

SPECIAL
POINTS OF
INTEREST:

- Replanting Peanut Options
- Early Season Weed Control
- Rhizobium Nodulation Assessment



Peanut Progress Report

VOLUME 2, ISSUE 2

JUNE 12, 2008

Peanut Production Update

*Jodd Baughman -
Extension Peanut
Agronomist*

There are a lot of concerns about the current peanut crop, especially in regards to wind and weather damage. Last week we addressed hail damage and stand reduction effects on yield. Fortunately for us peanut are a very resilient crop and can rebound from a fair amount of damage especially when compared to other crops. There has been some discussion about replanting heavily damaged crops. It is extremely late to plant or replanting runner and Virginia peanut since we are

looking at 150 to 170 days to maturity depending on the year (West Texas). This would put harvest at early November which is



Healthy Peanut Plant

pushing us into issues with freeze damage which can extremely reduce the value of our peanut. During the 2004 through 2006 growing season Pete Dotray did some work looking at re-

planting Spanish peanut behind hailed out cotton. In these studies OLin Spanish variety was planted the first week in June. Averaged over those three years yields were around 3000 lbs/A. Also there was no advantage to reworking the beds versus planting into the existing beds. Growers need to read labels to determine replanting options based on herbicides already applied. In addition, as we delay planting yields most like will be decreased as well. If you have any other issues please give me a call @ 940.552.9941 ext. 233 or by e-mail: Tbaughma@ag.tamu.edu.

Early-Season Weed Control in Peanut 2008

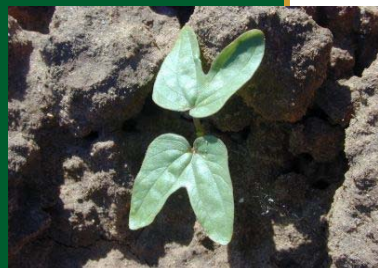
*Peter Dotray -
Extension Weed
Specialist*

One of the keys for successful weed management is early-season control. Peanut fields must be kept clean for the first 4 to 6 weeks in order to maximize yields. To date, this has

been accomplished by several methods : 1) preplant burndown herbicides or tillage before planting, 2) preplant herbicides (**Prowl, Sonalan, Treflan**) followed by incorporation (either mechanical or irrigation), 3) preemergence herbicides (**Valor, Dual Magnum (Parallel)**), and **Strongarm** in labeled areas of the

state), and 4) **Gramoxone Inteon (Firestorm, Parazone)** from ground crack to 28 days after cracking. Success of preplant herbicides is largely based on thorough incorporation, while success of preemergence herbicides is based on rainfall or irrigation to activate these herbicides. I have been

Early-Season Weed Control - Cont.



Ivyleaf morningglory seedling

“However, the residual activity may not last much longer and additional postemergence herbicides may be needed.”

with both Valor and Dual because the soil residual activity has been very good. However, the residual activity may not last much longer and additional postemergence herbicides may be needed.

There are several herbicides labeled for use postemergence in peanut. **Cadre (Impose)** and **Pursuit** have good activity on many broadleaf and grassy weeds, and nutsedge. Both of these herbicides have an 18-month rotation restriction following application before cotton and grain sorghum may be planted. I have seen grain sorghum injury this year from applications of Cadre or Pursuit made in 2006. The development of weed resistant to Cadre and Pursuit has become a bigger concern across the peanut belt over the past few years. Susceptible weeds that appear more and more tolerant year after year may be a sign that weed resistance may be present. The use of herbicides with different modes of action is a key to delay/prevent the development of herbicide-resistant weeds.

Basagran, Ultra Blazer, and **Cobra** may also be used postemergence in peanut. Basagran has activity on cocklebur, wild sunflowers, and yellow nutsedge. Ultra Blazer

and **Cobra** are effective at controlling Palmer amaranth, annual morningglory, and other small-seeded annual broadleaf weeds. Activity from these weeds will quickly decrease as weed size increases and these herbicides do not provide residual weed control. **Storm**, a prepackaged mixture of Basagran and 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 (crop oil) for maximum herbicidal activity. In general, these herbicides are effective on a broad spectrum of broadleaf weeds that are up to 4-inches in height. Herbicide options to control early-season grass weeds include **Select (Arrow, Shadow)** and **Poast Plus**.

2,4-DB (**Butyrac** or **Butoxone**) is also an option for use postemergence in peanut, but extreme care must be taken before this herbicide is chosen. This herbicide has good activity on several annual broadleaf weeds including morningglory and sunflower. 2,4-DB plus crop oil will cause typical phenoxy injury to peanuts, but previous research suggests this injury will not result in yield losses at the end of the season. The use of a crop oil with 2,4-DB may

also increase the activity against taller, hard to control weeds. 2,4-DB may be tank mixed with other herbicides to broaden the spectrum of weeds controlled. The dominant issue with using 2,4-DB in west Texas is cotton injury. Adjacent cotton fields are exceedingly susceptible to 2,4-DB drift. Tank contamination should also be an important concern when the same equipment is used in both peanut and cotton production.

Dual Magnum and **Outlook** are preemergence herbicides that may also be used postemergence followed by rainfall or irrigation for residual weed control and to decrease the potential of crop injury following application. Peanut injury has been noted with Dual Magnum when the herbicide has been applied preplant incorporated or preemergence on sandy soils followed by high rainfall (2 to 4 in) within 3 to 6 days after planting. Dual Magnum and Outlook have good activity on annual grasses and small-seeded broadleaf weeds, but must be applied prior to weed emergence or emerged weeds must be controlled by tank-mixing with another POST herbicide. Activity on yellow nutsedge has been observed when these herbicides are applied POST to peanut, but acti-

Early-Season Weed Control - Cont.

vation shortly after herbicide application (within 24 to 36 hrs) by rainfall or irrigation is necessary for effective control. Dual Magnum must be applied postemergence to yellow nutsedge not taller than 6 to 9 inches to be ef-

fective. If the nutsedge is any taller, another herbicide such as Basagran must be added to control the existing nutsedge. Also, herbicide incorporation with irrigation must be delayed 4 to 6 hr to

allow the Basagran to be translocated into the plant.

Contact Pete at 806.746.6101 with any of your weed control questions.

Mid-Season Assessment of Rhizobium Nodulations

**Calvin Frostle -
Extension Agronomist**

Note: The following comments address field observations in particular for the Texas High Plains peanut production region.

We are approaching the time in mid-June after planting in the Texas High Plains when peanut growers should check their taproot *Rhizobium* nodulation. Scouting 5 to 6 weeks after planting assesses early nodulation in advance of decisions about applying mid-season N, and if so, how much N. This is particularly important with N prices so high.

Use a shovel to dig plants from different rows and field locations. If nodulation is deemed poor, nothing can be done to increase nodulation in the current crop. In West Texas 20 to 25% of fields annually may be undernodulated, or worse, have only a few nodules per plant. Poor *Rhizobium* nodulation calls

for supplemental N to achieve desired yield potential. This is why early scouting is recommended. We need to know which fields are not nodulating early in the cropping season.

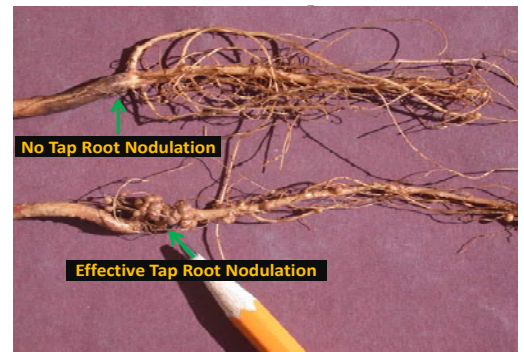
Extension assessment of many peanut fields in the Haskell and Comanche Co. areas as well as south Texas typically have nodules all over the lateral roots suggesting the source of *Rhizobium* is native to the soil. These lateral root nodules are in contrast to the masses of nodules you hope to find on the taproot, i.e. evidence of inoculant application. Nodules on the lateral roots, though often high in number (i.e., hundreds per plant) tend to be less active and may not be fixing N for your peanut crop.

Active nodules are pink to dark red inside. If nodules are white inside they are not yet active—check again in 7-10 days. Nodules no longer active are black, gray, and may be mushy—you will see

a few of those nodules starting in late July. Nodules which never turn pink or red inside are from soil *Rhizobium* that may not be specific for peanuts. You need to differentiate these types of nodules, mostly on the lateral roots, versus the mass of 'supernodulation' on the taproot, which is ready evidence that your inoculant worked.

For West Texas, the following guideline rates nodulation levels 5 to 6 weeks after planting. We are particularly interested in any developing clusters of nodules on the taproot. If early nodulation is good, you can expect it to continue to increase toward peak nodulation (usually early August), but if early nodulation is poor it probably isn't going to improve.

"In West Texas 20 to 25% of fields annually may be undernodulated"



Improving Lives. Improving Texas.

Newsletter is sponsored by:



**Texas Peanut
Producers Board**



Early season *Rhizobium* nodulation rating for peanuts (Texas High Plains).

| Early-Season Nodulation Rating | Nodules per plant | Management Consideration |
|--------------------------------|-------------------|--|
| Excellent | >20 | Likely excellent late-season nodulation N response doubtful |
| Very Good | 16-20 | Late-season nodulation also strong Reduce mid-season N goal |
| Good | 11-15 | Will produce good crop Anticipate some reduction in mid-season N |
| Fair | 6-10 | Would have liked higher nodulation Mid-season N program a decent bet |
| Poor | 0-5 | May be background soil <i>Rhizobium</i> only N fertility program essential Try to determine why nodulation is poor if field was inoculated |

In the above situation, as an example, a producer intends to apply 80 lbs. N/acre mid-season. But if early signs suggest that nodulation is very good, this producer would have good reason to reduce target N application by up to 50%. It has been

well documented that high levels of early season N, even moderate levels as low as 30 lbs. N/acre can reduce nodulation in a peanut crop. Higher mid-season N levels also can curtail *Rhizobium* N production as the plants are 'lazy' and take fertilizer N

instead of fostering the desired relationship with the bacteria to give you 'free' N. If you have any additional questions contact Calvin at Texas A&M - Lubbock, (806) 746-6101, ctrostle@ag.tamu.edu

Educational programs of the Texas AgriLife Extension Service are open to all people without regard to race, color, sex, disability, religion, age, or national origin.

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.