

Harnessing the Practice of Integrated Nutrient Management

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The present crop production is heavily reliant on the sole use of chemical fertilizers in most sub-Saharan African countries e.g. in Malawi. In the very first years of practicing chemical fertilization, farm returns continued to rise as due to the responsiveness of the soils to chemical soil amendments. However, continued sole application of chemical fertilizers has led to negative impacts on soil health, crop productivity as well as on the environment. Synonymously, organic fertilization alone has proved to be futile on yield due to unbalanced nutrient content. Despite this drawback of low nutrient content, organic materials are vital in a number of ways that are improved upon their application. For example, improvement on soil physical properties such as; soil structure, water infiltration, and water retention are all observed upon organic fertilization. Soil microbes also tend to increase in number and diversity upon adding organic fertilizers. Additionally, organic materials incorporated in the soil improve the nutrient use efficiency of soils to chemical amendments which is critical to crop growth and development. Nonetheless, a choice has to be made on the type of organic materials to be used for example crop residues and or animal manure. Further, the content of nutrients in the animal manures differ, with chicken manure dominating among the rest of the animal manures. Integrated nutrient management is an approach that combines the use of organic and inorganic fertilizers to the improve soil fertility sustainably and maintain environmental posterity.

Regardless of the slow rate of adoption of integrated nutrient management, farmers need to be enriched with the knowledge on the importance of INM to enhance adoption. Therefore, adopting integrated nutrient management approach will help address the challenges faced by the deteriorated farmlands and enhance productivity through a number of recent studies on the same.

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