

Performance and Utilization of African Groundnut Core Set in East and Southern Africa

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Groundnut genetic diversity is low and breeding programs have until recently utilized a limited portion of the existing diversity within and outside the allotraploid gene pool. This has hampered breeding efforts to deploy desirable alleles to meet the end users' needs in their adapted environments. A collection of 1500 germplasm nominated by African groundnut breeders were genotyped using the V2 Axiom-Arachis. A core set of lines (200 lines) were phenotyped in four (4) countries in Eastern and Southern Africa (Zambia, Malawi, Mozambique and Uganda). Valuable sources of resistances to biotic and abiotic stresses and superior yield related traits were identified for direct deployment as varieties and breeding lines. Adaptability trials are being conducted and different introgression pipelines initiated for recombinant inbred lines developments for desired traits. Nutrient profiling of these lines are ongoing and data will be freely available. Multiplication efforts for this core set representing diversity in Africa is ongoing to freely share these resources with any interested NARS in Africa.