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EXECUTIVE SUMMARY

This report presents results from first season on farm trials carried out at Ng'onde, Ikuwo, Magoye, Ikungula, Lugoda, Mpangala (high altitude zone) Mfumbi and Usalimwani (low altitude zone) in Matamba division. The experiments were conducted in farmers fields with each farmer being considered a replication. A total of 35 farmers (Appendix 6) were involved in the experiments. All crop husbandary activities and assessments were carried out by farmers under the supervision of the extension staff and MARTI-Uyole researchers. The trials involved variety evaluation using uniform levels of fertilization. The crop varieties tested were Sorghum (Tegemeo, 85-IL-208, SV-1, Pato and local - Lugejo), Maize (Staha, Kito, Kilima, TMV-1 and local). Beans (DRK-4, Uyole-94, Kabanima and local - Kablanketi) and Wheat (Selian 87, Viri, Azimio, Njombe 7, Juhudi and Solomon - local). The fertilizer levels used were 5tons/ha FYM and half recommended rates of phosphorus and nitrogen depending on the individual crop requirements.

The main objectives of the trials were:-

- to compare the performance of local and improved crop varieties.
- train farmers on recommended crop husbandry practices.

The general trend of the results were as follows:-

Soils: The soils which were used in the OFTs had the following attributes:-

- medium acidic to very strongly acidic
- inherent soil fertility was poor for most of the nutrients with extremely low levels in copper
- the soils were mainly clay and sandy clay loam.
- a few sites had high levels of Al and Mn.

Sorghum: Results showed that all the improved varieties were better than Lugejo. This is because all the improved varieties yielded above 2t/ha while Lugejo gave a yield less than 2t/ha.

However, Tegemeo and SV-1 appeared to be the most suitable to the area.

Maize: The mean grain yield of improved varieties across the two sites was higher than the local cultivar by 28% (5.97 t/ha for improved varieties versus 4.28t/ha). Kito matured earlier and was ready for harvesting 30 days before the rest. Farmers selected Kito, TMV-1 and Staha, in that order.

Beans: Results show that all improved bean cultivars outyielded the local bean cultivars, Kablanketi. Kabanima and Uyole 94 outyielded Kablanketi by 1328 and 1320 Kg/ha respectively, in Magoye village while Uyole - 94 and DRK - 4 outyielded Kablanketi by 991 and 557 kg/ha respectively in Ng'onde village.

Wheat: As for wheat yields at Ikuwo, Lugoda and Igenge villages, there was no significant differences between improved and local varieties. At Ikungula, all the four new varieties yielded better than Solomoni (local variety).

Though the exercise was carried out for the first time, farmers participation was very encouraging and the farmers have asked for seeds of their preferred crop improved varieties.

On-the-job training of farmers and extension staff was an important component of the trials.

Among the problems faced during implementation were included inadequate farmers assessment, relatively poor data collection, skewed gender balance and insufficient economic analysis. Strategies to address these problems have been worked out.