

Genetic Variability of Oil and Protein Traits of Groundnut lines using Near Infra-red Reflectance Spectroscopy Technology (NIRS)

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ABSTRACT

Peanut protein and oil quality are the important features which decide the market value of the groundnut. In the present study 100 advanced breeding lines were phenotyped for traits like protein, oil content using near infrared reflectance spectroscopy (NIRS) at ICRISAT, Patancheru. Analysis of variance showed a significant difference among the lines evaluated. The oil and protein content showed significant negative correlation. Improvement of the crop depends on the magnitude of genetic variability and extent of transmission of character, the cluster analysis divided the 100 peanut varieties into four groups with some differences in the traits between groups. Identification of lines having high oil and less protein content was done and lines with greater variation can be used further in the breeding pipeline.

Keywords: *Arachis hypogaea, Oil content, Protein content and Groundnut*