Volume 7, Issue 3

August 2013

PEANUT PROGRESS

In this issue

Jason Woodward,

Extension Plant Pathologist-State Peanut Specialist

"Final peanut acreage in the Southwest is still uncertain."

Current crop condition

Final peanut acreage in the Southwest is still uncertain. According to the USDA-NASS, Forecasted Peanut Area Harvested, Yield and Production report published Aug. 12 acres to be harvested are at 77,000. This is down from the 80,000 acre estimate provided in June. Estimated acres to be harvested in Oklahoma and New Mexico are 17,000 and 6,000, respectively. The complete report can be accessed at http://www.usda.gov/nass/PUBS/TODAYRPT/crop0813.pdf. While there is no doubt acres are down from the 145,000 harvested in 2012, these estimates appear rather low. In fact the FSA certified acres report, which was released Aug.15, indicated that approximately 111,000 acres of peanuts were planted this season. Whereas, certified acres for Oklahoma and New Mexico were consistent with NASS estimates.

Table 1. Summary of acreage of peanut market types planted in the southwestern United States

State	Runner	Spanish	Valencia	Virginia	Total
TX	30,325	28,094	15,453	37,372	111,244
OK	3,784	7,623	0	3,696	15,103
NM	790	697	2,780	1,809	6,076
Total	34,899	36,414	18,233	42,877	132,423

Production is concentrated in the High Plains (with Cochran, Yoakum and Terry Counties planting an average of 14,700 cares each and Gaines Co. planting 25,578 acres), followed by South Texas (Atascosa and Frio counties equaling 15,757 acres) and the Northern Rolling Plains (Collingsworth, Donley and Wilbarger counties totaling (12,085 acres). Crop conditions continue to surprise folk, undoubtedly due to rains that have occurred throughout the state, lessening the effects drought compared to earlier in the year (Fig. 1). **JW**

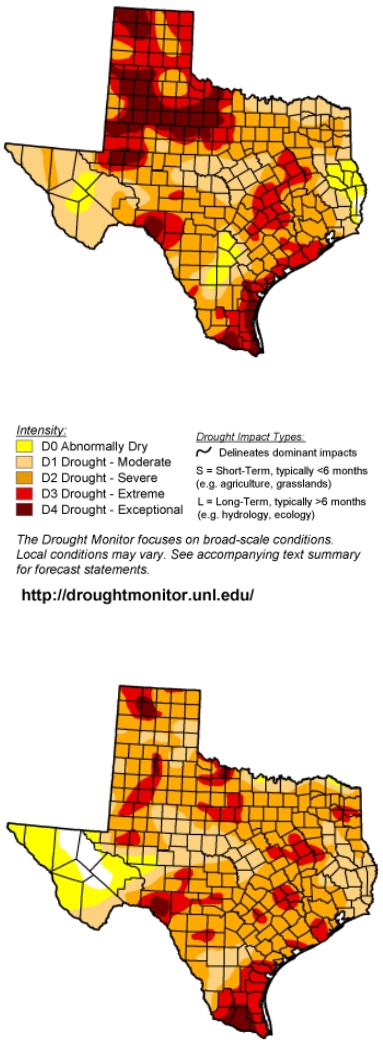


Figure 1. Comparison of drought conditions on July 13 (top) and August 22 (bottom).

TEXAS A&M AGRILIFE EXTENSION

Water requirements and estimating yield

While many producers may be thinking about shutting down irrigation systems to help mature their cotton crop, that tactic no advised in peanuts at this time. Research results from both Texas and Georgia indicate that stressing Runner peanuts now may be detrimental to yields, as water is still needed to fill developing pods. This is also true of Virginia-types as well. When considering Valencia- and Spanish-types, it may be necessary to determine if pods are fully developed, as these market-types can mature considerably earlier than Runner- and Virginia-types. If the crop is maturing at a steady rate, and moisture in the soil profile is adequate reductions in irrigation output may be an option. However, these decisions will be on a field by field basis and may require close observations to minimize stressful conditions at this time.

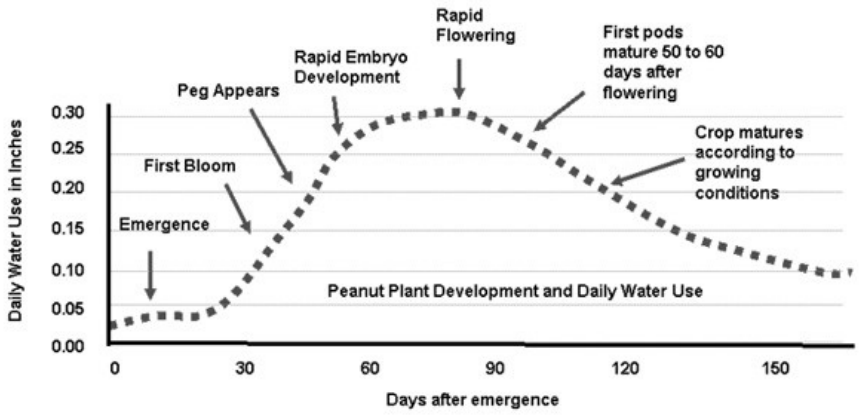


Figure 2. Daily water use of peanut (Adapted from the Texas Peanut Producers Guide).

"Research results from both Texas and Georgia indicate that stressing Runner peanuts now may be detrimental to yields."

With the crop looking as good as it does there is an increased interest in estimating pod yields. Although not an exact science, a method is available to help predict yields based on row spacing and market-type (Table 2). Yield estimates can help in making management decisions for the rest of the year. You will want to pull six, 1-ft segments of row throughout the field (to provide a good field average). **JW**

"Yield estimates can help in making management decisions for the rest of the year."

Table 2. Yield prediction factors for peanut market-types on various row spacing's

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

Example: six samples (1 foot of row throughout the field) were dug from a runner field which was planted on 40 inch rows:

Count the number of 2 kernel pods in each sample (i.e. 92, 94, 76, 88, 97 and 89). Add these numbers 536, and take an average 536 divided by 6 = 89. Plug this value into the following equation:

Yield estimate = Average number of pods / foot of row × Yield Prediction Factor for Runners on 40 inch rows (from Table 2)

Yield estimate = 89 × 48 = **4,300 pounds per acre**

Manada Anderson,

IPM Agent
Seminole

Scott Russell,

IPM Agent
Brownfield

Kerry Siders,

IPM Agent
Levelland

Monti Vandiver,

IPM Agent

"Insect pressure in peanuts on the High Plains is light to non-existent."

Accessing insect damage

When it comes to insects things are fairly quite throughout the High Plains. According to Texas A&M AgriLife Extension, IPM agents (Manda Anderson, Seminole; Scott Russell, Brownfield; Kerry Siders, Levelland; and Monti Vandiver, Muleshoe) insect pressure is light to non-existent. While there are moths abundantly present in peanut and cotton fields, they are mostly the adult stage of a smartweed borer. These insects look similar to adult bollworms or even armyworms; however, they are only transient and are not injurious to field crops. Subtle differences in size and anatomical features can be used to differentiate each species. The host range for this moth consists primarily of weeds, such as cocklebur, ragweed, cat-tail and lamb's quarter. Flushes of weeds following recent rains provide lush habitats which support populations.

Figure 3. Photo of an adult smartweed borer (moth).

Other worms or lepidopteron pests, can be found in peanuts, but well below thresholds.

Figure 4. Grasshopper nymph.

Peanut plants can tolerate large amounts of damage caused by foliage-feeding insects. Plants are more sensitive to damage 60 to 90 days after planting. Thresholds may vary by market-type due to differences in canopy density and architecture, as Runner-types have more leaf area than Spanish-types. As a general rule, irrigated Spanish peanuts can tolerate approximately six to eight medium-to-large larvae per linear foot of row before yield losses may occur; whereas, Runners can tolerate even greater amounts of feeding without experiencing any reductions in yield. These thresholds may be reduced if feeding is observed on peg. Likewise, peanuts can sustain high levels of damage due to grasshoppers, with no to little effect on yield. If treatments are warranted, numerous products are available for use in peanut (Table 3). The effectiveness of applications will vary based on the size of the pest, where higher rates may be required if dealing with large worms or adult grasshoppers. When applying insecticides, it is important to consider the impact applications will have on beneficial insects (for specific information refer to the respective pesticide label), as issues with other pests, such as spider mites may develop. A few reports of spider mites have been in parts of Gaines county; however, they are sporadic in nature and have not required treatment. **MA, SR, KS, MV and JW**

Table 3. Insecticides labeled for use in peanut for foliage-feeding insects

Insect	Insecticide	Product Rate/Acre	Days to Harvest	Grazing and Hay Use
Armyworm (various species), cutworm, corn earworm, grasshopper	Asana XL[a]	5.8 – 9.6 fl oz	21	No
	Karate Z[b]	0.96 – 1.92 fl oz	14	Yes
	Lannate L	1 – 2 pt	21	No
	Orthene 75S[c]	1 – 1 1/3 lb	14	No
	Sevin 80S[b]	1 1/4 - 2 1/2 lb		Yes
	Steward	9.2 – 11.3 fl oz	0	Yes
	Tracer	2 – 3 fl oz	14	Yes

[a]Do not exceed 0.15 lb. of actual insecticide per acre per season. Resistance may develop.
[b]See label for specific rates.
[c]For grasshopper control, use 1/3 – 2/3 lb/acre.

Disease update

As with the insect update, things are relatively quiet when considering peanut diseases. As mentioned in the previous issue of *Peanut Progress*, Sclerotinia blight has been observed in a few fields with a history of the disease. Additional cases have been reported within the past 2-3 weeks and have been treated accordingly. There is also an increase in the occurrence of Verticillium wilt. This disease is quite common throughout the High Plains, as it is one of the most wide spread diseases that affects cotton. The disease can be routinely found in parts of the Rolling Plains, predominantly the northern panhandle (such as Armstrong, Collingsworth and Donley counties). Verticillium wilt is caused by the soilborne fungus *Verticillium dahliae*. Once a field becomes infested, the pathogen is capable of surviving in the soil for many years as microsclerotia. These specialized structures germinate in response to root exudates and serve as initial inoculum. The fungus establishes itself on the root surface, penetrates the root, progresses through the vascular system, clogging these tissues, and ultimately resulting in plant wilting. Infections occur early in the season; however, symptoms are most evident during pod set. Leaves of infected plants are pale green, have mottled appearance, and die from the leaf margin inward (Figure 5). These symptoms may be confused with damage caused by poor water quality. Close examination of the vascular system will reveal severe discoloration of the tissue (Figure 6), which can be used to diagnose Verticillium wilt. Adequately watered plants may maintain a healthy appearance; however, excessive watering may lead to an increase in disease. A s the disease progresses the branches of infected plants deteriorate. As a result, plants may be dug prematurely, thus negatively impacting yield and grade. There are currently no effective fungicides for use against Verticillium wilt. Research trials are being conducted to evaluate the performance of cultivars of different market-types in fields with a history of the disease.

Figure 5. Initial symptoms of Verticilium wilt on peanut foliage.

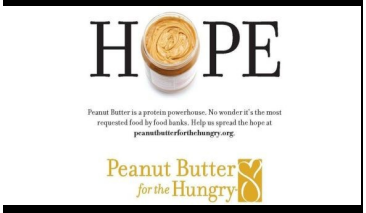
Figure 6. Vascular discoloration associated with Verticilium wilt (arrows).

In areas where leaf spot continues to be a problem, producers have asked questions regarding rainfastness of fungicides such as Abound, Bravo, Folicur and Provost. In general, fungicides require drying times of 6-9 hours before receiving rainfall or applying irrigation. This allows the products to dry and be absorbed into the leaf. There a quite a few things that cause lesions of leaves, which resemble leaf spot. When diagnosing leaf spot lesions are predominantly circular unless several lesions on a single leaf coalesce (Figure 7). A close examination of the upper or lower leaf surface will reveal sporualtion of the early or late leaf spot pathogens, respectively. Microscopic evaluations may be warranted. **JW**

Figure 7. Sporulation of a single (left) and multiple (right) leaf spot lesions.

"Research results from both Texas and Georgia indicate that stressing Runner peanuts now may be detrimental to yields."

"In general, fungicides require drying times of 6-9 hours before receiving rainfall or applying irrigation."



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)

WE ARE ON THE WEB:

1102 East FM 1294
Lubbock, TX 79403-6603

806.746.6101 office
806.632.0762 cell
806.746.4056 fax

http://peanut.tamu.edu

Newsletter sponsored by:

Peanut Progress — Volume 7, Issue 3 AUGUST 2013

TEXAS A&M AGRILIFE EXTENSION

1102 East FM 1294
Lubbock, TX 79403-6603

806.746.6101 ph
806.746.6528 fax

http://peanut.tamu.edu