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**PHYSIOLOGICAL AND GENETIC RESPONSES ASSOCIATED WITH TOMATO SPOTTED WILT
VIRUS IN PHORATE TREATED AND UN-TREATED SOILS
Final Report**

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Mechanical inoculation with TSWV was explored in a greenhouse setting. In our hands, using previously published protocols, we were unable to get satisfactory TSWV infection. Accordingly, we sent seeds of SunOleic97R (highly susceptible to TSWV) and Georgia Green (moderately susceptible to TSWV) to Dr. Scott Adkins (USDA-ARS) who has been successful in mechanically inoculating other plants such as tobacco. On his second attempt, he was able to successfully inoculate peanut, and develop a protocol that we will now use. In the meantime, a visiting scientist, Friderike Wilde (Germany), followed by a MS graduate student, Fanchoa Yi, have been analyzing the expression levels of previously identified peanut genes in response to TSWV field infection. We are developing a set of marker genes that may be useful in predicting resistance to TSWV. Mr. Yi will be constructing the cDNA libraries and generating the ESTs pending available funds.