CLIMATE CHANGE MEDIATED RESPONSE ON WEED, HERBICIDE AND THEIR VULNERABILITIES, CONSEQUENCES AND FUTURE SCOPES

UDIT DEBANGSHI[1] and Buddhadeb Duary[1]

[1]Affiliation not available

November 3, 2022

Abstract

Global climate change and its consequences such as rising temperatures, hydrological cycle (variable rainfall), soil salinity due to inclusion of sea water and rising carbon dioxide (CO2) levels, have an impact on weed species, their population dynamics, growth, reproduction and competitive ability and eventually crop productivity. Among these environmental factors, rising CO2 levels will benefit C3 plants more than C4 plants. Climate change can cause changes in the weed life cycle, community composition. Over the course of the year, some weed species go extinct while others develop into more noxious invaders and evolve genetic artefacts in response to intensifying climatic and non-climatic selection pressures. On the solution side, variations in temperature, CO2 levels and rainfall alter stomatal conductance, cuticle viscosity, transport, uptake, leaf retention duration and herbicide efficacy. Therefore, to adapt and mitigate; it is important to review how climate change can influence the crop-weed interaction.

Hosted file

`CCC_udit_climate_change_weed with reference.docx` available at https://authorea.com/users/519643/articles/593294-climate-change-mediated-response-on-weed-herbicide-and-their-vulnerabilities-consequences-and-future-scopes