Herbicidal effects of Allelopathins: A Review

Ali Raza[1*], Muhammad Kamran[1], Hafiz Haider Ali[1], Muhammad Umer Farooq[2], Qasim Ali[3], Muhammad Sohaib Chattha[1], Syed Naseer Hussain Shah[4]

[1]Department of Agronomy, University College of Agriculture, University of Sargodha, Sargodha-40100, Pakistan.

[2]Department of Plant Breeding and Genetics, University College of Agriculture, University of Sargodha, Sargodha-40100, Pakistan.

[3]Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad-38000, Pakistan.

[4]Department of Chemistry, University of Sargodha, Sargodha-40100, Pakistan.

Corresponding author's email: aliraza7342@gmail.com

ABSTRACT:

Expanding worldwide population is a danger to sustenance security and agricultural manageability. Allelopathy has developed as a down to business way to comprehend various issues in present day agriculture. Various methodologies including crop rotation, cover crop, intercropping, mulching, crop residue incorporation and water separates application are being utilized to investigate allelopathy for pest management, stress relief, growth development in crop generation. Allelopathy offers to the natural control of weeds, insects and diseases. Biosynthesis of secondary metabolites at higher rates and their part in stress indication gives brilliant resistance against abiotic stresses. Allelochemicals as bioherbicides radiated in plant rhizosphere, enhance supplement of nutrition through the procedures of solublization, natural nitrification, inhibition, probably for reducing the cost of production and weed suppressing method. Allelochemicals advance development at low fixation; however stimulate the development if provided at high fixation. Allelopathic water concentrates of different crops enhance crop development when applied at low concentration. The combination of plant water extracts and lower doses of herbicides provides weed suppressing option in major crops. Allelochemicals are the rising bio-herbicides, which can be utilized to control a lot of plant problems without causing any bad effect on the environment. In this review, potential use of allelopathic development in crop production, interaction between crops and weeds and decreases the cost of total use of herbicides is examined.

The objective of this review is to briefly describes a variety of weed and crop species that establish some form of potent allelopathic interference ,either with other crops or weeds, in agricultural sites, in the managed landscape, or in naturalized environments.

Keywords: Allelopathy, Bioherbicides, Crop rotation, Intercropping, Mulching, and Secondary metabolites.



Biography

My research interest is to enhance agricultural production, food security and reduction in environmental pollution. Therefore, the aim of this review is to describe the Bioherbicidal role of allelochemicals that are naturally present in to the every plant water extracts that suppress the germination of undesirable plants, promote the growth and yield of desirable plants.

Email: aliraza7342@gmail.com Contact no: +923417342710