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Full Length Research Paper

On-farm evaluation of promising groundnut varieties for adaptation and adoption in Tanzania

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Abstract

On-station and on-farm groundnut research was carried out in Sikonge district Tanzania, to evaluate groundnut varieties for yield under researcher and farmer managed conditions and assess farmer preferences. On-station trial was laid in a randomized complete block design with three replications. Five varieties Johari Pendo, Nyota, Sawia and Mambleo were planted on 25 m² plots at spacing of 0.9 : 0.15 m. Twelve farmers were involved in conducting on-farm trials with each farmer as a replicate. Participatory farmer evaluation and stability analysis were done. Both on-station and on-farm trials revealed high yield among varieties with Pendo (1444 kg ha⁻¹) and Johari (1163 kg ha⁻¹) out yielding other varieties which were also ranked by farmers and researchers as the most preferred genotypes. The genotypes and environments sum of squares accounted for the most of the variability by contributing 38.10 and 32.99% for genotypes and environments respectively. Mambleo and Sawia varieties showed high G X E stability. Farmers and researchers ranked Pendo and Johari as the best varieties.

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Key words: *Arachis hypogaea*, participatory farmers' evaluation, groundnuts, stability analysis.

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