Sixty-seven of the 112 accessions comprising the U.S. Peanut Mini-Core Collection were evaluated in 2013-2015 for resistance to Sclerotinia blight, caused by Sclerotinia minor. Susceptible cultivar Okrun, and resistant cultivars Southwest Runner, Tamnut OL06, and Tamspan 90, were included for reference. Entries were grown in two-row plots, each 1.8-m wide and 4.6-m long, using a randomized complete block design with three replications. Moderate to low levels of Sclerotinia blight were observed in 2013 and 2015, but more disease was observed in 2014, with 69% disease incidence in Okrun, and 6-7% in Southwest Runner, Tamnut OL06, and Tamspan 90. Disease incidence was averaged over the 3 year period. Five mini-core accessions (Core Collection/PI nos.: 227/290566; 233/290536; 287/355271; 342/298854; 805/355268) were highly susceptible to Sclerotinia blight and averaged 39-46% disease incidence. Significant resistance to Sclerotinia blight (<10% disease incidence) was observed in 35 accessions over the three years tested. Mini-Core accessions were also genotyped using a SSR molecular marker shown to be associated with Sclerotinia blight resistance. An r = -0.68 was observed between disease incidence and genotype peak height ratio, suggesting a significant correlation between the marker and disease resistance. This information will be useful to peanut breeders seeking sources of Sclerotinia blight resistance to introgress into elite lines.