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Intraspecific hybridization in groundnut

M.Pandiyan

Agricultural College and Research Institute, India

Groundnut *Arachis hypogaea* (L.) $2n = 40$ is an important oilseed crop of India. Though India ranks second in the production of groundnut in the world its productivity is lower compared to other countries. The yield is a complex character, which is highly influenced by environmental variations. Information on nature and magnitude of variability present in the population due to genetic and non genetic cause is an important prerequisite for a systemic breeding programme. Genetic variability is essential for initiating an effective and successful breeding programme and it become imperative to study the level of genetic variability available in the existing genotype. The study of genetic advance with heritability estimates further clarify the nature of character which can be improved through selection.

Therefore, the present investigation was undertaken to study variability, heritability and genetic advance in three independent populations of groundnut. The experimental material for the present investigation comprised of 10 genotypes of groundnut. Five male and five female parents were used for crossing and 20 crosses were made. F₁s were raised. The following characters namely Pod yield per plant (g), Days to 50% flowering, Days to maturity, Height of main stem (cm), Number of primary branches, Number of pegs, Number of pods, Number mature of pods, 100-seed weight (g), Shelling percentage and Oil content (%) were recorded. Three promising hybrids were obtained related to pod weight followed by pod yield for further evaluation.

Biography

M.Pandiyan is working in Agricultural College and Research Institute, TNAU, Eachangkottai 614 902 Thanjavur