato leaf miner *Tuta absoluta*, which caused extensive destruction of the tomato crop. Between 2011 and 2013, several types of date fruit stalk borer were recorded following the genus *Oryctes*, which caused severe damage to the palm trees and fruit. In 2016, it was recorded for the first time, the spread of fruit fly peach *Bactrocera zonata* in orchards in Iraq. In 2017, for the first time, the spread of the black Mexican insect *Saissetia miranda*, which invaded Iraq's agricultural ecosystem and caused damage to fig trees and fruit. Also, in 2018-2019 the spread of the banded conical snail *Cochlicella barbara* was recorded, which is an agricultural pest and a carrier of pathogens that infects human beings and young ruminants. Global climate change has affected the transformation of some species from a non-pest situation into a pest to adapt the climate to their livelihood. It also affected the shift of the level of infection in some pests to the status of the epidemic.

Keywords:

Global climate, Biodiversity, Agricultural pests, Insects.