

## **Genotypic and Phenotypic Characterization of Peanut Lines with Interspecific Introgressions Conferring Late Leaf Spot Resistance**

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Late Leaf Spot (LLS) disease caused by *Cercosporidium personatum* (Berk. & M.A. Curtis) Deighton affects peanut (*Arachis hypogaea* L.) all around the world. Up to 80% yield loss in LLS infested fields have been reported. In order to achieve effective control, fungicide applications must be implemented before and after the manifestation of the symptoms. However, chemical control is expensive, and can be difficult to apply in small-scale farms, particularly in developing countries. One effective solution to overcome these problems is the employment of resistant cultivars. Varieties with different levels of resistance began to appear in the US after 1985 and have progressed toward greater resistance. The IAC 322 breeding line shows a high level of resistance to LLS similar to that of peanut diploid relatives. It has been confirmed that IAC 322 has alien diploid introgressions from *A. cardenasii* Krapov. & W.C.Gregory. Three major wild segments were detected on chromosomes A02 and A03 previously. The goal of this research is to phenotype lines contain multiple combinations of introgressions in order to understand the contributions of individual wild segments on the different components of resistance and identify the best segments for cultivar development. Preliminary results show that the introgressed regions on the top of chromosome A02 and bottom of chromosome A03 play key roles in LLS resistance.