



Arkansas Corn and Grain Sorghum News

Jason Kelley - Wheat and Feed Grains Extension Agronomist
Scott Monfort – Extension Plant Pathologist

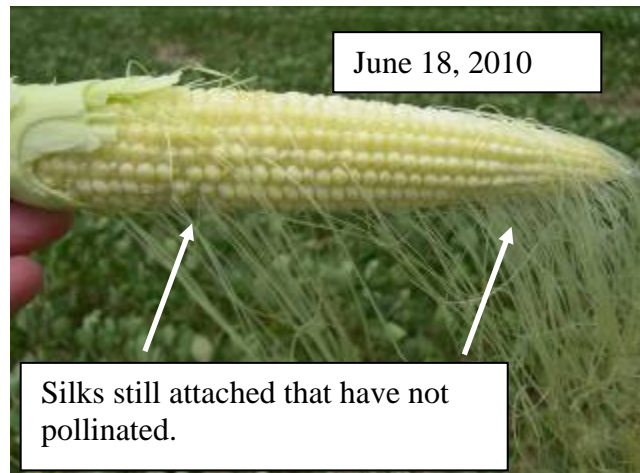
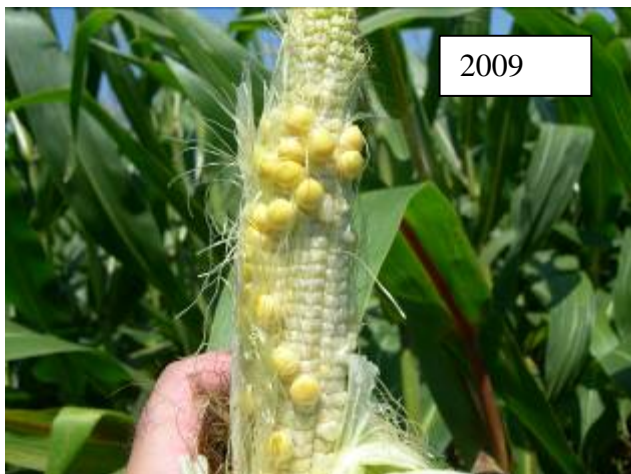
June 21, 2010

The June 21st Arkansas Agricultural Statistics Service crop progress report reflects what we are seeing in the field – that the corn crop is progressing ahead of schedule in many areas of the state. As of June 21, 81% of the crop had silked compared to only 38% in 2009 and only 52% for the five-year average. Good planting conditions and warm weather early in the season helped us get off to one of the best starts that we have had in the last couple years. However, the hot, dry weather is taking a toll. Temperatures this week are forecasted to be near 100 degrees with little chance of rain.

The Impact of Hot, Dry Weather on Corn Crops – Jason Kelley

Maintaining irrigation is difficult, but the recent heat and lack of rainfall has made it even harder to keep up with crop water demand. Many producers are irrigating corn, cotton, rice, soybeans (or watering them up), and ultimately all of these crops need water at the same time. **Corn is very sensitive to drought stress at silking, and not properly irrigating now will likely come back to haunt you later in the season.**

If you remember last year, we experienced a hot, dry stretch in mid to late June during silking. Fields that were properly watered had very little pollination problems. However, fields that had significant drought stress at silking resulted in poor pollination, which resulted in disappointing yields, to say the least. This year there is potential for the same scenario in many fields, especially those that are currently silking. **A lack of water at silking is more detrimental than the high temperatures.**



Fields that are pivot irrigated are especially difficult to keep watered under these conditions. Keep pivots running (don't shut down after one turn). Furrow-irrigated fields will need to be closely monitored. **On**

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furrow-irrigated fields, water every row middle. Watering only once a week will most likely not be enough. Depending on slope, soil type, etc., watering every three to four days may be needed.

Foliar Disease Update in Corn in Arkansas – Scott Monfort

The 2010 season has been hot and dry for the most part. The majority of early planted corn is now at or beyond silking, with little to no disease pressure. This is not to say there are no corn fields with disease problems. I have talked with several growers and consultants in the southern part of the state that had to treat some fields for Northern Corn Leaf Blight and Gray Leaf Spot. This was largely due to growing corn after corn and/or growing a susceptible hybrid. This is the year where scouting your crop could save you a fungicide application. Please **do not** make an automatic fungicide application under the current hot and dry conditions without scouting your fields first.

The corn acres I am most worried about is the later planted corn. For these acres, foliar diseases still have potential to develop and impact yield. However, this will depend on weather conditions and disease. Southern Rust is another reason for concern in the later planted corn. **Southern rust is active in Louisiana** and could move in the state at any time. With this in mind, **please scout your crop** and apply fungicides where you have disease or potential for disease to impact your crop. I will continue to update you on the disease issues in corn as they change.

I would also like to comment on the use of **Aflaguard**. We are continuing to evaluate this product for its potential to reduce aflatoxin in our corn crop. For this reason, I cannot comment on how well this product will work in Arkansas. However, I am familiar with Aflaguard in peanut, and it does have the ability to reduce the production of the toxin. I would recommend growers in Arkansas to concentrate on acres that cannot be watered regularly or adequately, have dry corners, have fertility issues, or are non-irrigated. I would be happy to work with a grower with these types of situations in some later planted corn. Please let me know. — 870-659-0648

Foliar Corn Diseases to Be Scouting For:

Gray Leaf Spot - Leaf lesions develop on the older, bottom leaves first, and the disease moves up the leaves as the plant matures. The tan-to-gray lesions are narrow and rectangular, and occur typically between the leaf veins.

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Northern Corn Leaf Blight – Leaf lesions are long ($\frac{1}{2}$ - $1\frac{1}{2}$ inch by 2-6 inch), cigar-shaped, gray-green or tan lesions developing on lower leaves that eventually spread upwards to the leaves and husk.



Southern and Common Rust - Lesions or pustules that contain the rust spores appear on all above-ground parts but are most abundant on the leaf. Pustules are circular to elongate in size, containing orange to brown masses of spores that erupt through the upper leaf surface. Leaves, stalks, and the

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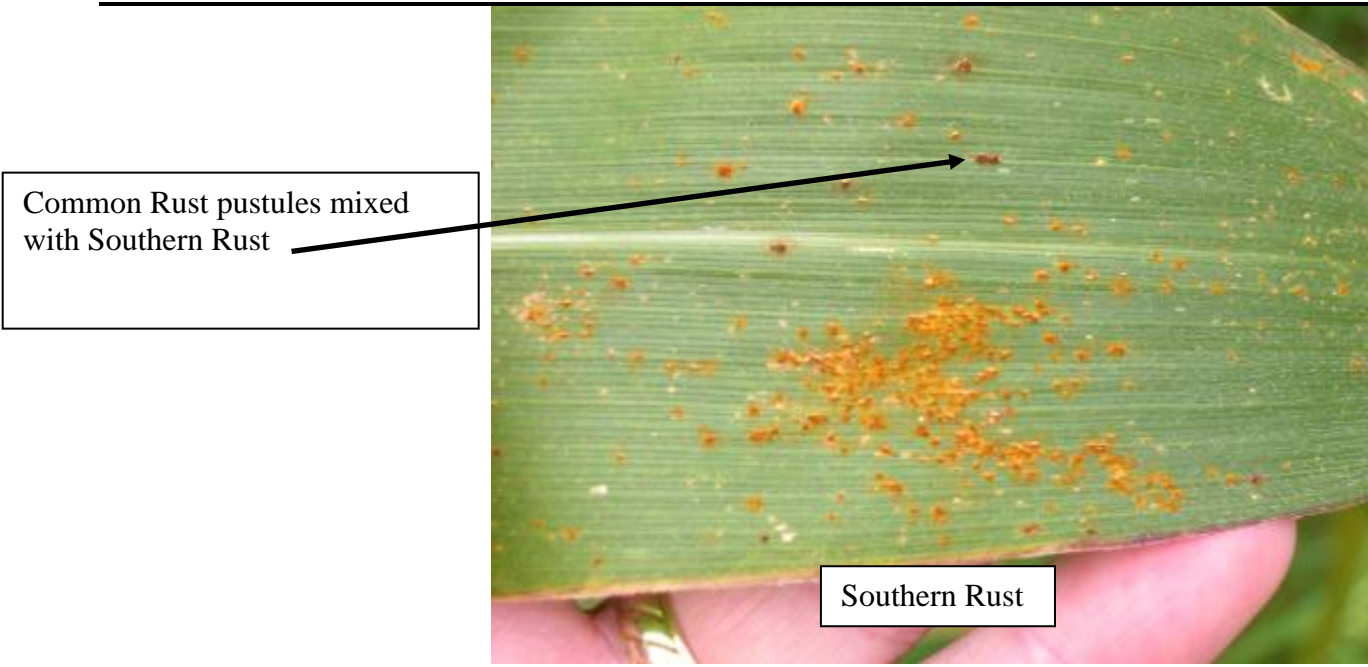
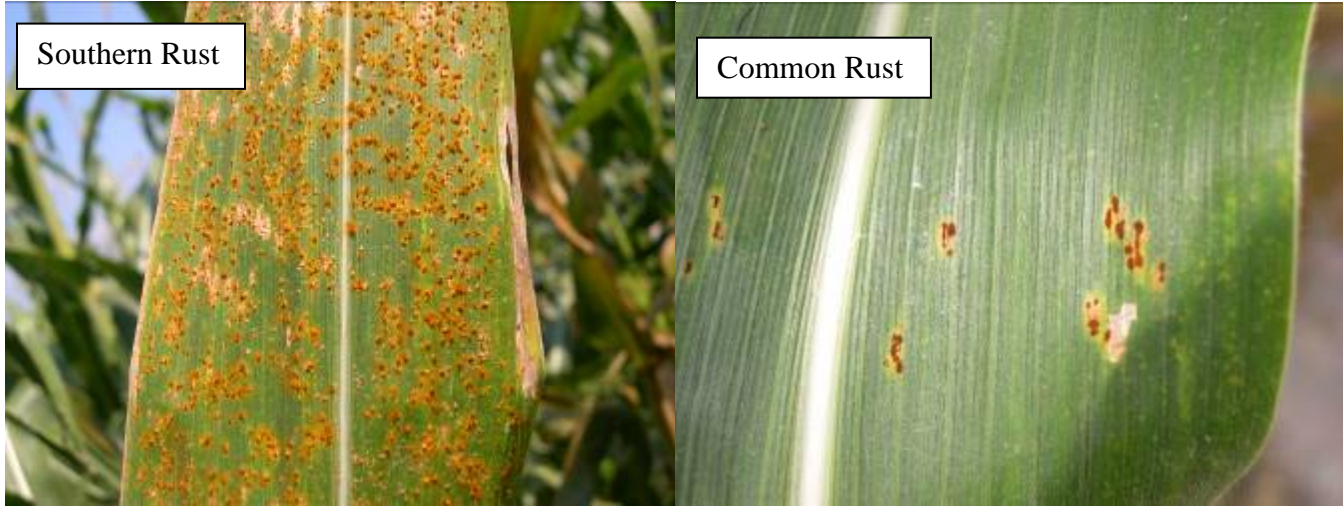
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husks on ears may be infected. Southern rust typically sporulates on the upper leaf surface. In contrast, Common Rust produces spores (dark red in color) on both surfaces of the leaf.



Common Rust pustules mixed with Southern Rust

Southern Rust

To help guide your scouting efforts and management decisions, there are several management practices where a fungicide should be considered in corn production, depending on various factors:

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Management Practice	Disease Risk	Fungicide Recommendation
Corn planted before April 15, irrigated, well-managed, conventional tillage, and good crop rotation	LOW RISK	FUNGICIDE USE VERY UNLIKELY
Corn diagnosed with Common Rust in May or early June	LOW RISK	FUNGICIDE USE VERY UNLIKELY
Corn with low yield potential (<140 bu/A) or dry land corn most years	PROBABLY NOT WORTH SPRAYING (economically)	
Corn planted consistently in minimum till or no-till systems, lots of old corn stalks and cover around	MODERATE RISK	BUDGET A FUNGICIDE
Corn planted after April 15, or replanted, irrigated, well-managed	MODERATE RISK	BUDGET A FUNGICIDE
Corn planted after corn, regardless	MODERATE RISK	BUDGET A FUNGICIDE
Corn diagnosed with Southern Rust (orange rust) in June or early July	HIGH RISK	RECOMMEND A FUNGICIDE
Corn hybrids not adapted to the South, not tested in the U of A Hybrid Testing Program	HIGH RISK	RECOMMEND A FUNGICIDE

We strongly advise that all fields be scouted for disease and suspicious corn rust samples be sent to the Plant Health Clinic in Lonoke, Ark. to verify whether it is Common Rust or Southern Rust.

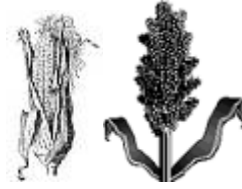
Fungicide Application Timing – Scott Monfort and Jason Kelley

We have gotten a lot of calls about timing of foliar fungicides. Our main disease (Southern Rust) generally comes late in the season, so applying a fungicide at tassel with no disease present does not make sense in many situations. Delaying fungicide applications until near brown silk (if no disease present) may help provide needed residual later in the season, when the disease is likely to appear. The pictures below (taken this year) illustrate how many days it will generally take from the beginning of silking to brown silk.

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Beginning of Silking

7 days later

9 days later

16 days later

16 days later

Contact Information:
Please contact your local county extension agent in Arkansas or the authors by e-mail at jkelly@uaex.edu or smonfort@uaex.edu if you have questions or comments regarding this newsletter.

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