Soil Health Management - FARO 67

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- Integrated nutrient management is the management of both organic and inorganic plant nutrients for optimal rice production while conserving the natural resource base essential for long-term sustainability. It consists of:

- Application of plant nutrient on the basis of soil test recommendation.

- Use of organic manures, crop residues, green manures, bio-fertilizers and soil amendments.

- Proper time and method of nutrient application.

- Proper management of water

- The amount of fertilizer to apply depends on the quantities and level of residual nutrients in the soil and the type of fertilizer materials available. It is advisable to apply fertilizer doses based on soil test results and expected yield.

- Rice responds well to nitrogen fertilization. The recommended doses of major plant nutrients to rice are 70-50-40, 60–30–30 and 80-30-30 N, P and K/ha respectively under upland (Sahel and Northern Guinea Savanna upland), (Southern Guinea Savanna) and Forest and shallow swamp rice ecosystems. For efficient management of chemical fertilizers, the following are to be taken into consideration.

- Nitrogenous fertilizers are to be applied in a greater number of splits. The lighter the soil, the more will be the number of splits. It is usually applied in three splits –40 % N at the time of planting, top dressed with 30% N 4 weeks after planting/ at the time of tillering and the other 30% N at 7 weeks after the planting or when the crop start to flower (panicle initiation stage).

- Full amount of phosphate and potassium fertilizers are to be applied during the time of final land preparation.

- In virgin soils and land that has been under 1 to 2 years fallow cropped with rice, apply a moderate rate of N (60 kg/ ha) and on older soils, apply a higher rate (80 kg/ha). Top dressing of N fertilizer should be applied between the rows and buried. The P and K fertilizers may be applied by broadcasting before sowing if applied separately. However, application times may vary due to weather constraints and individual farmers.

For lowland rice (shallow swamp, irrigated, hydromophic and inland valley swamp) apply half the N and all P and K at planting and the remainder broadcast at 6 - 10 weeks after planting at panicle initiation stage.

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