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Comparison of municipal solid waste compost produced in different seasons of year and their effects on germination and growth parameters of *lepidium sativum*

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Urban solid wastes produced are considered as one of the factors polluting the environment in the world, and its recycling into municipal solid wastes compost (MSWC) is the most effective way in combating and reducing its pollutant effects. MSW compost physical and chemical properties differ and depend upon the social and economical situation of the people, food diversity and climatic conditions of the regions. MSW compost can be divided into four classes according to time and season of production as, MSW compost of spring, summer, fall and winter. Compost nutritional value is related to its supply of nutrients for the plants which are the results of its components such as organic matter, its quality and quantity and compost production season. For example, MSW compost of summer and winter with respects to their components varied differently and their chemical analysis indicated that TN and acidity were 0.59%, 8.4 in MSW compost of winter and 0.48%, 7.9 in MSW compost of summer, respectively. The variations in OM, TN, sodium and C/N ratio of MSW compost produced during four seasons of year were in the ranges of 20-26%, 0.7 – 1.1, 0.4 – 0.7% and 10 – 14, respectively. Results indicated that maximum germination percentage and germination seed rate was gained by MSW compost of spring and minimum by MSWC of fall and winter. These, in fact, affect plumule and radicle growth of seedlings and ultimately influence the growth of plant. Electrical conductivity and the degree of maturity of compost produced in different seasons impose a negative impact on germination, plumule and radicle growth of plant.

Keywords: Seasonal MSWC properties, Germination and growth of *lepidium sativum*

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