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## **Influence of Biochar Addition on pH and EC of Municipal Solid Waste Composts**

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Application of biochar to agricultural lands as a means of sequestering carbon, improving nutrient cycling, and soil health has gained interest. Application of biochar is often known to increase soil pH and EC and is used as a soil conditioning agent in acid soils. This study paid attention to the application of biochar together with municipal solid waste composts (MSWC), which is generally known to induce high soil pH and EC levels. If biochar increases pH and EC in situations where these properties are already high, use of biochar with MSWC may induce complications in agricultural soils. The objective of this experiment was to determine the influence of biochar on pH and EC of MSWC. The study was conducted as a laboratory incubation experiment for a period of two months (61 days) using MSWC from five different municipalities (Weligama, Baduraliya, Bulathsinhala, Agalawatta, commercial MSWC) treated with five levels of rice husk biochar (0% - control, 5, 10, 15, and 20%, volume basis). The pH and EC of the samples were measured every other day for a week at the beginning, and then weekly intervals. The pH of the compost samples slightly increased during the first two weeks, remained slightly high for about four weeks, and then decreased afterward. However, this pattern showed no significant difference ( $p > 0.05$ ) with the control. No increment, but a decline in EC over the time was observed in all samples except one in Weligama and Baduraliya compared to the initial level, where EC of biochar added samples were lower compared with the control. Some MSWC samples showed a higher decline in EC with increasing biochar percentage. Samples with low initial EC levels showed a minimum decline in EC, while those with high initial EC levels showed a higher decline with the addition of biochar. Further experiments are required for understanding the exact reasons. It can be concluded that addition of biochar with MSWC would not cause further increment in the existing high pH and the EC levels.

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