

Evaluation of Stem Rot Resistance Components in Peanut

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For quantification of stem rot resistance in the peanut mini-core collection genotypes, incubation period, as a major epidemic parameter indicating disease development rate (as a measure of resistance) was estimated through inoculation experiments under semi-controlled conditions.

Three basic relative resistance components *viz*; incubation period in terms of sclerotial germination rate (IP_{50}), lesion length (LL) and Infection rate (IR), were estimated in the present study for resistance evaluation against stem rot pathogen, *Aethalia rolfsii*, in the peanut mini-core collections at Agricultural Science Center at Clovis under greenhouse conditions.

The Combined relative resistance/Resistance index (RI) estimated based on these three resistant components found to be very effective in expression of the resistance nature of peanut cultivars tested against stem rot pathogen and it can be used in population dynamics model for estimation of varietal resistance characters of mini-core collection.

Further, it was observed that the simulation model based on the resistance components utilized in present study is effective in estimating the disease progression in relation to the disease reaction against stem rot pathogen in peanut mini-core collection for utilization in further breeding programs.