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PEANUT PROGRESS

In this issue

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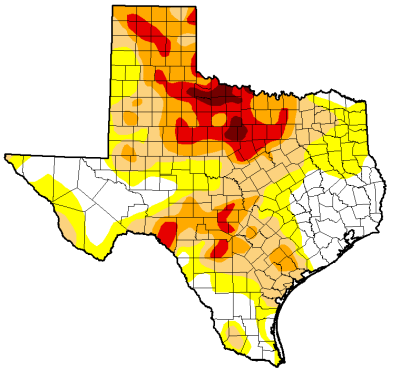
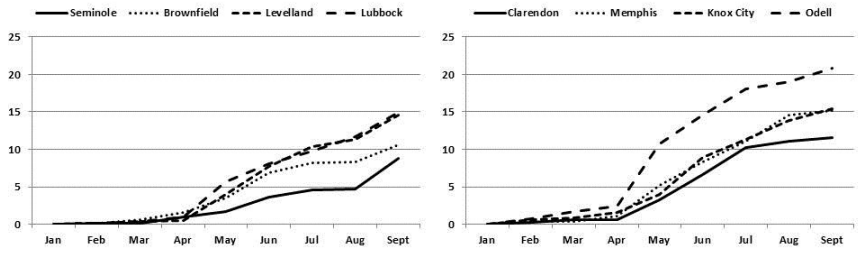
CURRENT PEANUT SITUATION

Widespread rainfall was received across much of the High Plains, whereas, rainfall was more sporadic or limited throughout other areas of the state. Areas in the High Plains received annual rainfall totals (or compared to recent accounts considerably more) over the past 2-3 weeks. For example, Lamesa (Dawson County) recorded approximately 6.5 inches of run to date in September with 0.33 inches falling on Sept. 20. Compare that to the 10 to 15 inches that fell on the same day in Gail (Borden County) roughly 30 miles away. When looking at the rest of the region rainfall totals of 6.8, 4.2, 7.5 8.6 inches were received in Brownfield, Denver City, Lubbock, and Seminole, respectively. Comparatively, areas in the Rolling Plains, such as Clarendon, Memphis and Seymour received 0.4, 0.8 and 1.5 inches, respectively (http://www.mesonet.ttu.edu/Sep14rain.htm). As a result, the current drought monitor for the High Plains is much improved (http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?TX). With these rains, total rainfall accumulations are at or well above average. Unfortunately, the slightly cooler than average temperatures and cloudy days that accompanied the rainfall mentioned above may have slowed maturity. In Lubbock, measurable rainfall was recorded for 12 consecutive days; however, skies remained overcast for a prolonged period of time despite temperatures rebounding somewhat. Overall, this rainfall has made final irrigation decisions easy; however, questions about when to dig peanuts are now being asked.



Current drought monitor for Texas as of 9/23/14.

"The current drought monitor for the High Plains is much improved "



Seasonal rainfall amounts for selected Texas Tech University Mesonet sites in the High and Rolling Plains of Texas as of 9/28/14.

TEXAS A&M AGRILIFE EXTENSION

CURRENT PEANUT SITUATION (cont.)

Assessing Pod Maturity

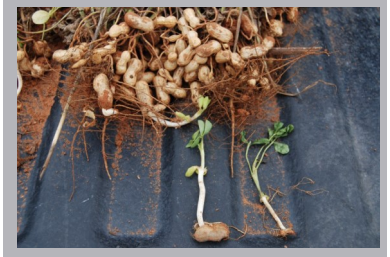
Determining maturity by categorizing pods based on color using a profile board.

As pods mature, the inside portions be-come brown to black, while immature pods retain a fresh, white appearance. The cellular layer just below the outer layer of the pod undergoes several color changes during the maturation process. It changes in color from white to yellow to orange to brown and finally black as the pod matures. This color distinction can be used to estimate crop maturity with the pod blast or hull scape methods. To get an accurate estimate of the field, collect three adjacent plants (about 1 foot of row) from three to five locations. The optimum time to dig peanuts is when they have reached peak yield and grade. Because of the indeterminate fruiting habit of peanuts, each plant will have pods of varying maturity. Consequently, the risk of losing early-set mature pods versus later-set immature pods must be considered, and a compromise must be achieved. Runner types should be dug at 70 to 80 percent maturity, Virginia types at 60 to 70 percent, while Spanish and Valencia types should be dug at 75 to 80 percent maturity. In addition to maturity, vine and pod condition needs to be considered when determining when to dig. Likewise, digging should only take place when weather forecasts are favorable and risk of rainfall or frost are minimal.

Pod blasting using a high pressure washer to determine maturity

Harvest related losses that occur due to declining vine and peg integrity may be addressed by making minor adjustments to diggers and combines. Studies conducted on the High Plains have shown that increases in both Valencia and Virginia yields can be achieved with later digging dates. In the aforementioned studies, yield reductions were only observed when vines were rained on while curing in the windrow. Another issue that is related to over-maturity is sprouting in the hull. This can occur when pushing shorter-season market types too hard. Sprouting in the hull may be more severe with high soil moisture and when soilborne diseases occur late in the season. ***JW***

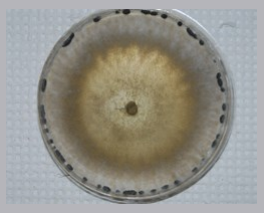
"Vine condition and peg integrity should be considered when making decisions on when to dig peanuts."



"Sprouting in the hull may be an issue related to over-maturity."

PEANUT DISEASE UPDATE

The weather conditions mentioned in the previous section (moderate temperatures, with rainfall and high humidity) are ideal for the development of Sclerotinia blight. There are two closely related fungi capable of inciting this disease (*Sclerotinia minor* and *Sclerotinia sclerotiorum*). With *S. minor* being more prevalent and aggressive. Isolations from samples submitted for diagnosis have recovered *S. sclerotiorum*. Although this fungus has been associated with the disease the overall and response of the fungus to fungicides are poorly understood. If you are dealing with *S. sclerotiorum* the same fungicides labeled for control fields with a history of pod rot have been treated previously this season. When considering making fungicide applications the opportunity for damage to occur, length of season, and pre-harvest intervals (PHI) should be assessed. For example if moderate amounts of disease are being observed late in the season, the potential to increase yields above and beyond the cost of the fungicide are limited. Furthermore, many fungicides labeled for Sclerotinia blight have a 14 to 30 day PHI.



Cultures of Sclerotinia minor (top) and S. sclerotiorum (bottom).

PEANUT DISEASE UPDATE (cont.)

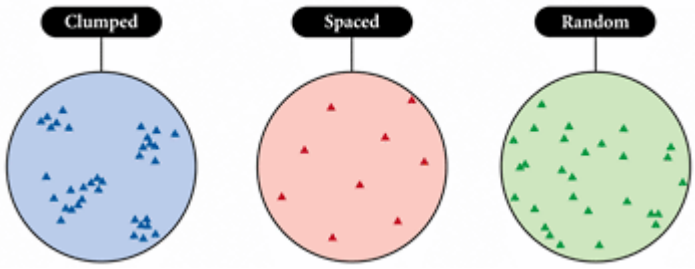
"The best time to access pod rot severity within a field is immediately after digging."

Symptoms of pod rot have been observed throughout much of the later part of the growing season. This disease complex is comprised of a number of different fungi including *Pythium* spp. *Rhizoctonia solani*, and *Thielaviopsis basicola;* however, the overall affect on peanut pods is similar (a dark brown to black discoloration). The best time to access pod rot severity within a field is after digging. Differences in Pythium and Rhizoctonia pod rot can sometimes be observed based on the appearance of the pods. Pythium is characterized by greasy, water-soaked necrotic lesions on the pod, whereas, Rhizoctonia has a more pronounced dry-rot appearance. Symptoms caused by *T. basicola* or black hull as the disease is commonly referred to, are more superficial and generally due not affect the kernels.

Characteristic symptoms of pod rot caused by Rhizoctonia solani.

Characteristic symptoms of pod rot caused by Pythium spp.

As anyone who scouts peanuts during the season will attest, the distribution of pod rot within a field can be quite sporadic. While the disease may be clumped in some areas, the random nature of where symptoms occur can limit ones ability to quantify severity of the disease. Arbitrarily or randomly choosing several areas within a field and estimating the percentage of infected pods can provide insight into the distribution of pod rot within a field. Likewise, assessments made during harvest operations (digging or combining) may also shed some light on disease severity and or distribution. Subsampling infested areas and scoring disease based on the severity of symptoms will provide additional information about the disease within a field. Although identifying infested areas within a field may be difficult, having a better understanding of problem areas within a field may be useful when scouting or treating subsequent peanut crops. ***JW***



Three potential distribution patterns of pod rot within a field.
Image: BioEd Online http://204.185.91.19/KHS/Teacher_Web/alternative/ecology.html

"Although identifying infested areas within a field may be difficult, having a better understanding of problem areas within a field may be useful when scouting or treating subsequent peanut crops. ."

Scoring of pod rot symptoms based on severity.

HOPE

Peanut Butter is a protein powerhouse. No wonder it's the most requested food by food banks. Help us spread the hope at peanutbutterforthehungry.org.

Peanut Butter for the Hungry

This newsletter is for you the producers and other members of the peanut industry. If you have any questions, comments or suggestions for the newsletter please contact Jason Woodward (jewoodward@ag.tamu.edu)

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