allied academies

Joint Event

International Conference on

Plant Science

&

Natural Products,Medicinal Plants and Traditional Medicines

November 15-16, 2018 | Paris, France

Plant science & Natural Medicine 2018, Volume 2
DOI: 10.4066/2591-7897-C1-003

Soil fertility status and yield trends in the rice-Wheat system in Nepal

Bhaba P Tripathi
International Rice Research Institute (IRRI), Nepal

Farming system of Nepal is the integration of forestry, livestock and crop production. Leaf litters are collected from the forestry and put as bedding materials in the cattle shed and mixed with cattle manure and urine. The decomposed Farm Yard Manure (FYM)/compost are applied in the crop field and incorporated in the soil by plowing. Then the crops are planted in the field.

In recent years, the livestock numbers are decreasing due to scarcity of labors working in the agricultural fields, because they are going out of the country for jobs and are migrating to cities and towns. Therefore, use of chemical fertilizers is increasing in major crop growing area as compared to organic fertilizers.

Comparing the soil fertility status of five development regions of Nepal, soil pH is dominated by acidic in nature except for Far-Western Development Region. The organic matter content of the majority of samples from Eastern Development and Far-Western Development Region was very low while the organic matter of the other regions was low to medium. The nitrogen content also ranged from low to medium across all the Regions. The status of phosphorus and potassium are low in Eastern Region whereas low to high in other Regions. The average status of soil nutrient contents is declining throughout the nation, but the rate of decline is higher in the eastern part of the country.

Long-term soil fertility experiment on rice-rice-wheat system in carried out in Bhairahawa, Nepal showed a sharp decline in rice yields in minus phosphorus (P) treatment in normal season rice, whereas in early rice, it was almost zero. Wheat yield declined in both P and potassium (K) missing plots. The application of P and K fertilizers partially recovered in P and K deficient plots.

e: b.tripathi@irri.org