Available online at www.joac.info



Journal of Applicable Chemistry

2014, 3 (4): 1782-1788

(International Peer Reviewed Journal)



ISSN: 2278-1862

Allelopathic Potential of Some Prunus Species And Identification of Allelochemicals

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Accepted on 15th July 2014

ABSTRACT

Allelopathy refers to biochemical interactions between all types of plant. This interaction either inhibitory or stimulatory effects of higher plants of one species (the donor) the germination and development of another (receptor) species. A field survey in Prunus cornuta, P. jacquemontii, P. armeniaca and P. amygdalus growing areas of Chamoli District were conducted with reference to the germination and growth of some companion crops at various sites of different soil fertility. Retardation in germination, growth and yield were noted in nearby Triticum aestivum (wheat) and Raphanus sativus (radish) plants particularly on those sites where the percentage of soil organic matter was low. It was also observed that the magnitude of interference gradually decreased as the distance from the tree increase. Aqueous and organic solvent extract of the aerial part of Prunus species were made and their residue were tested, after proper dilution, for their phytotoxic effect in germination and growth of the test crop. Residues of different extract showed inhibition in growth and germination of test species.

Keywords: allelopathy, bioassay, allelochemicals, Prunus species.