LOUISIANA CROPS NEWSLETTER

Cotton, Corn, Soybeans, Sorghum, and Wheat

LSU AgCenter Research & Extension

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SOYBEAN VARIETY SELECTION for 2015

Making the proper variety selection is critical to maximize profit potential. Variety selection may be the single most important decision you make. No two farms are alike. There are differences in production practices, soil types and climatic conditions just to name a few. You should plan to plant more than one variety. This will help reduce the risk associated with these conditions and weather. For these reasons, it is important to gather as much data as possible before deciding which varieties to plant.

Begin with data from your area and of similar production conditions, this should include Commercial Variety Trials from Research Stations, Extension demonstrations and/or company trials. If you are unable to find information that matches your production, look for varieties that consistently out perform others when averaged across locations. A proven variety is one that performs well in a wide range of conditions, soil types, and locations.

LOUISIANA – "SELECTS"

Louisiana – "Selects" is a listing of top performing soybean varieties in Louisiana. It was based on Commercial Variety Trials and Extension Demonstrations.

2015 Louisiana – **"Selects"**

Soybean MG3 - Early MG4

Dyna-Gro S43RY95	Dyna-Gro 39RY43
CZ 4181 RY	P 4211 RY
44-R08	

Soybean Late MG4

C4780RR2/STS	DG 4825 RR2/STS	AX4460
47-R13	REV 47R34	AG 4632
HBK LL4953	REV 49A75	DG 4967 LL
P 4930 LL	REV 49R94	REV 47R53
REV 52A94	S47-K5	Dyna-Gro S48RS53
48X02	AG 4835	AX4471
Dyna-Gro 31RY45	47X12	5N451R2
REV 49A14	5N479R2	REV 48R44

Soybean MG5

REV 56R63	Dyna-Gro S56RY84	AG 5535	DG 5267 LL
AG 5533	S55-Q3	Dyna-Gro S52RY75	AG 5634
R2C 5673	5N522R2	AG 5332	5N540R2
AX4550	5N550R2	REV 56A54	Dyna-Gro 32RY55

There are many sources of information that can be accessed to view variety performance. Contact your local Extension office or the LSU AgCenter website at www.lsuagcenter.com

Aphid Management in Wheat

Sebe Brown and David Kerns: LSU AgCenter Entomologists

Aphids

The most common aphids found on wheat are rice root aphid, bird cherry-oat aphid, corn leaf aphid and Russian wheat aphid. Green bug are rarely an issue in Louisiana and this is the only aphid species that causes direct feeding damage to wheat causing discoloration and speckling of leaves. Aphids also vector a disease named barley yellow dwarf virus (BYDV). Wheat can be severely affected by BYDV and infection can occur from seedling through heading; however; yield loss is greatest when seedling wheat is infected in the fall. The bird cherry-oat aphid and corn leaf aphid are the most important vectors of BYDV in the fall. Aphids will move, feed and reproduce when temperatures are above 48°F increasing the likely hood of virus transmission. Dense stands in the fall caused by excessive nitrogen fertilization can cause an increase in aphid activity leading to greater infection rates of BYDV as well.

Greenbug aphids: Photo by S. Stewart UT

Aphid Management

Planting date has a significant impact on aphid infestation and BYDV infection in the fall. Earlier plantings will generally have greater aphid numbers and a greater incidence of BYDV. Furthermore, ISTs are an effective fall insect control option that will help protect seedling wheat from aphid populations and reduce insect induced stress as the season progresses into the winter months. The ISTs Gaucho 600 at 1.6 fl. oz./100 lb of seed, Cruiser 5FS at 1.33 fl. oz./100 lb of seed and Nipsit at 1.79 fl. oz./100 lb of seed are options available to producers. These treatments will help control fall infestations of aphids, however; do not expect these treatments to provide spring insect control from stink bugs, armyworms, Hessian flies, or migrating aphids.

Foliar applications to control aphids are usually unnecessary when wheat varieties are planted during the recommended planting interval in Louisiana or when an IST is used. However, if wheat is planted too early, a foliar application may be justified if aphids get an unusually early start; scouting can help determine this decision. As such, the threshold for greenbug in Louisiana is as follows: plants with less than three tillers treat when 50 or more aphids are present per linear foot, plants with 3 or more tillers 3 – 6 inches tall treat when 100 – 300 or more aphids are present, plants 6 -10 inches tall treat when 300 – 500 aphids or more are present.

Greenbug symptomology: Photo by A. Catchot MSU

New Invasive Aphid Pest Found In New Mexico

Sipha maydis: a new pest of wheat: Photo by T. Grasswitz NMSU

A new invasive insect was found infesting wheat fields near Albuquerque, New Mexico in early February. The aphid has the ability to transmit BYDV and has a host range of over 30 different species of grass and cereal crops. This insect favors warm, dry climates which may reduce the likelihood of successful colonization of wheat in Louisiana; however, producers and crop advisors should be on the lookout for this aphid in their wheat fields. This aphid has white spine like hairs and a dark appearance covering its entire body. If you find this insect or suspect you have an infestation, please contact your LSU AgCenter county agent.

Cover crop management decisions

Josh Lofton and Beatrix Haggard, LSU AgCenter

Now is the time when most cover crops shift from fall and winter growth to spring growth.

Evaluate spring management of cover crops based on intended purpose, cover crop planted, and successive crop.

Termination needs to have already occurred or needs to occur shortly.

For soybeans and cotton :

Difficult cover crops to terminate (reproductive legumes or *Brassicas*) should be terminated or should be shortly.

Cover crops that are easy to terminate (cereals and vegetative legumes) should be terminated to allow for two to four weeks of non-actively growing cover crops.

As with most years in Louisiana, the transition between January to February represents the beginning of the coming production season. With this transition, warm temperatures, at least for periods, can be expected. For those that have planted cover crops, this period can be very critical. During these warm periods, certain cover crops begin to transition from winter to summer growth. This can be beneficial or can begin to have detrimental effects depending on both the intent of the cover crop and the cover crop planted. Below are short explanations of how this altered growth can influence the production system based on purpose and cover crop.

Cover:

During this shift from winter to summer growth, more rapid growth can be expected from most crops. This is especially true for the early spring legumes, such as the vetches, clovers and winter peas. These legumes can transition from only minor cover to almost full soil coverage. Cereals can increase coverage during this period as well; however, most cereals have established full soil coverage in the fall during tillering. As with the cereals, the *Brassicas* (tillage radish) cover has already established most of its soil coverage in the fall.

Nutrient contributions:

Nutrients taken up and, therefore, potentially reapplied for the successive cash crop can be highly variable. For legumes, optimum N fixation occurs during this early- to late-spring growth, which usually occurs during reproductive growth. While higher N content can be achieved during this reproductive growth, higher C:N ratios can result in less immediate available N contents. Tissue tests will aid in determination of this. For cereals, nutrient uptake occurs rapidly during late-tillering and around jointing. However, as with legumes, higher C accumulation can result in limited release during the cash crop's growing season. The *Brassica* crops have accumulated most of the nutrients by early season growth. This is evident by signs of stress that can be seen during this time of year. Early shedding of leaves can result in nutrient release during pre-planting and during the early growth; however, this early tissue decomposition could be detrimental as early N release can be lost from the soil during high rainfall conditions.

Picture of forage radishes growing in Winnsboro, LA. Yellowing indicates the radish has taken up all the available nutrients (probably N) in the soil system

Moisture uptake:

The cover in which this is most critical are cereal covers but can be evident in the other covers as well. For cereals, which have past jointing, moisture uptake from the cereal can be rapid. This is critical for the cover to continue with reproductive growth. However, this can be detrimental for the successive crop because much of the soil profile moisture can be diminished prior to termination.

Termination:

During this time of year, termination needs to be considered. If the field in which cover crops are planted is to be planted in corn, now is the time for termination. This will not only allow for breakdown of the cover crop but also has the potential to break the "green bridge," which should be broken for two to four weeks for best IPM practices. However, this decision is more difficult if soybeans or cotton will be the successive crop. If planting is later in the year and the cover crop is easy to terminate (cereals), terminations could be delayed, especially if soil cover is desired. Legumes can be easy to terminate if done timely. This would consist of terminating before loss of vegetative cover and growth. If legumes are terminated late, complete termination of the cover crop can be difficult. For *Brassica* covers, termination is dependent on the growth of the crop. Similar to other covers,

reproductive. Once these covers have gone reproductive, chemical termination is unlikely. If these conditions exist, *Brassica* covers need to be terminated immediately. Determining if these are reproductive will involve looking into the whorl of the leaves, where the reproductive structure begins (as in the pictures).

Reproductive structure of the *Brassica* cover crops.

Beginning growth of the reproductive structure of the *Brassica* cover crops. Oftentimes this structure can be hidden within the leaf whorls. Termination should have or needs to occur shortly

Stipe Rust Update

Boyd Padgett and Trey Price, LSU AgCenter

Stripe rust development is most aggressive when temperatures are 50 to 65°F in the presence of intermittent rain or dews (6 to 8 hours). However, development can occur when temperatures are from near freezing to 70°F. Initial infections on seedling wheat may not have the characteristic striping pattern that occurs on older plants. Seedling infections often occur in 'thumb-sized' clusters on the leaves, frequently toward the leaf tips, as opposed to a random distribution that occurs with leaf rust. Infections may appear as linear rows of small yellow to light orange pustules (stripes) on the lower leaves during late winter or early spring. Striped patterns are typical of infections in older pants. If conditions remain favorable for development, pustules may cover the entire upper leaf surface, as well as portions of the head. Stripe rust also tends to develop in circular areas in a field and spread outward from an initial infection site. These clumps of infected plants may be found along tree or ditch lines where dew periods are longer and appear from a distance as light yellow patches. A lifecycle (infection to reproduction) can be completed within 10 to 14 days under optimum conditions.

Stripe rust has been found in Central and Northeast Louisiana as well as in surrounding states. Incidence is low, but some fields have been treated with a fungicide. If rust is found in your field, there are several questions to consider before applying a fungicide. The decision to apply a fungicide should be made on a FIELD BY FIELD basis.

Some factors to consider when deciding to apply a fungicide.

- What is the disease incidence?
- Is the weather forecast favorable for stripe rust development over the next 5-7 days?
- Is the variety classified as being resistant, moderately resistant, moderately susceptible or susceptible to strip rust?
- What is the growth stage of the wheat?
- What is the general condition of the crop (health and vigor)?

The disease incidence observed in fields during early February was usually less than 1%. There were a very few exceptions. Stripe rust is present in several varieties in the official variety test and in my fungicide test plots (some varieties are Arcadia and Progeny 117) located on the Dean Lee Research Station. Depending on the variety, the growth stages range from tillering to jointing.

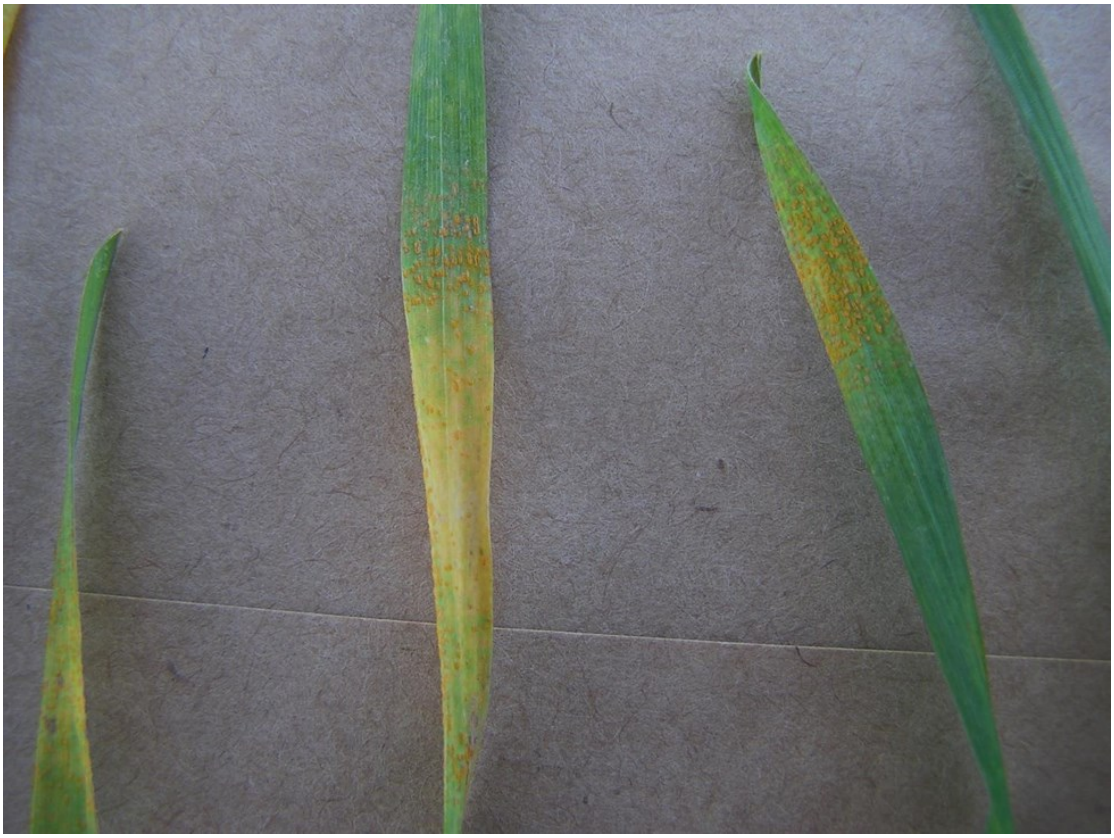
Stripe rust has also been observed on the Macon Ridge Research Station in Winnsboro and in several grower fields around the state.

During late January and the first week of February, weather conditions have been favorable for stripe rust development. When assessing weather conditions, nighttime and early morning conditions usually have more impact on disease development than daytime conditions. This is due to the presence of moisture that is necessary for spore germination and disease establishment.

Fungicide applications should be considered when disease is present and active, the variety IS NOT resistant to stripe rust, and is at or close to jointing or at a later growth stage. In addition, the crop health should be good to excellent, and the weather conditions should favor the development of stripe rust over the next 5-7 days.

When making an early application, it may be necessary to apply a second application later in the season. Always follow the fungicide label when applying any pesticide.

STRIPE RUST ON ARCADIA AT THE MACON RIDGE RESEARCH STATION (FEB 5, 2015) Picture taken by Steve Harrison



STRIPE RUST ON WHEAT AT THE DEAN LEE RESEARCH AND EXTENSION CENTER (Feb. 6, 2015).

Upcoming Calendar of Events

Planting!

For additional calendar information on LSU AgCenter Parish and Statewide events, visit our website at www.lsuagcenter.com/calendar

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LSU AgCenter Research & Extension

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Weeds	Corn, Grain Sorghum, Cotton. Soybeans	Daniel Stephenson	318-308-7225 (cell)	dstephenson@agcenter.lsu.edu
Asst. Integrated Pest Management, Northeast	Cotton, Corn, Soybean, Grain Sorghum	Sebe Brown	318-498-1283 (cell)	sbrown@agcenter.lsu.edu
Entomology	Cotton, Corn, Soybean, Grain Sorghum	David Kerns	318-439-4844 (cell)	dkerns@agcenter.lsu.edu
Entomology	Soybean, Corn, Grain Sorghum, Sugarcane	Beuzelin, Julien	337-501-7087 (cell)	JBeuzelin@agcenter.lsu.edu
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