

ALLELOPATHIC POTENTIAL OF SELECTED PLANT

SPECIES OF GENUS ZANTHOXYLUM

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ABSTRACT

Present article investigates the allelopathic potential of *Zanthoxylum armatum* (ZAL), *Zanthoxylum oxyphyllum* (ZOL) and *Zanthoxylum rhetsa* (ZRL) leaves. For the screening of phytotoxic potential, five concentrations of crude ethanolic extract i.e. 1, 10, 50, 100 and 1000 ppm were selected in the bioassay against *Brassica nigra* seeds. 10 ppm concentration of alcoholic ZRL extract had showed least values of Germination Rate and Response Index. Minimum Germination of Seedlings and Seed vigour was observed at 50 ppm concentration of crude ethanolic extract of ZRL. ZAL allelochemicals at 1000 ppm concentration was found most inhibitory for both Radicle and Plumule length. However, In case of ZOL allelochemicals, 1 ppm concentration of crude ethanolic extract was found most inhibitory for both Radicle & Plumule length and Germination % & Germination Rate had showed strong correlation. The present findings have clearly demonstrated the significant potential of *Zanthoxylum* Genus towards the phytotoxic activity and might be used effectively as bio-herbicide for weeds control.

KEYWORDS: Allelopathic Potential, *Brassica nigra* Seeds, Germination Rate, Response Index and Bio-herbicide

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