

EFFECT OF AZOLLA, CATTLE MANURE AND
INORGANIC FERTILIZER ON SOIL PROPERTIES
AND PERFORMANCE OF TOMATO AND CAPSICUM

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The present investigation was conducted at the Central Agricultural Research Institute to study the effect of rate of cattle manure (3, 6, 9, 12 t/ha) and Azolla (3, 6, 9, 12 t/ha) with and without inorganic fertilizer on soil properties and performance of tomato and capsicum. This experiment was conducted from Yala 1983 to Maha 1985/1986.

Highest mean yields of 19,721 kg/ha of tomato and 11,325 kg/ha of capsicum were recorded with 12 t/ha of cattle manure + NPK treatment. This treatment has given 80% yield increase of tomato and 85% yield increase of capsicum in comparison with the treatment where only inorganic fertilizer was used.

Azolla + NPK treatments did not generate a significant yield increase over the inorganic fertilizer only treatment. The yields of capsicum and tomato in the treatment consisting of inorganic fertilizer alone was always superior to the treatment with only cattle manure or Azolla alone treatment.

There was a significant decrease in soil pH in all the treatments associated with inorganic fertilizer. Increase of N, P and Ca was found in the soil where treatments associated with cattle manure or Azolla applications. However, there were higher calcium and magnesium contents of the soil in the cattle manure treatments than Azolla treatments. There was a build up of phosphorus levels in the soil in treatments associated with inorganic fertilizer application.

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