



President's Column

Tim White

Agricultural Management Services, Inc., Jonesville, LA

I would like to say that I appreciate the opportunity of serving as president of LACA this year. LACA is a very valuable organization that gives back more than you put into it. This organization has given me many opportunities to meet people that I would not have had without serving on the Executive Board. I would encourage each of you to become more involved in your association, whether it be by serving on a committee or as a director. I can assure you that you will receive more out of it than you put into it.

I would like to express sincere thanks to LDAF Commissioner Mike Strain for his solid commitment to the Boll Weevil Eradication Program. Commissioner Strain worked hard to obtain outside funding to help finance the program along with farmer assessments. Marc Bordelon, LDAF personnel, and the Technical Advisory Committee involved with the program have done an outstanding job with the day to day operations and oversight of the program. Louisiana is very close to eradication with only one weevil being caught in the entire state this year. Commissioner Strain has also been very instrumental in obtaining federal loan and grant money for Louisiana farmers and ag-businesses. This money has been instrumental in helping to alleviate some of the burden of our grower clients following several years of less than ideal crops.

I would like to extend a huge "Thank You" to Denise Wright; her dedication to LACA goes above and beyond her commitment to her position as Executive Director. No one can appreciate the effort that she puts into this organization until you have the chance to work with her. I am very proud that I have had the opportunity to work with her the last couple of years. Denise, thank you and I really appreciate the help that you have given me this year.

In closing, I would like to wish all of you a very Merry Christmas and may God bless each of you in the year to come.

Worker Protection Standards Train the Trainer Session

The LSU AgCenter and the Louisiana Dept of Agriculture & Forestry are making available to you pre-conference, Feb. 9, 2011, a WPS Train the Trainer

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course. Mario Saavedra of the Texas Dept of Agriculture will be on hand to deliver this training. Mario, Senior Inspector, and recently promoted to Regional Education Specialist, has over 29 years with TDA and likes to refer to himself as "Pesticide Law West of the Pecos". Mario's primary task is to train pesticide inspectors statewide on WPS, inspection policies and procedures, while still conducting inspections, investigations, testing and use-observations in the nine counties assigned in the Far West Texas Region. Mario has worked out of offices in Odessa, Dallas, Lubbock and is currently in the El Paso office. This training session will be offered Wednesday morning, Feb. 9, 2011 from 8:00–11:00 a.m. There is a \$25 fee which may be paid along with your conference registration or on-site at the LATMC registration desk. This event has been included on your LATMC registration form and pre-registration is encouraged. Once trained as a trainer, you are certified to train your employees and recertification can be obtained every three years at our consultants' meeting.

2010 YEAR IN REVIEW

I can hardly believe that another year has come and gone. For the most part, it has been a very good year for agriculture and forestry. With the exception of a few commodities, the industry has had strong to record prices for the majority of our products.

As usual, we had to deal with Mother Nature, a drought that affected yields but facilitated the harvest in the end. We are thankful no hurricanes or major tropical storms interfered with our farming activities.

Legislatively, we had a very good year. I am thankful for all of your support and the support of our Governor and Legislators. We made positive and significant changes and simplified over 200 years of law in respect to the prioritization of financial liens and contracts on grains. Further, we defined sustainability and placed the authority for the development of uniform and practical statewide animal care standards for livestock and poultry under the office of the Commissioner. These rules will be clear and distinct and will establish Louisiana as a state for animal agriculture. We created the Louisiana Sustainable Food Policy Council to assist in the development of markets for our local food products and at the request of the industry, we began labeling of Louisiana strawberries.

One of the most important pieces of legislation set aside any possible severance tax for water used to irrigate crops, forests or aquaculture for 25 years. Without this legislation, our farmers and foresters could have faced millions of dollars of additional input costs in the coming years.

This year, we have had a budget reduction of more than \$8.4 million to the Department of Agriculture and Forestry (LDAF) in direct cuts. During the past three years, we reduced our budget by more than \$24.7 million (22.9 percent). Since 2008, we streamlined and downsized the department by more than 300 employees (30 percent) and eliminated 383 vehicles (37 percent of the fleet) and decreased the aviation fleet by seven aircraft (31.5 percent).

The Louisiana Agriculture Finance Authority (LAFA) has been extremely busy administering more than \$92 million of federal funds to assist our farmers, ranchers and fishers and agribusinesses. The grant and loan program was the first and only one of its kind in the United States and helped so many of our friends and neighbors. In addition, over the last three years, LAFA has reduced its bonded indebtedness by over \$28.5 million (31.24 percent). The Governor, our Federal delegation, Louisiana Recovery Authority (LRA), LAFA and our legislators are to be commended for their work in setting up this program.

Additionally, the LDAF awarded more than \$310,000 of USDA grant funds for research, education and promotion to enhance the competitiveness of specialty crops in Louisiana. More than 16,000 senior citizens received more than \$380,000 worth of food coupons in the Senior Farmers Market Nutrition Program. The coupons were redeemed at approved farmers markets and roadside stands for fresh fruits, vegetables, herbs and honey.

We have seen an enormous increase in agricultural economic development in the form of agricultural manufacturing and processing. The ConAgra Foods Lamb Weston Sweet Potato Processing Plant in Delhi went online in November. DG Foods, a Mississippi-based chicken processor, is opening a new plant in Morehouse Parish that will employ 317. The Zagis USA cotton spinning plant in Jeff Davis Parish is using Louisiana cotton and is the first major cotton project in Louisiana in decades. New rice and grain facilities in north and south Louisiana and a \$30 million New Orleans cold storage facility for poultry shipments are underway.

After one hundred years, the boll weevil has been functionally eradicated from the cotton fields of Louisiana. For this achievement, the Boll Weevil Eradication Commission, Technical Advisory Committee, LDAF personnel, cotton farmers, agricultural consultants, pesticide applicators and state, local and federal partners should all be commended.

In the Gulf of Mexico, we suffered one of the worst ecological disasters in Louisiana history because of the Deep Water Horizon oil spill. The disaster brought into focus the importance of the Mississippi River for transport, the fragility of our wetland ecosystems and seafood industry, the necessity for quick and decisive action in the face of disasters and risks associated with our growing needs for energy. In response, the LDAF is working with the Louisiana Department of Wildlife and Fisheries, Louisiana Department of Health and Hospitals, Louisiana Economic Development and other groups to promote and assure the quality and safety of Louisiana seafood.

In our forests, we experienced a record number of wildland fires during a drought that was most severe from August through October. During that period, 936 fires burned nearly 10,000 acres of wildland.

In judiciary matters, the LDAF had a favorable decision in our ongoing litigation to establish the authority of the LDAF to rule on the closing of rural railroad crossings. The Federal Court for the Middle District of Louisiana remanded the case back to the 19th Judicial District Court, thus reaffirming our position that this is an issue under state jurisdiction.

On a national level, we were able to secure a grant for \$500,000 to establish the National Food Animal Veterinary Institute Pilot Program to address the national shortage of large-animal veterinarians and technicians. I am thankful for the assistance of Jon Hagler, Missouri Secretary of Agriculture, and Cheryl Cook, USDA Deputy Undersecretary for Rural Development, in helping to get this program started.

The LDAF is engaged in critical issues on the federal level. We are working to protect our state interests as they pertain to the 2012 Farm Bill, Cap and Trade, Estate Tax, Capital Gains Tax, Food Safety Modernization Act, National Pollutant Discharge Elimination System (NPDES) permits, immigration reform, Chesapeake Clean Water and Ecosystem Restoration Act and many more issues. I am thankful for our Federal Delegation and will continue to fight for the interests of Louisiana landowners, agriculture, aquaculture and forestry.

On a personal note, I was honored to be inducted into the LSU Alumni Association Hall of Distinction in April. In addition to my duties as Commissioner, I have also accepted the positions of vice-chair of the Southern United Trade Association, Treasurer of the Southern Association of the State Departments of Agriculture and Treasurer of the National Interstate Pest Control Compact.

It has truly been a year to be thankful for. I appreciate all of your help and support and I am truly honored to be able to serve as your Commissioner of Agriculture and Forestry.

*Mike Strain, D.V.M.
Commissioner*

2011 Louisiana Agricultural Technology & Management Conference Highlights

The LACA Executive Board and 2011 Program Planning Committee have worked diligently over the past few months to bring yet another exceptional conference to Central Louisiana. In October, we once again met with LSU AgCenter specialists and USDA-ARS researchers from the Sugarcane Research Unit in Houma at our fall retreat to discuss potential high-interest topics and speakers for our annual consultants' meeting. The conference will again be held in Alexandria at the SAI Convention Center on MacArthur Drive Feb. 9-11, 2011.

Following the WPS Train the Trainer session on Wednesday morning, Feb. 9th, there will be video streaming in the Emerald Room from 11:00 a.m. through lunch until 1:00 p.m. Several videos focusing on scouting methods, etc. will be available for your viewing. The conference will officially begin with a

luncheon sponsored by **BASF CORPORATION**. There will be several awards presented later on that day including scholarships, one of which will be sponsored by **DOW AGROSCIENCES**, a County Agent Award to be presented to an outstanding LCES agent who has gone over and beyond the call of duty to help the consultants and their growers, and the very prestigious Hall of Fame Award. Among some very informative talks and legislative updates will be a presentation on social networking which promises to be intriguing even to some of us who shy away from technology. The first series of Emerging Technologies presented by our sustaining members will wrap up the day's sessions. A time of relaxation and fellowship will then conclude that evening with a social reception sponsored by **BAYER CROPSCIENCE**.

On Thursday, Feb. 10th, the day will begin with breakfast sponsored by **DUPONT CROP PROTECTION** and **PIONEER HI-BRED INTERNATIONAL** followed by presentations on grain crops and a session featuring multi-crop issues. Our second series of Emerging Technologies by industry will also precede lunch, as well as our traditional Crop Protection and Production Quiz sponsored by **FMC CORPORATION**. Cotton, sugarcane, and rice breakout sessions will fill the afternoon following a luncheon sponsored by **MONSANTO COMPANY**.

On Friday morning, Feb. 11th, breakfast will be sponsored by **MAHKTESHIM AGAN OF NORTH AMERICA** followed by more specific crop breakout sessions and a general session to include presentations on drift management and crop protection trends in the Delta region. Consultant and commercial applicator (D&R) recertification will conclude our conference at 12:00 noon.

Throughout the conference, refreshment breaks will be held sponsored by the following sustaining member companies, **ARYSTA LIFESCIENCE, VALENT USA CORPORATION, AGRILIANCE, SYNGENTA CROP PROTECTION/SYNGENTA SEEDS, AND RICETEC**. We wish to thank all of our very generous sponsors for their continued support of the Louisiana Agricultural Technology & Management Conference!

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LACA Committees

Committees are the backbone of any organization and it's no different with the Louisiana Agricultural Consultants' Association. I would like to recognize a few of the committees who are extremely active in the association and congratulate them on their efforts over the past year. The **Governmental Affairs Committee** has worked closely with the Executive Board on several issues and always steps up to the plate when needed for special called meetings, whether with the AgCenter or internally. These members just recently attended a two-day meeting with the Board to amend and draft new policies and procedures.

The **Membership Recruitment/Retention/Rules Committee** is another that is often called upon to review new member applications and make recommendations to the Board on the credibility of those desiring to become members of the association.

The **Scholarship Committee** has been working tirelessly these past few months to recruit scholarship applicants, and have the very difficult task of weeding through these applicants to find the most deserving students.

The **LATMC Program Planning Committee** has once again generated an exceptional annual meeting program, and has, without a doubt, a commitment to excellence. The committee works hard from the time we meet in the fall of the year to start planning right up to conference time to make sure all goes off without a hitch.

I would encourage more of you to join committees and get involved in the work of the LACA. Other committees which are a vital part of our association are the **Internal Affairs, Nominating, Finance and Audit, Website Review, and Allied Industry Committees**. Serving on these committees can also prepare members to serve on the Executive Board which should be a goal of every member!

Utilizing LSU AgCenter Service Laboratories

Raghuwinder "Nick" Singh
LSU AgCenter

Are you concerned about your crop's health? Do you need to check the status of your soil, fertilizer, pesticides or water quality? Do you have plant disease, insect pest or weed problems? We have the services to help provide solutions to your agricultural needs. The LSU AgCenter has five state of the art laboratories that provide a wide range of services related to Agriculture, and include the following: the Plant Diagnostic Center, Organic and Water Lab, Soil Testing and Plant Analysis Lab, Ag Chemistry Lab, and Forage Quality Lab.

The Plant Diagnostic Center is a service of the LSU AgCenter and is supported primarily by the Department of Plant Pathology and Crop Physiology. The center diagnoses plant samples with disease problems caused by fungi, bacteria,

viruses, nematodes; insect pests and mites, as well as nonpathogenic agents. The center also provides weed identification.

The Organic and Water labs at the W. A. Calleri Environmental Center offer analytical services to research, public and private clientele. The lab performs more than 50 analytical procedures from simple to the most sophisticated determination of chemicals in water, solid and semi-solid materials.

The Soil Testing and Plant Analysis Lab offers a variety of soil, plant tissue and water tests to the general public and research community. With an integrated effort from both research and extension agronomists, the LSU AgCenter Soil Testing and Plant Laboratory is the only laboratory that incorporates latest Louisiana-specific soil fertility research in its recommendation system to help farmers to meet today's challenges in agricultural production.

The Ag Chemistry Lab is part of the Department of Agricultural Chemistry. The lab provides analytical support for research and extension efforts of the LSU AgCenter as well as for the Louisiana Department of Agriculture and Forestry. Analysis are performed on plant and animal tissues, soil, water, feeds, fertilizers, pesticides, agricultural chemicals and agricultural commodities. The laboratory also will analyze these sample types for the general public for a fee.

The Forage Quality Lab is at the Southeast Research Station near Franklinton, La. Louisiana and Mississippi forage and livestock producers can submit feed and forage samples for analysis. Forage quality analyses are also performed for research conducted in Louisiana and cooperative projects in Mississippi.

For more information on these service labs, go to



www.lsuagcenter.com.

I wonder what could be causing this bleach out symptom on these soybeans? Could it be a nutrient deficiency, a plant disease or herbicide drift? Come to the Louisiana Agricultural Management & Technology Conference session on 'Utilizing the LSU AgCenter Service Laboratories' to find out.

How Can Social Networking Enhance Your Career?

Quite a few of you have already started to use social media such as Facebook and Twitter to communicate with family, friends and colleagues. I know because some of you are my Facebook "friends." For others, social media is new territory. I hope that after reading this article, you will consider using social networking to enhance your ability to work as an independent crop consultant or a certified crop advisor. You might be surprised to learn what great resources await you in what's now referred to as Web 2.0.

Until recently, there has been some resistance to using social networking tools. They were viewed as time-wasters, silly or a way for teenagers to post useless information such as, "I'm having a coffee at Starbucks." Within the past year, the utility of these networks has improved substantially for working professionals, particularly in the realm of agriculture. USDA, professional associations, agricultural lobbying groups and agricultural media outlets have all developed social networking platforms. Furthermore, the potential to use these networks to inform the urban population about problems facing agriculture has also grown. In my exposure to these resources, I have found two primary benefits - quick access to information and enhanced communication with colleagues around the world.

My introduction to social networking began when I attended the first national eXtension.org conference in St. Louis, Mo., in October 2009. I decided to attend the meeting because we had been awarded a grant to develop a website, www.eXtension.org/blueberries. Like most of you, I went to this conference with the notion that it would be interesting. I might learn a few things, but I was far too busy to incorporate anything new into my already crowded work schedule. I was overwhelmed by what I learned at the conference. I moved in a daze from session to session absorbing everything I could about Twitter, Facebook, SlideShare, Flickr, Delicious, blogging, google docs and a host of other resources (see definitions in sidebar). Many of the sessions were streamed real-time and watched by viewers from around the world. Evenings were spent discussing new ideas with colleagues from across the United States. I spent the majority of the conference trying to decide how I could use these new tools to enhance my extension program.

I decided to start using what I learned while I was in the airport on my way home. I booted up my laptop and was on the Internet in a snap. With the help of a colleague, I set up a Facebook account and a blog in less than 30 minutes. I decided there was no risk in just testing the waters to see if these resources would be effective for delivering information. The primary goal of the Cooperative Extension Service is to deliver the land-grant university to the people - quite literally to extend

information developed at the university into every home in America. Traditionally, we have extended information via print newsletters, winter meetings, summer field meetings, at conferences, through phone calls, text messages, and recently through e-mail and websites. Now we have access to even more online resources including Facebook, Twitter and blogging - just to name a few. These online tools give us the chance to interact with our audience virtually. In these interactive social networks, you can post information, chat and message family, friends and colleagues 24 hours a day, seven days a week.

I firmly believe that we need to maintain the personal touch in delivery of extension programming, but I have been pleasantly surprised to find that social networking resources can enhance and extend the reach of our information. Following my first timid steps into the world of Facebook and blogging, I have now moved full bore into using social networking as a primary component of my delivery program. I have found ways to save time by linking accounts together. The Louisiana rice insects blog posts are automatically connected to my Facebook and Twitter so that when I hit *publish* they are *posted* on my Facebook profile and Twitter feed. This distributes the blog information to all my followers and friends. The audience includes family, friends, farmers, consultants and colleagues from around the world. This leads to discussions about observations with colleagues. The most surprising result of this information delivery approach is that I have created an interest in agricultural crop production among acquaintances that are urban dwellers and not associated with agriculture. The value of this educational component is impossible to measure, but without a doubt is positive for agricultural industries.

Dr. Paul Coreil, Vice Chancellor at the LSU AgCenter, recently formed the LSU AgCenter Social Networking Advisory Committee. You can expect to see many more opportunities to engage with LSU AgCenter faculty and staff via social networking resources. I encourage you to explore these tools and determine if they can enhance your career. Personally, I hesitated the most to create an account in Twitter. I had thought of Twitter as just a way for people to track movie stars and singers, and I don't have time for that nonsense. I was surprised to find that you can follow the USDA, NIFA, the White House, EPA, USA Rice and many other agriculturally related entities. It's a quick, easy way to stay connected to news and changes in our global economy. I'll talk more about social networking and online resources at the Technology and Management Conference in February 2011. In the meantime, please don't hesitate to contact me if you have any questions as you take your first steps into the social network.

Definitions of terms (modified from en.Wikipedia.org):
Facebook: a social networking tool that has more than

500 million active users. www.facebook.com

Friends: within facebook these are people you are connected with that can view your account.

Status update: posting in Facebook that delivers information to your friends.

Twitter: a website that offers social networking and microblogging services, which enables users to send and read other messages called tweets. www.twitter.com

Tweets: text based posts of up to 140 characters displayed on Twitter user's profile page.

Delicious: a social web service for storing, sharing and discovering Web bookmarks. www.delicious.com

Flickr: an image and video hosting website and online community where you can easily share pictures and video files. www.fliker.com

SlideShare: an online slide hosting service where users can upload PowerPoint or pdf presentations. www.slideshare.net

Google docs: a free, Web-based word processor, spreadsheet, presentation, form and data storage service offered by Google. It allows users to create and edit documents online while collaborating in real-time with other users. www.google.com

Blog: a type of website or part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. *Blog* can also be used as a verb, meaning *to maintain or add content to a blog*.

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Wheat Disease Update
Boyd Padgett, Ph.D.
LSU AgCenter

Most, if not all, of our wheat is up and growing as we enter the 2010-11 growing season. Even though your thoughts are probably fixed on Christmas and hunting, you need to begin planning how to best manage your wheat crop to maximize profits. There is an old saying 'You don't plan to fail, you fail to plan'. Wheat is affected by several pests. Diseases can dramatically impact your crop if not properly managed. However, there are effective tools to prevent this from happening.

An effective disease management strategy begins by knowing the enemy. Correct disease identification is critical before effective practices can be successfully implemented. Disease development is spawned primarily by a favorable environment. Favorable temperatures and moisture regimes will dictate if a disease will initiate and develop in the presence of a susceptible host and pathogen. Therefore, know what conditions favor our predominate diseases. In most years, leaf and stripe

rust are the enemies; however, leaf and glume blotch, head scab, and stem rust could pose a potential threat.

DISEASE IDENTIFICATION

RUSTS

Rusts are caused by fungi. There are three found in Louisiana: leaf rust, stripe rust, and stem rust. During favorable conditions for development, rusts spread rapidly within a field and cause significant yield losses if not properly managed. Temperature requirements for optimum development differ among the rusts, but leaf wetness periods of 6 to 8 hours are needed for infection. A lifecycle can be completed in 7 to 10 days when conditions are optimum for development.

Stripe or yellow rust

In many cases, leaf and stripe rust can be found during late winter and early spring. Leaf rust usually subsides with cooler temperatures, but stripe rust can continue to develop when the ambient temperature is near-freezing. If stripe rust epidemics initiate early season, an early fungicide application (before the flag leaf emerges) could be warranted. Epidemics initiate in the lower canopy. Yellow-orange pustules arranged in a linear fashion parallel to the leaf veins are the distinguishing characteristics of stripe. As the disease develops, the entire leaf surface can be covered with pustules. This disease develops best when nighttime temperatures range from 40 to 60°F, and leaf wetness periods are 6 to 8 hours in duration. There is evidence that some isolates of the stripe rust pathogen can continue to develop when temperature exceeds 60°F.

Leaf rust

Leaf rust prefers warmer temperatures than stripe rust. Initial symptoms of leaf rust begin as light yellow spots, usually on the lower foliage. As the disease develops, small pin-point pustules form on the upper leaf surface. Pustules are brick or dark red and occur randomly on the leaf. Similar to stripe rust, pustules can cover the entire leaf surface if conditions remain favorable for development. The disease develops optimally when nighttime temperatures range from 60 to 80°F, and plants are exposed to 6 to 8 hours of leaf wetness. Similar conditions will favor the development of leaf and glume blotch caused by *Stagonospora* and *Septoria*, respectively.

Powdery mildew

This fungal disease can cause severe losses in some wheat producing regions, but it is of minor importance in Louisiana. This disease usually initiates on the upper leaf surface in the lower canopy. Leaves will be partially covered with a light gray powdery growth. The entire leaf surface can be covered by fungal growth when disease is severe. Disease develops best when relative humidity is 85% to 100% and temperatures are 60 to 70°F. Disease development is usually arrested in Louisiana because of high temperatures.

Septoria blotch

Septoria blotch is a fungal disease that occurs in some years on wheat grown in Louisiana. If not properly managed, this disease can reduce yields. Symptoms begin in the lower canopy as small, light green or yellow interveinal spots. As the spots or lesions develop they become oval in shape and brown in color. Mature lesions have light brown to ash-colored centers with yellow margins. Black pepper-like fruiting structures can be present in the center of each spot. Disease develops best when temperatures are between 59 and 68°F and 6 hours of leaf wetness occurs. The fungus survives on living plants or infested dead debris.

Stagonospora blotch

Stagonospora blotch is similar to Septoria blotch; however symptoms are not limited to the foliage. Yields can be reduced when disease is severe. This fungus can induce symptoms on leaves, stems, and heads. Initial symptoms appear as yellow flecks on the lower leaves and develop into oval-shaped lesions with brown centers and narrow yellow margins. Similar to Septoria blotch, black pepper-like fruiting structures can be present in the center of each spot. Optimum development occurs when temperatures are between 68 and 80°F with leaf wetness period extending to 6 hours.

Loose smut

Loose smut in wheat rarely impacts yield; however, it can be problematic in seed saved from fields affected by this disease. Infection by the fungus is optimized when wet weather occurs during flowering. Infected seed will appear normal; however, when planted the following year, the head produced from the seed will be black in appearance. Symptoms of the disease appear after heads emerge. Affected heads are black with sooty-like spores of the fungus. Affected heads are the result of infections that occurred the previous growing season; therefore, nothing can be done to reduce spread of this disease during the current season. This disease is managed by not using seed from affected fields or using a fungicide seed treatment. The LSU AgCenter does not recommend saving seed.

Bacterial streak or Black chaff

Black chaff, a bacterial disease, can affect the foliage, stems and heads of wheat. Initial foliar symptoms usually occur between heading and flowering (in the bend of the leaf) and appear as water-soaked lesions that develop into dark-brown streaks. Mature lesions have light-colored centers (yellow to straw colored), water-soaked margins and will ooze a honey-like substance (bacteria) during humid conditions. Black streaks can appear on the glumes and the peduncles. Moist weather and temperatures in the mid 80's favor disease development. Wind, freeze or anything that could injure the leaves will allow opportunity for infection. The bacterium survives during the off season on the soil or seed.

Scab

Scab is caused by a fungus that also infects and develops on corn. This disease is not a widespread problem in Louisiana and is most prevalent in the southwest portion of the state. The fungus infects during wet, warm weather when the wheat is flowering. Symptoms are limited to the head. Infected seed are tan in color or appear to be bleached. In many cases only a portion of the seeds are affected. If conditions remain favorable for disease development, a salmon-color powdery substance (spores of the fungus) can be present at the base of the seed.

Barley Yellow Dwarf

This viral disease is vectored by over 20 species of aphids. There are a variety of symptoms that can occur throughout the growing season. Leaves on infected plants can be yellow to red in color. Stunting can occur when plants are infected early in the growing season. Barley yellow dwarf (BYD) is difficult to manage in Louisiana, but is usually not a serious problem. There is evidence that insecticides can reduce the incidence and severity of BYD; however, it is difficult to determine if these applications would be economical.

Wheat can be adversely impacted by diseases if not managed in a timely manner. Disease initiation and development is impacted by a number of factors including: a favorable environment, the pathogen, and a susceptible host. These factors must be present and working together. In 2010, leaf and stripe rust were present in some fields in the state. Stripe rust was found at varying amounts in some fields of AGS2060.

DISEASE MANAGEMENT

Disease management begins with planting high-yielding varieties with good genetic resistance. Genetic resistance to wheat pathogens is extremely effective. Dr. Steve Harrison has released several top-yielding varieties that possess good genetic resistance to the leaf and stripe rust pathogens. In studies conducted by LSU AgCenter scientists over the past several years, fungicides were not beneficial when applied to resistant varieties. Therefore, planting resistant varieties save producers more than \$20/A by eliminating the need for a fungicide application. I would encourage producers and consultants to check the disease package of their varieties.

Genetic resistance isn't bulletproof. This resistance can break down over time. Pathogen populations can evolve to overcome resistance. This was the case in 2010 when stripe rust was seen in AGS2060 (a stripe rust resistant variety). Therefore, agents, producers, and consultants should always scout their crops beginning no later than early spring. In some cases, leaf and stripe rust can develop to very low levels in the fall. Catching early infections will allow you to plan for the

spring.

Efforts should be taken to utilize genetic resistance; however, once the disease(s) is identified, a fungicide application may be needed. Typically, a single application at flag leaf emergence (F8) is adequate for managing most foliar diseases of wheat. Based on LSU AgCenter research, fungicides effective for managing stripe rust are Quilt, Stratego, Twinline or tank mixes of propiconazole (Tilt, Propimax) and a strobilurin (Quadris or Headline). Propiconazole applied alone is efficacious against stripe rust as well. Strobilurins applied alone are another option for managing stripe rust; however, to optimize the effectiveness of these products, they must be applied before stripe rust is evident.

Leaf rust can be managed with a well-timed application of propiconazole, a strobilurin (Quadris or Headline), or a premix of propiconazole or a strobilurin. Most of the wheat fungicides are somewhat effective against *Septoria* and *Stagonospora* blotch, but these diseases are not as prevalent statewide as leaf or stripe rust. Based on data from other states, scab has been reduced with applications of Proline + Folicur compared to non-sprayed wheat; however, no data is available from Louisiana.

Finally, realize fungicides are effective against fungal diseases and are NOT effective against bacteria (Black chaff or viral diseases). Application timing and sprayer set up are just as important as the fungicide choice. Ideally, fungicides should be applied before disease onset or when disease incidence is very low. The residual activity of the fungicide may be lost if applied too early. Apply too late, and disease severity may be too high to arrest disease development.

Sprayers should be configured to optimize coverage. Coverage is affected by gallons per acre, pressure, nozzle size, nozzle type, and nozzle spacing. Aerial fungicide applications should deliver fungicides in 4 to 5 gallons of total solution per acre and ground applications should be configured to deliver 10 to 20 gallons per acre.

Nozzles should be selected that deliver small droplets (200 to 300 microns). Nozzles configured to reduce drift potential will usually result in poor coverage. Boom height and nozzle spacing should be adjusted to the manufacturer's specifications. A boom height too high will increase the potential for drift and a boom height too low will not provide adequate overlap for the nozzles. Pressure should be adequate to force fungicide down in the canopy.

On a final note, remember an effective disease management program will only be successful when all of the components are working together. Efforts must be made to correctly identify the diseases present, choose high-yielding, disease-resistant varieties, and make timely applications of efficacious fungicides when

necessary. For more information concerning disease management in wheat contact your local LSU AgCenter county agent.



Leaf Rust



Leaf Smut

Stripe Rust



Calendar of Events

Beltwide Cotton Conference
Atlanta Marriott Marquis Hotel
Atlanta, GA
January 4-7, 2011

NAICC Annual Meeting and AG PRO EXPO
Renaissance Worthington Hotel
Fort Worth, TX
January 19-22, 2011

Southern Weed Science Society Annual Meeting
Caribe Hilton
San Juan, Puerto Rico
January 24-26, 2011

Conservation Systems Cotton and Rice Conference
Crowne Plaza
Baton Rouge, LA
February 1-2, 2011

Louisiana Ag Industries Association Annual Meeting
Paragon Casino Resort
Marksville, LA
February 3-4, 2011

AND, DON'T MISS OUR ANNUAL MEETING...

Louisiana Agricultural Technology & Management Conference (Louisiana Ag Consultants Association)
SAI Convention Center
Alexandria, LA
February 9-11, 2011



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