Removal of aldicarb from the market for peanut has forced growers to evaluate alternative approaches to controlling thrips. Research was conducted during 2011 to compare thrips control, tomato spotted wilt, days to row closure, and pod yield for the cultivars Bailey, Gregory, CHAMPS, Phillips, and Sugg with and without phorate applied in the seed furrow at 5 lbs product/acre. In other trials, efficacy of acephate applied postemergence was compared when applied alone or with paraquat. Phorate was effective in controlling tobacco thrips regardless of cultivar and for minimizing tomato spotted wilt for tomato spotted wilt-susceptible cultivars. Acephate was effective in protecting peanut from tobacco thrips damage similar to aldicarb applied in the seed furrow.