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T-Y IPM News

Terry - Yoakum Pest Management Association

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Current Situation:

Generally we are waiting on crops to mature. Cotton producers are making plans for the use of harvest aids, awaiting enough maturity. Valencia peanuts are being dug and some thrashing has started. Runner and Virginia peanuts have seen significant increases in foliar disease and the pod rotting complex since rain fell September 10-12. Several grain sorghum fields are ready to harvest and others have finished blooming. Those recent rains should provide enough moisture for sorghum to finish out.

The *High Plains and Rolling Plains Cotton Harvest-Aid Guide* has recently been updated. I will include some excerpts in this newsletter and the **Harvest-Aid Decision Tables** from that guide will be included in this mailing. For the complete *2008 High Plains and Rolling Plains Harvest-Aid Guide* please go to the TAMU Lubbock web site: lubbock.tamu.edu.

Peanut foliar diseases are increasing in their severity. The spread of these diseases is a function of leaf wetness. That is, the length of time a leaf is wet during any 24 hour period. At present the heavy dew is a significant factor in this. If leaf spot, web blotch or pepper spot is causing defoliation in a field and that field needs another 3 weeks or more to mature, it would likely be wise to apply a “rescue” treatment. Remember, fungicides do not remediate infection, but rather protect uninfected foliage. See the *Texas Peanut Production Guide* for a listing of suggested fungicides.



Early leaf spot of peanut usually produces fungal growth and spores on the upper leaf surface.

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Cotton Harvest-Aid Considerations

Proper harvest-aid product selection, tank mix partners and rates vary with environmental and crop conditions. What works best in one year is not necessarily the best for the next season. Efficacy of harvest-aid chemicals is always a concern. There are several factors that affect the performance or lack of performance of harvest-aid chemicals.

Some factors that increase the performance of harvest-aid chemicals include the following:

- Warm, calm, sunny weather
- Soil moisture relatively low but sufficient to maintain cotton plant in active growth condition without moisture stress
- Soil nitrogen levels relatively low
- Leaves active and uniformly expanded on plants
- Little or no secondary growth evident on plants
- Plants with a high percentage of open bolls that have shed some mature leaves

Conversely, some of the factors which negatively affect harvest-aid chemical performance include:

- Applications made under cool (below 60°F), cloudy conditions
- Prolonged periods of wet weather following treatment
- Plants in vegetative growth state with low fruit set
- Plants severely moisture stressed with tough, leathery leaves at time of treatment
- High soil moisture and nitrogen levels which contribute to rank, dense foliage and delayed maturity
- Plants exhibiting secondary growth (regrowth) following a "cutout" period
- Improper calibration of application rates and poor spray coverage

APPLICATION CONSIDERATIONS

In general, the yield and condition of the cotton should determine the type of harvest aid product chosen. If the leaves are beginning to shed and have reddish to purple pigmentation present, they will be easier to drop off the plant without excessive "leaf stick." "Sticking" occurs when the leaves do not drop and are frozen on the plant. The natural abscission layer forming process at the base of the leaf petiole is abruptly halted by physiological stress such as a freeze or desiccant application. Some cotton varieties do not readily form abscission layers even on older leaves and may not defoliate properly. If the leaves "stick," then lint quality can be reduced due to increased leaf content in the fiber. Drought-stressed leaves generally have a much thicker waxy cuticle on the surface. This can considerably affect harvest-aid performance.

Cotton secondary growth (or "regrowth") sometimes occurs after the plants have "cutout" or stopped blooming due to drought stress or physiological maturity. If warm temperatures and rainfall are encountered at that time, the cotton plant growth cycle can start again, and one can find secondary growth in the terminal and on many of the other nodes on the plant. Plants with unopened bolls or young, developing bolls are less likely to produce secondary growth, although application made at this stage can result in reduced lint quality and yield. Secondary growth is difficult to control since young foliage does not form abscission layers or shed as older leaves do. **Research has shown that, in general, the PPO inhibitor harvest aid chemicals tend to produce more favorable results for controlling regrowth.**

Proper spray volume and coverage are also critical to the success of a harvest-aid program. Be sure to calibrate the sprayer to deliver the correct volume and nozzle pressure to ensure adequate distribution and foliage penetration.



Looking forward to a good harvest.

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