



Genetic enhancement of groundnut in Nigeria

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Nigeria is the largest groundnut producing country in West and Central Africa and the crop is grown largely under small-holder system and rain-fed conditions. However, the productivity is limited and attributed to many factors including biotic, abiotic and other socio-economic constraints. The gap between potential and realized yield is large in subsistence farming. The demand for improved groundnut varieties has been increasing over the years making it imperative to develop varieties suitable to the different agro-ecological zones, which take into account market preferences, the challenges of aflatoxin contamination and climatic variability. There are opportunities for introducing/ developing dual purpose and dual season groundnut varieties for both haulm and grain yields, since the market for haulms remain high especially in dry season.

To address these issues, ICRISAT has been working with national partners to improve productivity of groundnut mainly with the support of Groundnut Value Chain (GNVC), Tropical Legumes (TL-III) and USAID groundnut upscaling projects and supplied more than 750 trait-specific advanced breeding lines (resistance to foliar diseases, rosette, aflatoxin contamination, early and medium maturing, confectionery types and tolerant to drought) for genetic enhancement of groundnut.

Recently based on the National Performance Trials (NPT) and Participatory Varietal Selection (PVS) trials, the national programs have released three short-duration rosette resistant varieties (Samnut-24, Samnut-25 and Samnut-26). Most of these varieties were preferred by farmers for their high yield, disease resistance, drought tolerance, short duration, seed size, suitability for home consumption, seed colour and market demand and had 20-30 per cent yield advantage over the local varieties grown by farmers. Efforts are also being made to develop new breeding material under wider adoptive background and elite lines with resistance to multiple biotic and abiotic stresses with farmer and market preferred traits have been identified for their possible release for commercial cultivation and harness export potential of the crop. The current efforts to deploy modern breeding approaches and tools to enhance genetic gains in groundnut are discussed.

Key words: Genetic Enhancement, Groundnut, Nigeria, Productivity, Trait specific breeding lines