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Abstract

The Effects of Fertilizer Type and Application Time on Soil Properties, Plant Traits, Yield and Quality of Tomato

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Abstract:

Compost is considered to be superior fertilizer for soil quality and productivity, and is commonly used with chemical fertilizer. The optimal mixed ratio of compost with chemical fertilizer and the best application time is necessary to know for sustainable agriculture practices and management. Compared to the control treatment, this study comprehensively evaluated the effects of four mixed ratios of compost with chemical fertilizer, two nitrogen application times of chemical fertilizer, and their interaction on the soil properties, plant traits, yield, and quality of tomato plants. The soil properties, plant traits, and yield of tomato with all compost-mixed fertilizers performed better than the treatment without fertilizer. Furthermore, the amounts of available nitrogen, phosphorus, organic matter, plant weight, and yield in a 30% chemical fertilizer + 70% compost treatments (CF30) were even better than those with pure chemical fertilizer (CF100). No significant effect of nitrogen application time and its interaction with the mixed ratio treatment was detected, and the quality of fruit remained consistent among treatments. This study demonstrated a suitable practical application method for cow manure compost as a nutrient source in tomato crop production under silty loam soil.

Biography:

Muhammad Hasnain from Pakistan. He have a Bachelor's degree in Agriculture and currently pursuing a Master's degree in Ecology from the School of Environment of Northeast Normal University. As a researcher, I have good experience in laboratory and field research, scientific and review paper writing, other experience certificates and have been awarded a Chinese Government Scholarship for Master study with stunning academic results. My research skills are also flexible as I work on many projects related to soil, plant and environmental science. Now I can work independently

or as part of a team member. I love working in international and interdisciplinary environments. I have good spoken and primarily scientific writing English skills (I have been studying all my previous English subjects at my School, Bachelor's and current Master's programs are taught in English. I also have a wealth of skills and experience in laboratory and fieldwork and use multiple software to analyze scientific research data.

Publication of speakers:

1. M. E. Mosleh and M. R. Besmi. Stray Capacitance of a Magneto Cumulative Generator Including N-Turn, Single-Layer, Solid, and Round Conductor With Insulating Coating. IEEE Transactions on Plasma Science 2011; 39(10): 1990-1997
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