

## Species composition and vermicomposting studies on sustainable mountain agricultural in Kumaun region of Indian Himalayas

**Rajwar, Neha**

Research Scholar, Department Of Zoology, Dsb Campus, Kumaun University Nainital, India,  
rajwar.neha@gmail.com

Earthworms are one of the most important and dominant invertebrate present in the terrestrial ecosystems. They are ubiquitous, abundant and highly reproductive organisms and are 'keystone species' in soil food webs. The deterioration of soil fertility through loss of nutrients and organic matter, erosion, salinity and soil pollution are the negative consequences of modern agricultural practices. Vermicomposting is an integrated technique of composting as it employs the composting material passes through the earthworm gut which is loaded with the bacteria helpful in composting. Vermicompost provides major and micro- nutrients to the plants. It improves aeration of soil, humification, soil texture and water holding capacity of the soil. The tropical soils are mainly plant nutrient deficient whereas the majority of nutrients are entrapped in agricultural by products. Present study includes the random faunastic survey of the earthworms from foothill or sub-mountain region in south to the mountainous region in the North of Himalayas along the altitudinal gradient. Endemic species i.e *Amyntas gracilis*, *Metaphire holutti*, *Metaphire anomala* etc. have been identified along with the exotic species *Eisenia fetida* from the surveyed region. The purpose of the study is to compare the vermicomposting capacity of the exotic species with the endemic species to ensure that the local species can also be utilised in villages for the production of high quality vermicompost locally in the mountain agricultural practice.