

## **COMPARISON OF TOTAL ORGANIC CARBON AND PLANT NUTRIENT CONCENTRATION IN COMPOST PREPARED FROM DIFFERENT MIXES**

Muhammad Faisal and Wajid Ali

*National Centre of Excellence in Geology, University of Peshawar*

wajeedaali@gmail.com

### **Abstract**

The objective of this study was to evaluate the Total Organic Content and NPK concentration of compost prepared from different recipes under field conditions in an arid environment. The experiments were conducted on farmer fields utilizing locally available materials. All methods of composting used were aerobic ensuring an ample supply of oxygen during the process. Five different recipes evaluated in the study were chickpea husk, loose grass and cow dung (C1), Wheat straw, cow dung slurry and loose grass (C2), saw dust, vegetable scrapes and cow dung slurry (C3), farm yard manure and saw dust (C4) and cow dung and saw dust (C5). The TOC concentration was highest in C5 followed by C4 while C3 showed the lowest concentration of TOC. On the hand the Total Nitrogen and Total Phosphorus concentration was the highest in compost prepared from C3 and C4 mixes. In case of Total potassium C1 mix exhibited better results than other recipes, while it was the lowest in C5 mix. The TK concentration declined in decreasing order of C1-C2-C3-C4-C5. It was observed that mixes like C3, C4 and C5 are more suitable for such environments owing to the availability of the material and better quality of compost in terms of nutrient concentrations.