ABSTRACT

Lettuce is a widely cultivated and consumed horticultural commodity. Increasing production is necessary through improved cultivation techniques and appropriate fertilization to meet market demands. This study aimed to determine the effects of different concentrations of banana peel liquid organic fertilizer and rice straw ash on the growth and yield of lettuce plants. The research employed a two-factor randomized block design with three replications. The first factor was banana peel liquid organic fertilizer with four concentrations: 0 ml, 15 ml, 30 ml, and 45 ml per plant. The second factor was rice straw ash with four levels: 0 g/plant, 30 g/plant, 40 g/plant, and 50 g/plant. Analysis of variance showed that banana peel liquid organic fertilizer significantly affected plant fresh weight, with the best result obtained at 15 ml/plant. Rice straw ash application influenced plant height at 21 days after planting and root fresh weight, and had a highly significant effect on plant height at 7, 28, 35 and 43 days after planting, as well as plant fresh weight, with the best result at 40 g/plant. An interaction effect was observed between banana peel liquid organic fertilizer and rice straw ash on the number of leaves at 7 and 14 days after planting.

Keywords: banana peel, lettuce, liquid organic fertilizer, straw ash