



THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION

Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

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Upcoming Dates

- Georgia Young farmers Annual Convention – Jan 28-29
Savannah Marriot Riverfront – (229) 386-3429
- Georgia Watermelon Annual Convention – January 28-29
Lake Blackshear Resort & Golf Club Cordele – 706-845-8575

Current Climate Situation: The recent rains are certainly helping our groundwater situation, but we are still below average. Although La Niña is still in effect, the weather has not necessarily shown it lately. We have received much more rainfall and the temperatures are much lower than expected. I perceive this as a good thing since we received exactly what they predicted last summer ~ hot and dry. It will likely persist into the spring, but should hopefully move into a neutral or El Niño phase. The 30 day (from publication date) rainfall recorded at the USDA Multi-Crop Irrigation Research Farm in Shellman recorded 3.04" (30 year average is 5.44") inches with a daily average temperature of 42.07°F and an average daily maximum temperature of 54.97°F. Average daily temperatures are about 8 degrees lower than the 30 year average (must be global warming). The average minimum temperature was 29.16°F. The average 4" soil temperature over the last thirty days is 44.70°F. The evapo-transpiration 30 day average is (.027) inches per day, which is below average. To monitor soil temperatures and weather information at various weather stations including the USDA Multi-Crop Irrigation Research Farm visit www.georgiaweather.net.

UPCOMING EVENTS

2011 Randolph County Extension Commodity Meeting Dates

| | | |
|-------------------|---------------|--|
| January 27, 2010 | Time: 6:00 pm | Dewey Lee – Corn & Jared Whitaker - Soybeans |
| February 21, 2010 | Time: 6:00 pm | John Beasley, Bob Kemerait, David Adams – Peanuts |
| March 1, 2011 | Time: 6:00 pm | Guy Collins, Phillip Roberts & Glenn Harris – Cotton |

***Please put these dates and times on your calendars!!
We hope to see you there!!***

WHEAT

****We have planted older varieties this year and several have poor resistance to hessian fly be on the lookout for these symptoms – Buster Haddock***

Scouting For Hessian Fly in Wheat

By Dr. David Buntin

Although it is very cold, there is still the possibility of insect infestation if the right conditions are met. In late November and early December I have scouted fields and noticed the presence of some hessian fly infestation. Hessian fly, as you know, can devastate a wheat crop. The best and most effective defense of this pest is genetics. It is important to choose a variety with good hessian fly resistance. If not the information I found below may be of assistance.

Hessian fly maggots (larvae) suck sap and stunt tillers presumably by injecting a toxin into the plant. Feeding by a single larva for several days is sufficient to completely stunt and kill a vegetative tiller. Infested jointed stems are shortened and weakened at the joint where feeding occurs. Grain filling of infested stems is reduced and damaged stems often lodge before harvest. The following pictures show typical stunting and dead tillers due to Hessian fly:



Stunted tillers



Wheat plants with dead tillers

In February, you will find most of the Hessian fly larvae and pupae at the crown of the plant, hiding behind the leaf sheaths. As the plant starts jointing, flies lay eggs on the uppermost leaf so you will find the larvae and flax seed further up the plant. After hatching larvae make their way downward along the stem, inside the leaf sheath, until they can't go any further. This is why they accumulate just above a stem joint. More than one joint on the same stem can be infested.



"Green gut" (older Hessian fly larva)



"Flax seeds" (Hessian fly puparia)

The older larvae (above left) are informally known as "green guts" because the green color in their digestive tract shows through the white body color. Newly hatched larvae are reddish. After hatching, they move along a leaf groove to the leaf sheath and then move between the leaf sheath and stem where they begin to feed on the stem above the leaf base. Maggots become white after molting and appear greenish white when full grown. Once larvae move to the stem base, they are protected from weather extremes and foliar applied insecticides. The "Flax Seed" stage (above right) is where the fly turns from a maggot to a pupae before emerging as an adult fly. If you squish a flax seed and the contents are white or green, it is a young flax seed. If it is reddish colored, this is an older flax seed from which the adult will soon emerge.

Scouting for Hessian fly: Look at several spots within the field. If you see any plants with stunted or dead tillers, carefully dig them up and peel back the leaves to see if you see any Hessian fly larvae or pupae. Check the surrounding apparently healthy plants nearby. If you find 5-40% of all wheat tillers infested with Hessian fly, you may be able to rescue the crop using a properly timed foliar insecticide. Treating fields with less than 5% infestation would not be economical. If 40%-50% or more of the tillers are infested, it may be prudent to abandon the field, and stop adding inputs such as nitrogen.

Deciding when to spray: If you want to try to control the fly with a foliar insecticide, check the field at least once a week. Look in different parts of the field until you have seen at least 10 Hessian fly larvae or flax seeds. Note how many green guts, younger flax seeds, and older flax seeds that you find. Once most of the flax seeds are “red” start looking for eggs on the newest leaves on the wheat plant. Eggs are tiny and orange colored. They are laid between the veins on the upper surface of the leaf. Make the insecticide application when the adults start to emerge, that is, as soon as you find the first eggs on the plants, or when most of the flaxseeds are red inside. Use lambda cyhalothrin at 0.03 lb. a.i./A (Karate Z, Mystic Z, or similar products @ 1.92 fl. oz./acre (1 gal/67A) or Silencer, Lambda T or similar products @ 3.84 fl. oz./acre (1 gal/33 A). Proper timing of this application is very difficult without sampling. Also the rescue treatment often is not completely effective even when applied at the proper time.



You may find more than one Hessian fly larvae or flax seed behind a leaf sheath. There were more than 7 larvae and flax seeds infesting this tiller.

Hessian fly larvae or flax seed



Adult Hessian flies are small black flies about the size of a mosquito. Adults live about two days and females lay about 200 eggs in the grooves of the upper side of the wheat leaves. They are difficult to find in the field.

Nitrogen applications critical in early spring.

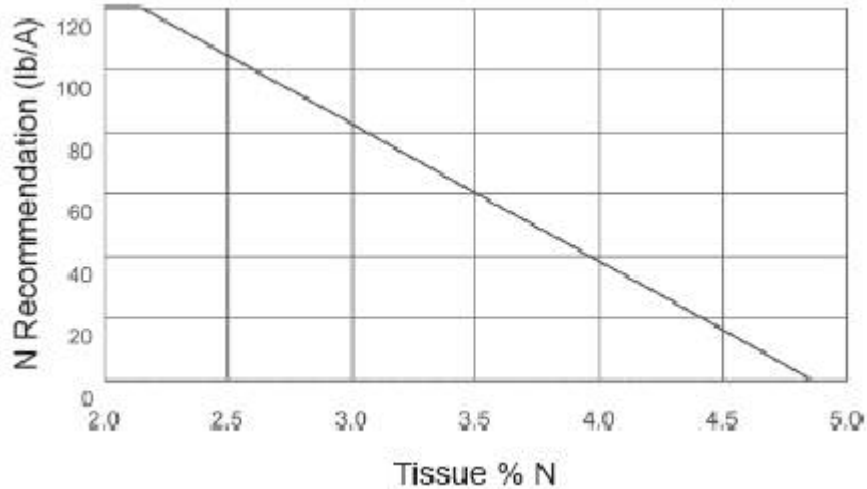
Dr. Dewey Lee

High yield wheat in Georgia most often only requires 100 to 130 lbs of N per acre. Nitrogen applications will vary according to the soil type, the variety’s lodging resistance, irrigation capability, previous crop, wheat growth stage and residual nitrogen from manure applications.

Spring N applications should be made at stem elongation and prior to the development of the first hollow node to keep the crop from entering any deficiency during head development. Usually this occurs during early to mid February in south Georgia and late February and early March in north Georgia. Most growers who are properly managing their N would have already applied some nitrogen if tiller counts were low. Application rates can vary considerably. In general, average yields (50 to 60+ bu/ac) only need 80 lbs N per acre. However, higher yields require more N carefully applied to maintain a proper level of nutrition.

The figure below is a guide used by growers in North Carolina and Virginia to

determine the need for nitrogen at GS 30 (or Feekes 5). A tissue analysis is needed for final N application determination. It is assumed that the average tiller count will be above 100 per square foot.



In addition, 15 lbs of S should be applied with the nitrogen to soils that are sandy. Avoid tank mixing herbicides such as Express, Harmony Extra, and/or 2,4-D as this will increase burn and tissue loss.

Mid to late December planted wheat will not have the same yield potential as timely planted wheat and therefore will not yield as well (30% to 50% reduction). Maximum yield potential is usually met with a total of 80 lbs N per acre.

Currently November planted wheat in the southern portions of the state has reached the first hollow node stage. This wheat is very susceptible to injury by applications of phenoxy herbicides. If the crop has not been top dressed, do not apply 2,4-D or MCPA with any additional nitrogen.

Mike Rowe: Farmers need to be their own advocates

By Dairy Herd news source | Friday, January 14, 2011

Farmers became a big part of “Dirty Jobs with Mike Rowe” when Rowe took offense at the saying, “work smarter, not harder.” “What a silly way to separate knowledge from skill,” Rowe told attendees at the American Farm Bureau Federation’s 92nd annual meeting. Rowe decided to celebrate people who work both smart and hard and knew farmers and ranchers do both. “It seems like every time I go to a farm, there’s some type of issue,” he said, recounting what happened after three farm episodes aired.

On his series “Dirty Jobs,” that airs on the Discovery Channel, Rowe helped a hog farmer with an operation near Las Vegas gather leftover food from casinos, which the farmer cooked in his Rube Goldberg invention and then fed to the hogs. People for the Ethical Treatment of Animals wrote to him, concerned that the warm food was harming the animals. The Environmental Protection Agency feared gas escaping from a hose under a truck hood might be toxic when in fact it was steam.

Rowe visited a laying hen operation in Buckeye, Ariz., which he said enabled him to give an honest, fair look at caged egg production. Because “we deal with feces from every species,” Rowe used a bobcat to clean up chicken manure that accumulated below the

cages. The Occupational Safety and Health Administration said his skill with the bobcat—or lack thereof—had come perilously close to endangering the health of the workers at the farm.

Before a visit to a Craig, Colo., sheep ranch to assist with castrating lambs, Rowe asked the humane society about the preferred method for the procedure and was told how to use a rubber band to accomplish the task. However, he learned that the lambs recovered quickly after the ranchers' method of clipping and extracting the genitals but would be in pain for up to two days if rubber bands were used. "I saw with my own eyes that it was a kinder, gentler way to do it for the lamb," he said of the rancher's procedure. That got Rowe to thinking: if these experts and agencies were wrong about what they saw on "Dirty Jobs," what else were they wrong about?

American farmers are surrounded by angry activist groups, each with its own agenda, he said. "Our country is asking you to do more with less every single year and I see a lot of other agendas pushing at you. The rest of the country needs to understand what you guys do on a day-to-day basis. We are not sufficiently astounded that you guys feed [the world] every day."

Rather than a spokesman, agriculture needs lots of advocates, Rowe said. These advocates can each use their talents to tell their story. He cited Troy Hadrick, a Farm Bureau member in South Dakota whose YouTube video attracted the interest of a furniture company owner who now sponsors a Nascar entry that promotes agriculture during races.

Rowe himself has produced two "brown before green" specials that showcase farmers' work to care for the earth. "You find a farmer and scrape off the dirt and you'll find one of the greenest people on the planet," he said. Saying he was flattered at having been asked to be a spokesman for agriculture, he told Farm Bureau members, "I do believe in my heart of hearts that you are your own best spokesmen."

PEANUTS

Wet Soil Samples May Give "False High" pH Readings

Glenn Harris

I don't have to tell you that it has been a wet fall and winter...which has caused everyone to get behind on taking soil samples. It's tempting to get impatient and take more samples than you should under these conditions. Two potential problems with doing this are 1) you might not get a good representative sample, because really wet areas (including where there is standing water!) have to be avoided, and 2) if the laboratory you are using uses the "water" method of measuring pH, you could get pH readings that are higher than they really should be. In fact, these "false highs" could be off as much as 0.5 units, for example they may read 6.5 when they really are a 6.0.

Why does wet weather cause pH values to be high? It has to do with salts (or lack of salts) in the soil and how it affects the reading when using a pH meter in the lab. Basically, a pH meter measures the “electrometric potential”, or charge, between a glass electrode and a reference electrode, that is directly related to hydrogen ions. This measurement, which is actually in millivolts is then converted to a pH reading. A “wet” soil sample usually means that salts have been leached out and if the sample is prepared with water, the readings are not as accurate. This problem can actually be overcome by preparing the sample with salt instead of water, which is exactly what the University of Georgia Soil Testing Lab started doing a few years ago. Most other private soils labs in Georgia and throughout the southeastern US are using water (and not salt) to prepare samples. (As an interesting side note, you may have seen an article in a recent Southeast Farm Press magazine that announced the University of Kentucky soils lab has just switched from using the “water” method to the “salt” method.

In order to make this a little more clear, the following excerpt is from a textbook titled “The Nature and Properties of Soil” by Brady and Weil (Fourteenth edition, Prentice Hall, page 373). Interestingly, this section is titled “Take your soil pH with a pinch of salt” !

“In North America, most labs use **pure water** to make the soil suspension used in measuring pH, giving results reported as pH_{water}. Two important drawbacks to this method are that it is sensitive to (1) the soil:water ratio used and (2) small variations in the soluble salt content of soil. For example, fertilizer additions or evaporative salt accumulation can cause pH_{water} readings to differ by as much as 0.5 units even though soil acidity remains constant.

These problems can usually be overcome by a second method using a weak, unbuffered salt solution instead of pure water to make the soil suspension. Most commonly, a **0.01 M CaCl₂ solution** is used to provide a background electrolyte concentration sufficient to minimize variations caused by most salt accumulations or chemical fertilizer applications. The Ca²⁺ ions added in the solution force a portion of the exchange acidity to move into the active pool, giving pH_{CaCl} readings that are typically 0.2 to 0.5 units lower than pH_{water} readings for the same soil. Many soil test labs in Europe and Australia routinely report pH_{CaCl} rather than pH_{water}. “

So is the salt method better? This is a question I get all the time and it depends on what you mean by “better”. As far as being a more accurate measurement of soil pH under conditions like we have right now with wet, leached out samples, the answer would be “yes” ! To be honest, the only problem I have with the salt method is that up to this point, everyone has always used pH_{water} and no one is used to pH_{CaCl} values. In order to reduce some confusion, the UGA soils lab actually estimates what the pH_{water} value would be. This number is based on hundreds of samples that show, on average, the pH_{CaCl} value is 0.6 units less than the pH_{water} value. But if these two methods are perfectly correlated, then why switch? I get this question too and the answer is that they are not perfectly correlated. One example where they are not is, again, with wet, leached out samples.

OK, so what is the bottom line? What should I do right now? I would recommend delaying soil sampling as much as possible until you can get a good representative sample. Knowing that we are going to get in a hurry and soils are already leached I would also recommend going back and spot checking soil samples later if the lab you are

using is using the pHwater method (basically any other lab besides UGA or University of Kentucky !) and you suspect you have a “false high”. When should you suspect a “false high” ? And this is a key point... use the previous history of pH from each individual field to help determine if you may have a problem. For example, if you did not lime last year and your pH goes from 6.0 to 6.5, you could have a “false high”. By the way, this problem is more prevalent with higher pHs, so the situation where you think you have a 6.0 and you really have a 5.5 should be less likely. Which is good, because in reality that would be the worst case scenario when you thought you didn’t need to lime and then you end up with aluminum toxicity and yield reductions.

COTTON

Cotton Marketing News

Don Shurley

Observations From Beltwide

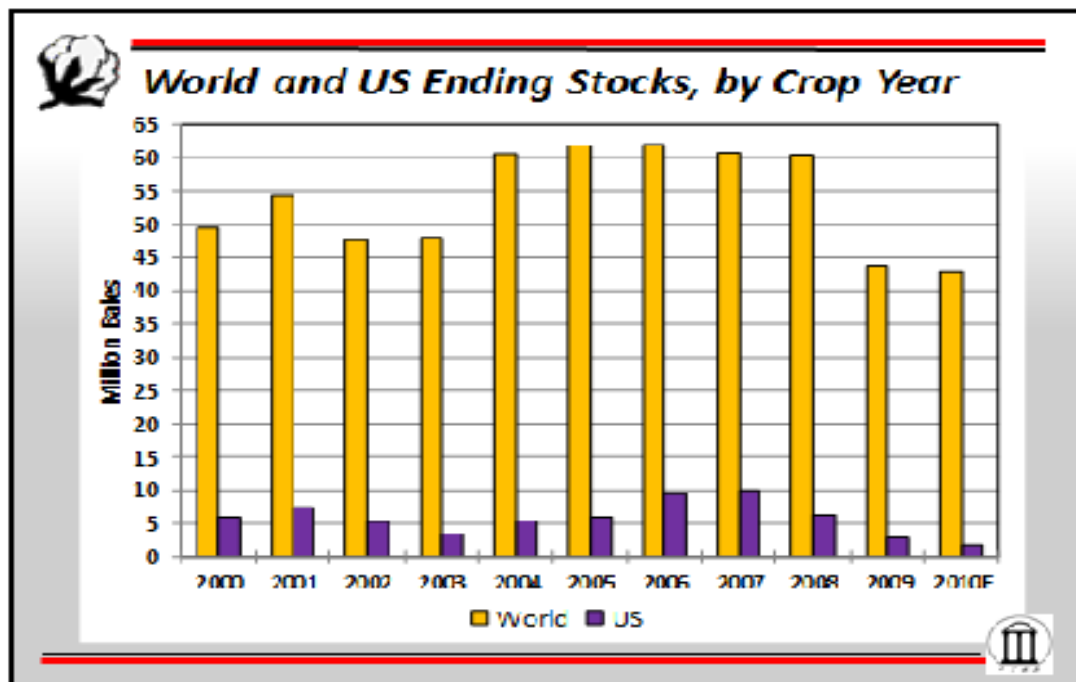
The 2011 Beltwide Cotton Conference was held in Atlanta last week. I attended the Crop Insurance Workshop, Options Workshop, Outlook Symposium, and the Economics and Marketing sessions. The mood was upbeat-- \$1 cotton will do that. I didn’t take notes and don’t remember everything that was said, but several comments stood out:

- Prices should stay strong and may even continue to track higher. Acreage will increase but stocks are very tight- tight enough to keep prices strong even with an increase in supply.
- Cotton use is slipping. Due to high cotton prices, substitution of man-made fibers is already taking place. The consumer prefers natural fibers (cotton) but cotton-polyester blends will increasingly find their way to the retail shelves unless consumers “push back” and demand cotton.
- The 2012 farm bill debate is going to be contentious. It’s already started. Because commodity prices are high (and payments, therefore, low) some will use this as evidence that a farm income “safety net” is no longer needed. Some, for example, are already proposing that Direct Payments be cut or eliminated. While this is faulty logic, it will get traction.
- There are changes in crop insurance for 2011. Producers need to meet with their insurance provider and get on top of these changes—understand the changes in policies and coverage, the implications for their farm(s), and make the best informed decision possible.
- Congratulations to Dixon Farms of Berrien County, GA- winners of the Cotton Marketer of the Year Award.

Supply/Demand Update

USDA’s January supply/demand numbers were released on Wednesday this week. World 2010 crop Ending Stocks were tightened a bit more from the December numbers due primarily to a very slight reduction in the World crop and a slight improvement in Mill Use. Ending Stocks are estimated at 42.84 million bales—down 550K bales from the December estimate.

The little up-tick in demand (mill use) is good to see but it's worth noting that World Use for the 2010 crop year is actually almost 2 million bales below 2009. With acreage and production very likely to increase in 2011, a flat, stable, or declining demand will make it tougher to keep prices at current levels. There is already evidence that export sales are being cancelled due to high prices. The US is the World largest cotton exporter. We are often considered a "residual supplier"—but a major and (depending on other country production and foreign demand) a much-needed source of cotton nonetheless.



If USDA projections are realized, the US will have only 1.9 million bales of 2010 cotton on-hand when the new 2011 crop year begins on August 1. This is barely 1 months' worth of US export plus mill use. In other words, if projections hold, the US will essentially be out of cotton. World supply is tight and, as a result, prices have increased. But I think even more of a factor, the World's largest supplier of cotton to foreign mills that import cotton is essentially out of it.

Prices and Marketing

Further evidence of this is clear. Oct2011 futures prices are about 12 to 13 cents per pound higher than Dec2011. In other words, the market is willing to pay substantially more for cotton that can be delivered earlier because there is very short supply of it.

Dec2011 has been above the \$1 mark and farmers (basis the Southeast) able to contract cotton for \$1 or better for the first time this week. In conversation with producers, I get the impression that many are already pretty far along in locking in prices on their expected 2011 production. The move above \$1 this week, I think, speeded the process up even more.

Prices (Dec2011) reached over \$1.05 this week but as of this writing are down about 3 cents today and back down below \$1.

Producers priced most of their 2010 production in the 70's and 80's, a good level by any measure, only to watch the market march to \$1.50 later. So, it would be tempting to hold off doing much on the 2011 crop for fear of getting burned again. But, we are already 30 cents higher than last year this time. So, again, I think contracting or purchasing Put Options has likely been pretty heavy for this early in the year.



Right now, the consensus seems to be that the market will remain high (90 to 95 cents or higher) perhaps at least through planting season. Cotton has to remain competitive in bidding for acres with other crops. I see 80 to 85 cents as the possible downside risk, if for no other reason, because that is where we were before the top was blown off the 2010 crop. But, I can't see that scenario playing out anytime soon. With an increase in World and US acreage and production likely on the way, could prices explode again? The answer is "yes" because stocks are projected to be even tighter than when we started the 2010 crop year and even with an increase in acreage, prices will still be sensitive to crop conditions. The "downside risk" scenario is a situation where US and World production is expected to increase significantly and demand (use) goes flat.

There are "tools" available like Put Options and Call Options that can be used to add some flexibility to your marketing—once you contract, that price is fixed whether the market goes up (like 2010) or down. Options aren't perfect and they can be expensive but they are a way to try to add some flexibility to your marketing. There is no perfect solution but prices have become so volatile and uncertain that producers just have to find ways to be more flexible and hopefully end up with more money in their pocket.

Sincerely,

Buster Haddock
 ANR Agent
 Randolph County

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