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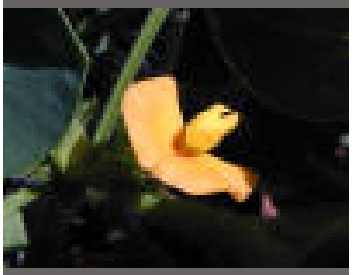

TEXAS AGRILIFE EXTENSION SERVICE

Peanut Progress

Peanut Update from South Texas

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Extension Plant Pathologist

Weather. The region received 3-7 inches of rain after Labor Day to at least interrupt a 2-year drought. The region experienced a record number of days in 2009 with temperatures over 100 F. The drought brought spotted wilt, caused by *Tomato spotted wilt virus*, to its knees, and foliar diseases (leaf spots, rust) are minimal as well. Southern blight and pod rots have again been issues this season because soils have long been infested and the crop was frequently irrigated.

CRR. Some fields have cotton root rot disease in peanut. Although still sporadic and at low incidence, it seems to be on the increase in South Texas peanuts over the last 20 years. Initial symptoms are small groups of dead plants that died suddenly without significant yellowing. Areas with dead plants may stabilize or enlarge from 1 to 3 ft. of row to roughly circular areas 50 ft. or more across. When dying plants are inverted, the lower tap root has advanced decay but the crown is mostly intact. Examination with a hand lens or a dissecting microscope reveals fuzzy tan/tawny fungal strands on the taproot surface.

Risk factors include low soil organic matter, high pH soil (optimum 7.2 to 8.0, but as low as 6.5), increases in soil CO_2 associated with rain and irrigation, some clay in the root zone, high summer soil temperature, and little if any soil freezing in winter. Erosion has exposed alkaline (high pH) outcroppings where the fungus, *Phymatotrichopsis omnivora*, is best able to survive long term deep in the soil. The pathogen is native and endemic to high Ph soils in the hotter two-thirds of Texas and hot areas of other southwest states and northern Mexico.

Rotations of peanut with cotton, another susceptible crop, can increase the fungus population in soil. Rotations with grass crops can help reduce the fungus numbers. Vegetable crops such as carrot and potato that mature in the heat of late spring may succumb. Currently labeled fungicides offer no control. Any fertilizer program that increases soil pH should be avoided.

Big vines. Growers are concerned about excess canopy height in some fields that will cause problems at digging and threshing. Peanut plant height can be increased by variety choice, high seeding rate, residual N from previous crops, direct nitrogen fertilizer during the season, frequent irrigation, and drainage into lower-lying parts of a field.

Tamrun OL07 and other TAMU varieties were selected for advantages that include yield, grade, and field resistance to spotted wilt and Sclerotinia blight (caused by *Sclerotinia minor*). Atascosa County has several fields with a history of Sclerotinia blight and the disease is an issue in west and central Texas and Oklahoma. In general,

Peanut Update from South Texas - Continued

dense, low growing, and/or highly branched varieties are more susceptible to *S. minor*. Recent TAMU runner variety releases have large vines with more open crowns and fewer branches from the crown. Peanut breeders in Georgia and Florida have focused on releasing varieties with resistance to spotted wilt but not Sclerotinia blight, and those varieties tend to have short dense canopies with more branches from the crown. In West Texas, larger vines can have a yield advantage.

The necessity of resistance to Sclerotinia blight in Texas, and yield advantages of large vines to the northwest has some south Texas growers who planted TAMU varieties looking at 18-inch tall vines.

Light competition among plants at high seeding rates increases height. High seeding rates are among techniques to reduce spotted wilt risk.

The high N fertilizer rates used on vegetables, corn, and cotton leave many fields in south TX with significant N residue. Some growers also supplement with N during pod formation in hopes of increasing yields.

Due to the long drought, there was little deep moisture when the 2009 crop was planted in South TX. Continued drought and unrelenting heat forced more irrigation events to keep the pegging zone moist and somewhere below scorching temperatures. Vines responded with lots of growth. Low lying areas prone to stay wet have especially large vines.

Growers in the south should weigh the benefits of taller varieties with multiple disease resistance and advantages and disadvantages (including height) of high N on peanuts in this region. If seeding rates are very high, there may be room for some reductions that should reduce height. Hopefully next season will begin with good moisture in the soil profile and growers can tweak management to keep the lid on vine growth. For more information please contact me at 830-278-8151 or email: m-black@tamu.edu.

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