

**Improving nutritional quality of groundnut (*Arachis hypogaea* L.)**

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Globally at least 2000 m people are estimated to be affected by micronutrient deficiency. Deficiency of iron (Fe) and zinc (Zn) is widespread and affects a large number of people in various parts of the world. Since plant foods are major source of minerals and vitamins for the poor, enhancing the Fe and Zn contents of plant foods that are consumed regularly offers a convenient way of overcoming their deficiencies in human diet. Groundnut is both a food and an oilseed crop. Being rich in oil, protein, minerals and vitamins, groundnut can contribute significantly towards reduction in protein-energy and micronutrients malnutrition. ICRISAT has been breeding groundnut varieties for several traits including yield, confectionery traits, earliness and tolerance to biotic and abiotic stresses. Except for monitoring oil and protein contents, the nutrition quality parameters, however, were not seriously considered. The situation is not very different in many national programs in Asia and Africa. In this study, we report on the range of variability for kernel traits such as oil, protein, Fe, and Zn present in a set composed of 64 elite ICRISAT lines and 8 popular checks. The oil content varied between 43-60% while the protein content varied between 16-26%. Fe content varied from 41-66 ppm while the Zn content varied between 47-85 ppm. Lines ICGV 06420, ICGV 86015, ICGV 86143 and X-14-4-B-19-B had the highest contents of oil, protein, Fe and Zn respectively. Moderate to high heritability (0.47-0.90) was recorded on these traits and, further, no negative correlation between any two traits was observed. These results indicate that there is sufficient variability for nutritional traits in groundnut and they could be exploited by breeding to enhance the nutritive value of groundnut cultivars, particularly for malnourished population in developing countries. Further studies are being conducted to screen minicore collection of groundnut for the above nutritional traits and also characterize the G x E component.