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# Integrated impact of Farm manure and Nitrogen Fertilizer on Soil Health Indices and Maize crop yield

## **Introduction**:

Presently, the most important challenge to agriculture is sustainability of soil health in Pakistan. To maintain soil health, there is a need to move towards organic farming. However, the application of manure only cannot replace the chemical fertilizer to meet higher demand of crop production. Therefore, combined use of inorganic and organic amendments is the most effective way to maintain crop productivity along with sustainable soil health.

### **Materials and Methods:**

Field experiment was conducted on maize crop at Research Area, Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad. Three levels of FM (0, 5 and 10 t ha<sup>-1</sup>) and three N-levels (140, 160 and 180 kg ha<sup>-1</sup>) were used in combination. Agronomic and soil physico-chemical parameters were recorded. Results were statistically analyzed using ANOVA under Randomized Complete Block Design with Factorial arrangement.

#### **Results :**



#### **Conclusions:**

Combined application of manure and nitrogen resulted in significant increase in maize crop yield. High application of farm manure resulted in improved soil physico-chemical properties. High manure application along with high rate of nitrogen resulted in Nitrate leaching.

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