TAAT Soil Fertility Management Enabler Compact

Highlights

- *Establishment of soil fertility maps to guide balanced fertilizer recommendations for crops*
- *21 nutrient deficiency maps established in Tanzania and Niger and soil initial nutrients levels characterized at sites of compact demonstration in Nigeria.*
- *An electronic platform linking farmers to agro-input dealers for effective input delivery in Burkina Faso is established*
- *13 best bet fertilizer formulas including S, MgO, CaO, Zn and B demonstrated.*

What is the problem?

Low inherent soil fertility and suboptimal soil fertility management has been recognized as a major constraint to food security in Sub Saharan Africa (SSA). The major fertilizers available in the market are essentially commodity NPK fertilizers, which are not always the best fertilizers formulations. As a result, there are significant yield gaps between potential crop yield and farmer's field yield and in SSA. Recent assessment of response of crops to applied nutrients in SSA showed that secondary and micronutrients, mainly S, Zn and B, are becoming yield limiting factors, thus, the need for balanced fertilizer formulation for optimal crop yield. Fertilizer formulation is most effective when based on soil needs for nutrients.

One other constraint to adoption of improved soil fertility management technologies is lack of access to fertilizers by farmers. While improving the quality of the fertilizer being recommended to farmers, the SFE will improve the environment for effective delivery of fertilizer to farmers using the private sector.

Compact description

The TAAT SFE supports commodity compacts to achieve increased and sustainable agricultural productivity by providing environmentally sound improved soil fertility management recommendations and fertilizer efficient technologies, while ensuring easy access of farmers to quality agricultural inputs.

What are TAAT Soil Fertility Objectives?

- To improve fertilizer recommendations for commodity compact crops for incresed agricultural productivity
- To improve access of farmers to quality inputs
- To scale up fertilizer efficient agricultural technologies

What are the TAAT Soil Fertility Technologies?

- Balanced fertilizer recommendation through soil testing
- Integrated Soil Fertility Management
- Fertilizer Deep Placement (FDP)
- Microdosing (MD)
- Linkage of farmers to agro-input dealers through an electronic platform

What have we achieved so far?

Input delivery: Over 2,400 agro-input dealers registered and geo-referenced and an electronic platform established that connect farmers to agro-input dealers in Burkina Faso.

Farmer preparing to place USG in a rice field

Balanced fertilizer formulation: 22 soil fertility maps established to improve the resolution of fertilizer recommendations for crops in Tanzania and Niger. Inherent soil nutrient constraints characterized (26 nutrients constraints) characterized for commodity compact sites in Nigeria; 13 best bet fertilizer formulas demonstrated for Millet, Sorghum, Rice, peanut cowpea and wheat.

Technology deployment: 463 demo plots on Fertilizer Deep Placement and Micro Dosing and phosphate rock based integrated soil fertility management technologies; 730 mini kits (seed + fertilizer) for farmers' own demonstration of Micro Dosing; three training videos produced to facilitate dissemination of fertilizer efficient technologies.

Were there any key challenges or lessons learned?

- Developing input and agricultural services delivery around the private sector is a promising avenue for effective scaling up of technologies
- Digitalization has been an effective way of dissemination of technologies while facing restrictions such as those imposed by the COVID-19 pandemic.

Briquetting machine

Women placing USG.

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