ASSESSMENT OF THE QUALITY OF COMMERCIALLY PRODUCED COMPOST AVAILABLE IN THE MARKET

P.G.I.L. Dharmasena and M.G.T.S. Amarasekara

Department of Agricultural Engineering and Soil Science, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura, Sri Lanka.

Compost can be used as a soil amendment in crop cultivation and often increases productivity when it is combined with chemical fertilizers. With the organic farming concept, the government has recently promoted a large number of compost products. However, no proper management system has been implemented to ensure the quality of these products. Hence, a study was carried out to assess the quality of compost products available in the market and compare them with Sri Lanka Standards (SL Standard) 1634:2019/ 1635:2019 introduced by Sri Lanka Standard Institution. Fifteen compost samples were randomly collected from open market in different parts of the country. Collected samples were analysed for quality parameters using standard analytical methods. According to the results, the total N content of all 15 samples remained below the SL standard of total N (1%). The total P content of samples varied from 0.1 to 0.2, but none achieved SL standard (0.5%). However, 14 out of 15 samples reached SL standard for total K (1%). Only five samples were complied with the SL standard for C:N ratio (10-25%). According to hazardous element analysis, the As content of 11 samples exceeded the SL standard of 3 mg kg^{-1}. Results revealed that any of the tested products were not complied with SL standards. Therefore, they cannot be recommended as a source of soil amendment. Thus, a quality control mechanism to regulate the production process is essential to maintain the quality of compost available in the market.

Keywords: Compost, Organic farming, Quality parameters, SLS standards