

Herbicidal Potential of Catechol as an Allelochemical

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Catechol is an allelochemical which belongs to phenolic compounds synthesized in plants. Its herbicidal effects on weed species; field poppy (*Papaver rhoeas*), creeping thistle (*Cirsium arvense*), henbit (*Lamium amplexicaule*) and wild mustard (*Sinapis arvensis*) were investigated using wheat (*Triticum vulgare*) and barley (*Hordeum vulgare*) species as control plants. In comparison to 2,4-D (a common synthetic herbicide), 13.64 mm of catechol have been found to have a strong herbicidal effect, as effective as 2,4-D on field poppy weed by killing it, and a suppressive herbicidal effect on the other weeds by inhibiting their growth significantly. Concerning all the weeds, in general, elongation of the shoot was affected more negatively than that of the root. Fresh weights of the weeds were decreased by catechol significantly only in field poppy but not in other weeds. The study reveals that catechol is a potent inhibitor of growth of the weeds and therefore it can be evaluated as a herbicide for future weed management strategies.

Key words: Allelochemical, Catechol, Herbicidal Effect