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Poster Abstracts

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Identification of new sources of early-maturity in groundnut core collection

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Early-maturing high-yielding groundnut (Arachis hypogaea L.) cultivars are needed for shot growing season, multiple cropping, and to avoid late season droughts. In almost all breeding programs only a few sources of early-maturity (Chico, Gangapuri, JL 24; mainly Chico) have been used. The aim of our research was to identify new sources of early-maturity through evaluation of core collection developed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India.

The 584 Spanish (A. hypogaea subsp. fastgiata var. vulgaris) and 229 Valencia (A. hypogaea subsp. fastgiata var. fastgiata) for maturity and other agronomic traits at 90 days after sowing (DAS) in the 1999 rainy season. We selected 15 Spanish and 4 Valencia landraces from 13 countries with maturity similar to Gangapuri and evaluated them in Preliminary trial in the 1999/2000 post rainy season at 1240 °Cd (equivalent pod DAS in rainy season at ICRISAT Center, Patancheru) 1470 °Cd (equivalent pod DAS in rainy season at ICRISAT Center, Patancheru) along with Chico, Gangapuri, and JL 24. Considering pod yields, shelling percentages, and 100-seed weight at both harvests, promising lines (Valencia: ICGs 4890, 11605; Spanish: ICGs 3540, 5881, 99427, 11914, 13647, 14390, 14788, 14815) have been selected. The diversity studies using 18 quantitative traits indicated a high degree of divergence among new early-maturity sources.