Third International Conference of the Peanut Research Community

On

Advances in *Arachis* through Genomics and Biotechnology (AAGB – 2008)

ICRISAT, Hyderabad, Andhra Pradesh, India 4-8 November 2008

ABSTRACT BOOK

Organized by



International Crops Research Institute for the Semi-Arid Tropics

In collaboration with



Peanut Science Council, USA

Selection of accessions from minicore to improve disease resistance in groundnut

<u>Sujay V</u>¹, Kusuma VP¹, Yugandhar G¹, Sujatha Bhat¹, Gowda MVC^{1*}, Upadhyaya HD²

A mini core subset of world germplasm comprising 188 accessions was evaluated for late leaf spot, rust and seed colonization by *A. flavus*. Accessions highly resistant to late leaf spot (ICG 2857, ICG 8760, ICG 12625, ICG 13787, ICG 12672, ICG 14475 and ICG 11426), rust (ICG 4746, ICG 6706, ICG 11088 and ICG 11426) and *A. flavus* (ICG 14985, ICG 6025, ICG 3673, ICG 12625, ICG 13787 and ICG 8760) were identified. Some accessions (ICG 12625, ICG 13787, ICG 11426 and ICG 8760) combined resistance to at least two diseases. The identified accessions along with three popular cultivars (GPBD 4, TAG 24 and JL 24) were subjected to RAPD assay using twenty primers to assess molecular diversity. The genetic similarity (S_{ij}) ranged from 0.64 to 0.92. Accessions ICG 6706, 14475 and 8760 were more diverse with the popular varieties. The information generated in this study will be of great value to plant breeders in their effort to develop varieties resistant to fungal diseases through hybridization.

¹University of Agricultural Sciences, Dharwad-580005, Karnataka, India ²International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru 502 324, Andhra Pradesh, India

^{*}Address for correspondence: mvcgowda@sify.com