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Impact of mulching and planting distance of *Orthosiphon stamineus* on soil pH and electrical conductivity in organic farming system

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A field study was carried out to determine the impact of mulching and planting distance on the growth of *Orthosiphon stamineus*, soil properties and also to observe the changes in pH and EC of the soil in response to mulching and planting distance using an organic planting system. The experiment was conducted at Farm 16, Faculty of Agriculture UPM. The four treatments consisted of mulching, non-mulching, planting distance of 30 cm \times 30 cm and planting distance of 45 cm \times 45 cm. After eight weeks of planting, the plants were harvested, while soil pH and EC were measured on a weekly basis throughout the planting period. The soil was also analysed for physical and chemical properties. The results showed application of the treatments increased the soil pH and maintained the soil EC at the suitable range for crop growth. The best treatment to use was mulching with planting distance 30 cm \times 30 cm, because soil pH increased proportionally on a weekly basis and soil EC ranges also were suitable for O. stamineus growth. Both planting distances showed significant differences on plant growth, moisture content, cation exchange capacity and exchangeable K. The treatments mulching and non-mulching showed significant differences on soil bulk density, porosity and exchangeable magnesium.

Biography

Daljit Singh has completed his PhD at the age of 26 years from Universiti Putra Malaysia and postdoctoral studies from Department of Geography and Planning, University of Liverpool, UK. He is currently working as senior lecturer in the Faculty of Agriculture, UPM, Malaysia.

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