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PEANUT PROGRESS

In this issue

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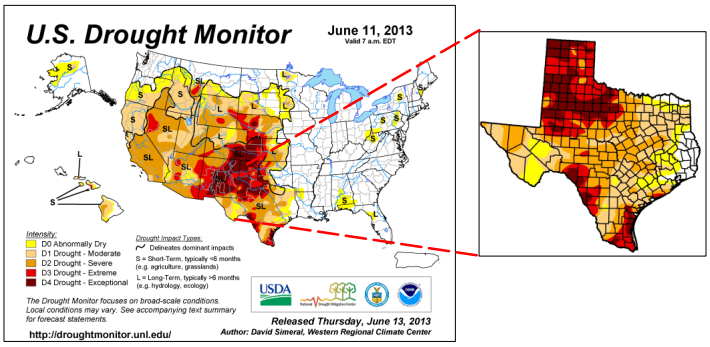
Current Peanut Situation

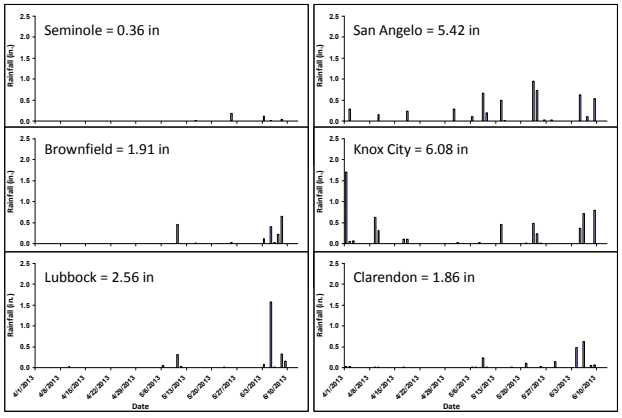
From freezing temperatures on May 5 to hail and high winds on June 5, with 100+ degree temperatures in between, this year's peanut crop on the High Plains has seen some wild conditions. Despite some rainfall that has occurred throughout parts of the region, much of the High Plains and Rolling Plains continue to be plagued by drought conditions. According to the USDA Drought Monitor (http://droughtmonitor.unl.edu) approximately 9% of the state of Texas is classified as being in the exceptional stage (D4), much of which encompasses areas where peanut production occurs.



When considering rainfall, there are a few bright spots with regard to accumulation. Unfortunately, far western portions of Gaines County have received essentially no rain (0.36 inches since April 1, according to the West Texas Mesonet Station located 2 miles NNE); however, higher rainfall amounts have been recorded to the east, such as Terry (Brownfield, 1.91 inches) and Lubbock (Lubbock, 2.56 inches) counties. Off the Caprock, areas such as San Angelo and Knox City have recorded rainfall totals of 5.42 and 6.08 inches, respectively. In Clarendon (Donely County), several hail events accompanied the rainstorms responsible for the 1.86 inches of rain since April 1.

Likewise, hail was responsible for damaging some peanuts during the widespread storm that occurred on June 5. Such weather has spurred questions about hail damage effects on peanut. Don't give up on hail

Total rainfall from April 1 to June 11 for six West Texas Mesonet locations.



"When considering rainfall, there are a few bright spots with regard to accumulation."

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Current Peanut Situation cont.

unlike cotton peanut can recover from an excessive amount of defoliation. In studies simulating hail damage, runners that were defoliated over 90% at early bloom experienced yield reductions in 1 of 3 years, and yields under those circumstances were over 3500 lb/A. Most hail damage was minimal and plants were able to recover. If growing conditions cooperate, the affects of such damage on yield will be minimal.

Simulated hail damage affecting plant stands.

While most fields are up to a good stand, there are still remnants of delayed establishment. While marginal soil moisture was most likely the culprit, several other factors, such as seed vigor, extreme weather conditions, planting depth and density, soil temperature, starter fertilizers and/or herbicide carryover may have contributed to this problem. Vigor is the component of seed quality responsible for rapid and uniform emergence under a range of conditions. In general, peanut has good seedling vigor; however, differences can be observed among varieties. Low vigor seed will exhibit a delay in stand establishment. Harsh conditions, such as temperature fluctuations and high winds, resulting in blowing sand slowed growth in some cases. Damage due to blowing sand was greatly reduced in fields where peanuts were planted into an existing cover crop, such as wheat, rye or existing cotton stalks.

Healthy peanut planted into existing cotton stalks, providing protection from blowing sand.

Furthermore, the dry conditions experienced over the past few months may have led to an increase in herbicide residues, as moisture to dissipate such products or promote microbial degradation was lacking. Furthermore, cool temperatures experienced after planting may have greatly reduced growth, thus extending exposure to herbicides (especially yellow herbicides). This in conjunction with dry conditions in lower portions of the soil profile may have exacerbated problems that are seldom experienced under normal growing conditions.

Regardless of the cause of stand issues, peanut has a tremendous ability to compensate for less than ideal stands and maintain high yield potential. As peanuts are transitioning from a vegetative stage into reproductive stages (i.e. bloom and pegging) close attention should be paid to the water demand of the crop. Irrigation should be applied to foster humidity levels within the canopy needed for pollination, moisten the soil for pegs to penetrate, and replenish what is needed to cool the plant and maintain growth and development. **JW**

Reduced stands resulting from yellow herbicide damage.

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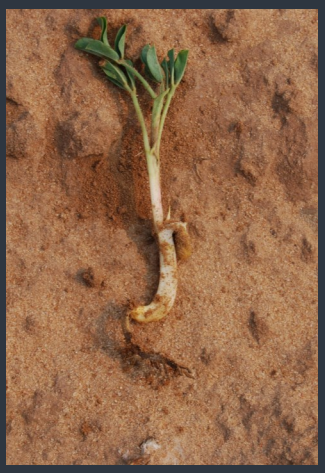


Symptoms of chilling injury (curling) and yellow herbicide damage (necrosis and bottle-brushing).

Mid-season weed control in peanut in the Texas

Peter Dotray, Weed Scientist

and

James Grichar, Research Scientist

"One major disadvantage of some herbicides is a long rotation restriction following application"

Peanut fields seem to be off to a favorable start with good stands and good early-season weed control. Preplant burndown herbicides **(Gramoxone Inteon, Roundup),** applications of dinitroaniline herbicides (**Prowl, Sonalan,** or **Treflan)** preplant incorporated, and the use of herbicides at-planting (**Valor, Dual Magnum, Parallel)** have been very effective. We would expect that this early-season success will start to give way to weed escapes very soon, so the next weed management strategy will be needed soon in order to achieve mid- to full-season weed control. Overlapping residual herbicides can be achieved by applying Dual Magnum. This treatment is effective at controlling weeds that emerge after the initial soil residual herbicides have "played out". We are aware of several growers who have been effective using this strategy. Do not apply more than the equivalent of 2.67 pounds of active ingredient of Dual Magnum per acre during any one year (1.33 pts followed by 1.33 pts). Do not use Dual II Magnum or Dual IIG Magnum after peanuts have emerged. Please see the Dual Magnum label for tank-mix options and other important information and restrictions. Some Dual Magnum tank-mix combinations state that applications must be made prior to peanut pegging.

Basagran, Cobra, and **Ultra Blazer** are options for use *early-* to *mid-postemergence*. Basagran has activity on common cocklebur, annual sunflowers, and yellow nutsedge, whereas, Ultra Blazer and Cobra are effective on Palmer amaranth, annual morningglory, and other annual broadleaf weeds. Weed size and "health" can significantly impact the efficacy of these "contact-type" herbicides. As weed size increases, the activity of these products will decrease. These herbicides do not have soil residual activity, so thorough spray coverage is important. We have seen some fields where Cobra has already been applied and the weed control following applications was very good. Expect some leaf burn following this herbicide treatment, but this burn has been shown to only be cosmetic. **Storm**, a prepackaged mixture of Basagran and Ultra Blazer, may be used to control a wide range of small and actively growing annual broadleaf weeds. All of these herbicides need a spray additive (e.g. a crop oil concentrate) for maximum herbicidal activity. Herbicide options to control grassy weeds include **Select, Arrow, Shadow** (both are generic Select), **Poast Plus**, and just recently, **Fusilade.** Restrictions with Fusilade include no more than 24 oz per application with a total for the growing season not to exceed 48 oz., maintain at least 14 days between applications, do not feed green immature growing plants to livestock or harvest for livestock feed, and do not harvest peanuts within 40 days of last application.

Cadre, Impose (generic Cadre), and **Pursuit** have good activity on many annual broadleaf and grass weeds, and nutsedge. These herbicides primarily control broadleaf weeds and nutsedge species but will provide some annual grass control if the application is made when the grasses are less than 1 inch tall. These herbicides have good foliar activity and also have activity through the soil. One of the major disadvantages of these herbicides having soil activity is the 18-month rotation restriction following application before cotton and grain sorghum may be planted. 2,4-DB (**Butyrac or Butoxone**) is also a good option for postemergence weed control in peanut, but extreme care must be taken when using this herbicide. 2,4-DB has good activity on most annual broadleaf weeds including morning-glory , sunflower, larger tough-to-control weeds, such as silverleaf nightshade (whiteweed). The use of crop

Mid-season weed control cont.

of crop oil with 2,4-DB will increase activity, but crop oil also will enhance phenoxy-type injury to peanut. Typically, this type of injury (plants just 'lay down') can be seen for 2 to 3 days but peanut plants recover quickly and no yield reductions have been noted. 2,4-DB may be tank mixed with other herbicides such as Cobra or Cadre to broaden the spectrum of weed control and also to aid in control of taller weeds. Proper tank clean out and drift reduction must be a priority when selecting this herbicide. Or better yet, designate a separate sprayer for use of all phenoxy-type herbicides.

Because we know there are glyphosate-resistant Amaranthus species in Texas, we have an excellent opportunity to control these populations in peanut in 2013 because of the diversity of herbicide "modes of action" that are available. Any field where glyphosate resistance is suspected, weed escapes need to be controlled to help contain these populations. We are currently testing several "new" herbicides in peanut in several research experiments in 2013. Stay tuned for some additional herbicide options in the upcoming years. **PD** and **JG**

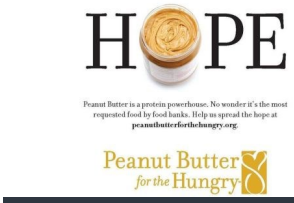
Assessment of nodulation

As growth and development will increase over the next several weeks, now is the time to assess nodulation and consider the need for supplemental fertilizer. Poorly inoculated fields will appear yellow 30-40 days after planting. Nodulation can be determined by using a shovel to uproot ten plants and counting the number of nodules per taproot. Nodules located on lateral roots are indicative of resident bacterial populations and contribute less to nitrogen fixation. The inside of active nodules appear pink to dark red. Immature nodules will have a cream to white color and should be reassessed in 7 to 10 days; whereas, inactive nodules are gray to black and appear mushy as they degrade. An average of 15 nodules is adequate, less than 10 is marginal and less than five indicates poor nodulation. Low nodule counts may require the application of supplemental nitrogen; therefore, soil tests may be required. Always follow test recommendations and avoid over-fertilizing. Limit side-dress nitrogen applications to less than 50 pounds per acre, as this may exacerbate soilborne disease issues, such as pod rot or

Adequate nodulation on the taproot (left) and view of a healthy nodule (right).

"The inside of active nodules appear pink to dark red."

"An average of 15 nodules is adequate, less than 10 is marginal and less than five indicates poor nodulation. "



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

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