

Peanut Yield Loss in the Presence of Late or Early Leaf Spot Defoliation

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Late and early leaf spot, respectively caused by *Cercosporidium personatum* and *Cercospora arachidicola*, are damaging diseases of peanut (*Arachis hypogaea*) capable of defoliating canopies and reducing yield. While these diseases each may be more predominant in a given area, both are important on a global scale. To better guide management decisions and quantify relationships of end-of-season defoliation and yield loss, meta-analyses were conducted over more than 100 data sets meeting established criteria. Slopes of proportion yield loss with increasing defoliation were estimated separately for runner- and Virginia-type varieties. Results for runner-types indicated yield loss to linearly increase 2.3 to 2.9% per 10% increase in defoliation for levels up to approximately 95% defoliation, after which the rate of loss increased more rapidly. Yield loss for Virginia-types was better described by an exponential function with a slope of relative loss increase of 2.2 to 2.7% per percent defoliation. While numerous factors remain important in mitigating overall losses, the integration of these findings should aid recommendations regarding digging under varying defoliation pressures and peanut maturities to assist in minimizing yield losses.