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Peanut Production Update

Well along with everything else that has happened this production season we are now seeing Southern blight show up in some peanut fields. Jason Woodward has put together a discussion on this disease and what to look for. On another note, there have been several questions on estimating yield in potential fields this year. One foot of peanut plants should be dug in several areas and the number of two kernel pods should be counted (only count two kernel pods or pods that have the potential to produce two kernels). This will be multiple kernel pods for Valencia. The total number of pods should be divided by the number of one foot sections that were dug. This number should then be calculated by the yield factor (listed in Table 1. for various row spacing's).

Remember this is an estimation of yield and not an actual predictor of yield. This allows producers to make potential inputs decisions (fungicides, water, etc.) but should not be considered a prediction of what each individual field will actually produce. I am usually not a big promoter of yield prediction estimates in any crop (peanut, cotton, or wheat for example). These generally have a tremendous "SWAG" factor involved. However, considering the extreme circumstances we are facing this year they may be helpful in making decisions on how to finish out this crop. If you have any additional questions about this year's crop call me at 940-613-1275 or e-mail me at todd.baughman@agnet.tamu.edu

Table 1. Yield prediction factors for various row spacing's.

Row Spacing (in)	Yield Prediction Factor			
	Runner	Virginia	Spanish	Valencia
30" rows	65	88	46	77
36" rows	54	73	38	64
40" rows	48	66	35	58

Example: 6, 1-ft row samples were dug from a runner peanut field planted on 40" rows.

Pods per foot of row X Yield Prediction Factor for Runner 40" rows = Yield Estimate

Number of 2 kernel pods in each sample were (92 + 94 + 76 + 88 + 97 + 89) = 536/6 = 89 average number of pods per foot of row

Yield Estimate = 89 X 48 = 4300 pounds/acre



Typical field symptoms of
Sclerotinia blight Southern blight.

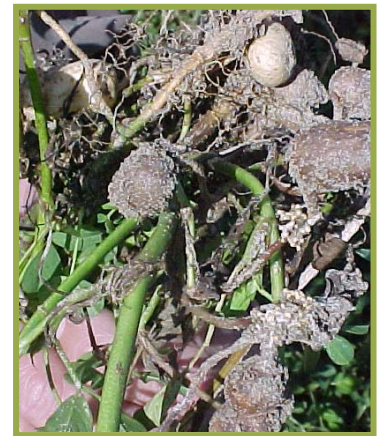


Jason Woodward,
Extension Peanut
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Peanut Disease Update

Things continue to be extremely slow on the disease front as far as peanuts are concerned. I have, however, been receiving numerous phone calls from consultants, industry representatives and producers regarding Southern blight. Southern blight or ‘white mold’, as the disease is referred to in the southeastern United States, is responsible for major yield losses. The pathogen that causes the disease (*Sclerotium rolfsii*) is widely distributed throughout the state and can commonly be found in peanut fields. In general, Southern blight is more prevalent in the southern part of the state and the Rolling Plains. All of the questions I have received to date about Southern blight have come from High Plains region. I have seen evidence of the disease in several fields during

recent trips that I have made through the region. Several things must be taken into consideration when determining treatment options. **First**, is there sufficient yield there to protect. The effects of the widespread drought have greatly impacted flowering, pegging, as well as pod initiation and development. To be blunt some of the peanuts may not be worth protecting. More importantly, however, is the level of disease. It is not uncommon to see sporadic occurrences of Southern blight in any given year. Fungicide applications made to protect against pod rot appear to suppress Southern blight. So there is the potential for increased incidence of Southern blight if pod rot applications were avoided due to the hot dry conditions; however, the level of Southern blight pressure I



Symptoms of Southern blight affecting pods below ground with no evidence of fungal growth on the soil surface. Note the ashy gray appearance.

“Several things must be taken into consideration when determining treatment options.”



Actively growing mycelia of *Sclerotium rolfsii*, causal agent of Southern blight. Note the profuse growth between stems and lateral branches and abundant production of sclerotia.

see on the High Plains is moderate at best. The most severe Southern blight I have seen this season is occurring under two scenarios 1) in areas where water is pooling due to a leak in the irrigation line and 2) in fields experiencing excessive fluctuations in soil moisture between irrigation events. Physically monitoring disease development is also important when considering fungicide applications. The majority of fields exhibiting symptoms of Southern blight show little activity of *S. rolfsii* in the lower canopy. When dealing with aggressive populations of the fungus, it is common to see the disease progress down long portions of the row; similar to what we see with

Sclerotinia blight (Figure 1), which is essentially non-existent this year. The appearance of the fungus in the lower canopy can be an indicator as to how the disease may develop. For example, if the fungus is actively growing with mycelium (the white moldy growth) bridging the space between plants (Figure 2), killing numerous plants and producing a large number sclerotia then there is the potential for yield loss. However, if the fungus is restricted to the crown area or a few lateral branches and relatively inactive then yield losses will not occur. When scouting for Southern blight, keep in mind that the fungus can also affect pegs and pods below ground with little

to no evidence of the fungus on the soil surface (Figure 3). Furthermore, there is a saprophytic fungus that resembles Southern blight that possesses no threat to yield or vine integrity. One way to differentiate the two is to closely examine the affected area. If the fungus is easily removed with your finger and the underlying tissue is not degraded then you are dealing with the 'tooth fungus' that will not affect yield. If you have any questions related to peanut diseases, feel free to give me a call at 806-632-0762 or send me an e-mail at jewoodward@ag.tamu.edu.

If you have any questions related to peanut diseases or any other peanut production issues contact Jason Woodward at 806-746-4053 or jewoodward@ag.tamu.edu or Todd Baughman at 940-552-9941 or ta-baughman@tamu.edu.



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