

E-124: IN SEARCH OF GROUNDNUT CULTIVARS WITH HIGH ZINC AND LOW PHYTATE IN THEIR SEED FOR ALLEVIATING ZN MALNUTRITION IN INDIA

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The dietary deficiency of Zn is affecting over 2 billion people worldwide and is more prevalent in areas representing a major proportion of cereal based diet. Groundnut consumption can provide 40% (4 mg 100g⁻¹) of the RDA for Zn but, the presence of phytic acid in seeds interferes with its availability. Thus, identification of groundnut cultivars with high Zn and low phytate in seeds is an effective alternative to alleviate the malnutrition due to Zn deficiency. A field experiment was, therefore, envisaged by undertaking 20 groundnut cultivars wherein their Zn and phytic acid content was estimated. The inhibitory effect of phytic acid on Zn absorption was further studied on the basis of molar ratio. Among 20 groundnut cultivars, 6 cultivars reflected seed Zn content more than 55 mg kg⁻¹(GJG 31, GG20, GG7, Tirupati 3, Tirupati 4 and TAG 24) while 8 cultivars displayed their Zn content between 50- 55 mg kg⁻¹. The phytic acid content showed its highest value in JL 24, Tirupati 2, TMV 2 and Tirupati 1. The phytic acid content showed its highest value in JL 24, Tirupati 3, GJG 31, GJG 22, 4 (> 2 g 100g⁻¹) while it was <1.5 g 100g⁻¹ in cultivars GG7, Tirupati 3, GJG 31, GJG 22, Kadiri 9, TMV 13, DRG 12, SG 99, MH 4, TG 26 and Girmar 1. The cultivars GG7, DRG 12, Tirupati 3, Girmar 1 and TG 26 showed their molar ratio below 18:1.

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