Fertilizer recommended approaches

Soil fertility is a baseline for production of both quantity and quality of agricultural products and it is either degraded, up graded or sustained depending on the various activities carried out on land.

Before fertilizer application for proper crop growth and yield, consider soil fertility and this, use Farm yard manure, compost manure and green manure to increase soil fertility. Also consider soil pH, nutrient availability and type of crop to be grown.

Application approaches

Fertilisers supply nutrients to the plants and the recommended approaches include buildup and maintenance, sufficiency and basic cation saturation ratios and quantitative approaches.

First, buildup and maintenance approach maintains soil fertility for up coming years and it provides more nutrients and compensate for lost nutrients by the crops. The approach emphasizes fertilizer application basing on requirements. Phosphorous and potassium are the best for this approach. This approach increases on nutrient content of soil over time however, it increases on purchase of fertilizers and reduces profits.

Additionally, sufficiency approach is used to meet nutrient requirement of crops. Its objective is to increase profitability in a given period of time using minimal fertiliser amounts and reducing on costs. This is done based on soil test levels for fertilizer application to increase nutrient and mineral content of soil. Recommended fertilizers for this approach are phosphorous and potassium.

Similarly, basic Cation saturation ratio approach expects a definite ratio of cations to be present in soil to achieve maximum yield and the recommended fertilizers are calcium, magnesium and potassium for this approach. Cation proportions should be 65-85% Ca, 6-12% Mg and 2-5% K. It is suitable for sandy soil as soil holds very minimum amounts of Cations. However it is suitable for calcareous soils since potassium ratio is very high.

Finally is the quantitative approach which considers soil test values as actual amount of nutrients presents in soil. Fertilizer applied is based on difference between soil test values and required nutrient amount by crop. All in all, test values are taken by approximation.