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SYNTHESIS AND HERBICIDAL ACTIVITY OF SOME NEW HETEROCYCLIC ACID AMIDES

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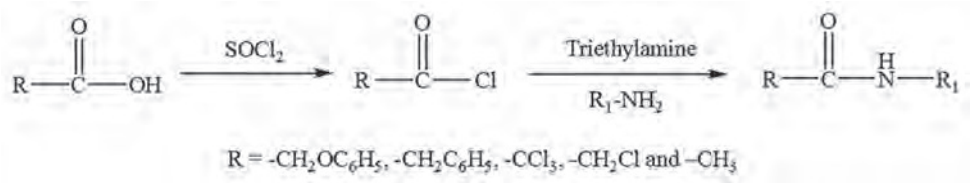
ABSTRACT Different amides were synthesized by reacting differently substituted acetic acid with different substituted heterocyclic amines in the presence of thionyl chloride and triethylamine. Characterization of synthesized compounds was done using infrared and ^{1}H nuclear magnetic resonance spectroscopic techniques. All the synthesized compounds were also screened for their pre- and post-emergence herbicidal activity against Bathua (*Chenopodium album*) and Jangli palak (*Rumex dentatus*) along with wheat variety HD 2967 (*Triticum aestivum*) in laboratory for pre-emergence and pot experiment for post-emergence herbicidal activity, respectively. The synthesized compounds were tested at different concentrations along with standard 2,4-dichlorophenoxyacetic acid (2,4-D). Compounds containing phenazone moiety were proved to be more effective than compounds containing pyridine moiety against both the weeds but also showed phytotoxic effects (discoloration and necrosis) on wheat. All the synthesized compounds registered less activity than 2, 4-D against both the weeds.



KEYWORDS Amides, 4-Aminophenazone, 2-Aminopyridine, *Chenopodium album, Rumex dentatus.*