

**IMPACT OF ORGANIC AND INORGANIC
FERTILIZERS ON SOIL PROPERTIES OF BLACK
PEPPER GROWING SOIL IN INTERMEDIATE ZONE
MID COUNTRY SRI LANKA**



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ABSTRACT

Black pepper (*Piper nigrum* L) – ‘King of spices’ is an important spice crop grown in Matale district of Sri Lanka, Black pepper varieties of grown are, Sri Lankan local variety and ‘Panniyur’. This experiment was carried out to study the effect of organic and inorganic fertilizers on soil properties of black pepper growing soil in intermediate zone wet country Sri Lanka.

The treatment consist of T1:Present fertilizer recommendation (Urea as N source).T2:Half of recommended fertilizer mixture+10Kg of gliricidia;T3:Present fertilizer recommendation $(\text{NH}_4)_2\text{SO}_4$ as N source;T4:Half of recommended fertilizer mixture [$(\text{NH}_4)_2\text{SO}_4$ as N source] +10Kg of gliricidia green manure;T5:Half of recommended dose of N- $[(\text{NH}_4)_2\text{SO}_4$ as N source] ;T6:Control.These 6 treatments replicated three times in Randomized complete Block Design (RCBD).The data was analyzed using SAS and different between treatment means was compared using Duncan’s Multiple Range Test (DMRT).

Treatment with the application of ammonium sulfate showed increasing trend of Soil nitrogen, phosphorus, potassium, Electric Conductivity and Leaf tissue nitrogen, phosphorus, potassium, magnesium, manganese and Ferrous in Black pepper. Combination of 50% ammonium sulfate and gliricidia green manure can be recommended for Black pepper in intermediate zone mid country

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