Crop Progress

Frank Sinatra had “the world on a string.” If he were in charge of the weather these days, it would be a Yo-Yo string he had ahold of. Up and down we go, temperatures and rainfall alike.

We usually hope for a “4th of July rain” in most years. This year, most were hoping for a break. Unfortunately we did get more rain this week that wasn’t particularly welcome or needed. Temperatures have returned to normal for now at least and the weekend looks like a typical one for July with temps in the upper 90s. But the yo-yo is set to return with record low temps in the 70s and 80s forecast for most of next week beginning Tuesday. Rain chances are also scattered throughout that time.

The good and the bad: the good – lower, milder temperatures during heading and grain fill are generally good for yield and quality (see 2013); the bad – cooler temps can cause uneven heading and make fungicide and insecticide applications less effective (also see 2013). Rainfall and overcast weather can also affect flowering and pollination.

It’s difficult to say what will actually happen from week to week at this point. Smart money these days seems to be – whatever you would normally expect, expect the opposite.

This week should begin the big push to heading, with almost 10% of fields reaching 50% heading (Table 1). Another 80% of the crop should hit that stage over the next two weeks. If you’re heading now, get out there and scout for stink bugs – the first fields to heading will be hardest hit before they spread out.

Table 1. Percent of rice acres set to reach 50% heading during listed weeks of 2014 according to DD50 enrollment.

<table>
<thead>
<tr>
<th>Heading Date</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Headed</td>
<td>7%</td>
</tr>
<tr>
<td>July 12-18</td>
<td>38%</td>
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<tr>
<td>July 19-25</td>
<td>41%</td>
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<tr>
<td>July 26 – Aug 1</td>
<td>10%</td>
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<tr>
<td>Aug 2-8</td>
<td>3%</td>
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<tr>
<td>Aug 9-15</td>
<td>1%</td>
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Out Standing in Your Field

Diseases & Fungicides

In what could very well turn out to be a “blast year” and favorable conditions for sheath blight and smut development, there have been a number of questions about the susceptibility of different cultivars to these diseases. In Table 2 is a short list of cultivars and their susceptibility ratings for sheath blight, blast, and kernel smut and false smut. One recurring question has been about Roy J’s susceptibility to blast. Roy J is susceptible to blast and the appearance of blast lesions shouldn’t be a surprise. Since this cultivar’s release we haven’t seen a true blast year. Last year late-planted Roy J showed severe neck blast in a couple of fields in White County. Last year was also the first time many grew it and in most cases blast levels were low.
A blast-prone field planted to a susceptible cultivar requires preventative fungicides applied twice to control neck blast – the first at late boot to 10% heading and the second 5-7 days later or when 50-75% of panicles have emerged from the boot. Remember panicle bases or necks still need to be in the boot for effective control using fungicides. Table 3 contains recommended products and rates for blast management. Propiconazole is not effective against blast but it can be included for suppression of other diseases such as the smuts.

When considering fungicide applications for multiple diseases, be sure to use minimum recommended rates in the mix for control of each disease. The first application for blast management may also be used to manage sheath blight and the smuts. A minimum of 6 oz of Tilt equivalent is recommended to suppress kernel smut and false smut. The 19 oz rate of Stratego contains 5.5 oz of Tilt equivalent; and the 21 oz rate of Quilt Xcel contains 6.2 oz of Tilt equivalent.

Table 3. Recommended fungicides and rates for blast management in Arkansas.

<table>
<thead>
<tr>
<th>Fungicide</th>
<th>Active Ingredient</th>
<th>Rate Product/Acre</th>
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<tbody>
<tr>
<td>Quadris azoxystrobin</td>
<td>12.3 fl oz</td>
<td></td>
</tr>
<tr>
<td>GEM trifloxystrobin</td>
<td>6.4 – 9.8 fl oz</td>
<td></td>
</tr>
<tr>
<td>Stratego trifloxystrobin + propiconazole</td>
<td>19 fl oz</td>
<td></td>
</tr>
<tr>
<td>Quilt Xcel azoxystrobin + propiconazole</td>
<td>21-27 fl oz</td>
<td></td>
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*Quilt is also a mix of azoxystrobin and propiconazole.
Growing Rice with a Snorkel

Plenty of fields around central Arkansas experienced severe flooding that submerged rice early last week. Some rice was under for only a few days while parts of others were under for nearly 2 weeks. The results, as expected, have been highly variable. “Stretched” plants and odd discoloration have been the most common complaints.

Rice that was under for shorter periods of time are generally showing new growth and should begin to progress normally, though likely will be delayed. Rice under for longer will have serious issues and some of it may die or was laid over. Possible nitrogen applications on rice at this point will need to be determined by the stage of the rice, likelihood of crop survival, and the appearance of active growth. Call for help with specific scenarios.

To add insult to injury, additional heavy rainfall hit some of these areas again on Tuesday night. How much this will increase damage to already affected areas remains to be seen.

Pictures 1-3 show the results of some rice that has been submerged the longest. This field was completely covered for 7+ days and only now is half the field no longer submerged. Plants are completely saturated – to the point where if you pluck a tiller free and squeeze it, water squirts out of it. In addition to complete saturation, the water quality is terrible and tissue is beginning to rot (the smell is terrible).

New green growth can be seen in parts of the field, but management must be careful and deliberate here on to salvage what we can. Draining must occur to get fresh air to the plants and reduce saturation, but re-flooding with clean water will also need to happen quickly or the field may remain sour. Flooding of rice fields to the point of crop submersion during reproductive growth stages is something that just doesn’t happen. There’s no playbook for this and every field needs to be managed on a case-by-case basis. Let’s just hope we don’t have to deal with it again.

Picture 1. Rice field that had been under water for 7-10 days. Lower end of field still under water.
Managing Hydrogen Sulfide Toxicity

Hydrogen Sulfide Toxicity (Autumn Decline) has been showing up in more fields lately. The common aboveground symptom is a yellowing or “off” color. Belowground symptoms are blackened roots, especially around the crown of the plant (Picture 4).

No matter when these symptoms are found, if the condition appears to be severe enough to need correction, the only option currently recommended is to drain the field, but different situations call for different measures.

In a field with symptoms that has not yet reached midseason (green ring), the best option is to treat the field as though you are draining for straighthead prevention – dry the soil to cracking and re-establish the permanent flood prior to ½” internode elongation. This will optimize nitrogen use efficiency and prevent drought stress during reproductive growth. Check for new root growth before you re-establish the permanent flood.

In a field with symptoms that has reached midseason (after green ring), the best option is a “soft drain”. Pull the water back to muddy soil so that new white roots begin to emerge from the base of the plant. Once this occurs, begin to re-establish the flood. One way to do this on hard to irrigate fields would be to start draining the field and start irrigating from the top levees as soon as possible and “chase the drain” down the field. Correction of hydrogen sulfide toxicity at this stage is tough because it’s a balancing act – balancing potential yield loss from the toxicity with potential yield loss from drought stress during reproductive growth.
In fields that develop a history of this problem, it may become beneficial to take a preventative approach – drain and dry the field according to recommended timings for a straighthead drain.

Some fields are set up to be easier to manage for this problem than others. Field size, slope, soil type, and irrigation capacity all play a role in how effective we can be in correcting this problem. The above are general guidelines but if you need help for specific fields give us a call.

Insect Issues

As fields begin to head, rice stink bugs will start to be our primary concern as usual. Remember, during the first two weeks of heading the threshold for RSB is 5 stink bugs per 10 sweeps. After the first two weeks the threshold is 10 stink bugs per 10 sweeps.

Rice stink bugs can be found everywhere on headed grasses and even in rice fields that do not have heads emerged yet. **DO NOT TREAT FIELDS FOR STINK BUGS IF HEADS HAVE NOT YET EMERGED.** There’s a lot of talk about “throwing in an insecticide with a boot fungicide application.” If you do that, you will be wasting an application and it’s very likely the field will reach threshold as soon as heads emerge and another spray will be needed.

**Picture 4. Hydrogen sulfide toxicity symptoms.**

**Picture 5. Rice stink bugs feeding and mating on headed grass on field edges.**
While fall armyworm problems seemed to have fallen off at the moment, there are reports of populations on the move again in Mississippi and southeast Arkansas. The biggest concern going forward would be that they infest heading rice and try to feed on flag leaves or clip panicles. Those finding fall armyworm at the moment are reporting a high percent of them as parasitized by beneficial insects.

**Herbicide Issues**

Picture 6 is an example of what happens when Select (clethodim) is accidentally applied to rice. The result is “rotten neck” and plant death. In the top image you can see the dead/dying tillers and in the bottom image you can see how the tillers are easily pulled out of the plant. The intended application was Clincher and a generic version of clethodim was accidentally put out because it has a name very similar to Clincher.

**Enroll fields in the DD50 Program here:**

[http://DD50.uaex.edu](http://DD50.uaex.edu)

Problems or questions:

[jhardke@uaex.edu / 501-772-1714](mailto:jhardke@uaex.edu / 501-772-1714).
Arkansas Rice Update
Dr. Jarrod Hardke, Dr. Gus Lorenz, Dr. Bob Scott, & Dr. Yeshi Wamishe

Additional Information
Arkansas Rice Updates are published periodically to provide timely information and recommendations for rice production in Arkansas. If you would like to be added to this email list, please send your request to jhardke@uaex.edu.
This information will also be posted to the Arkansas Row Crops where additional information from Extension specialists can be found. Please visit the blog at http://www.arkansas-crops.com/

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