Influence of integrated nutrient management on biometric and biomass production of maize crop in acid soils of Odisha

Meenakhi Prusty, Monika Ray and Sunita Dandasena

Summary
A pot culture experiment was conducted on influence of integrated nutrient management on biometric and biomass production of maize crop in acid soils of Odisha in the Dept. of Soil Science and Agricultural Chemistry, College of Agriculture, OUAT, Bhubaneswar during Kharif 2016. The treatments were T1 - control, T2 - STD, T3 - STD+lime (PMS) @0.2LR, T4 - STD Vermicompost (VC) 2.5 t/ha, T5 - STD +lime (PMS) @0.2LR + vermicompost (VC) @2.5 t/ha. The result of the experiment indicated that combined application of STD +lime (PMS) 0.2LR + vermicompost (VC) @2.5 t/ha (T5) provided highest change of plant growth rate (cm/day) over the crop growing period (1.10) and chlorophyll content (mg/g leaf tissue) is 39.4 in comparison to other treatments. Similarly highest fresh biomass production 58.2g/pot, root density is 0.74g/cm3 and relative agronomic efficiency (RAE %) is 365 was found in the same treatment. The lowest values was found in absolute control (T1). Therefore, combined application of organic amendment (VC) with lime source influence the biomass production positively.

Key words: Soil test dose (STD), Vermicompost (VC), Paper mill sludge (PMS)