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**IRWIN COUNTY EXTENSION AGRICULTURE NEWS - Vol. 42 Mon. Nov. 28, 2022**

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*In this issue: Meetings/Events, Recent, Precision Soil Sampling, Forage Questions, Feeding Cottonseed, Sweet Taters, 2023 Annual Blueberry Update, Sign Up Now for 2023 Southeast Regional Fruit and Vegetable Conference, Beltwide Cotton Conference, Peanut Pod Cast, Georgia Peanut Farm Show, Young Peanut Farmer Award, Critical Inputs for High Yield Wheat, Soil Testing*

**Meetings/Events – Please call to sign up for these meetings in BOLD – WATCH FOR UPDATES IN NEWSLETTER or THE OCILLA STAR.**

Meeting/Events	Date	Location
Annual Blueberry Update	Wed Jan 4, 2023 9am-Noon	Alma, GA
SE Fruit and Vegetable Conference	Thu-Sun Jan 5-8, 2023	Savannah, GA
Beltwide Cotton Conference	Tue-Thu Jan 10-12, 2023	New Orleans, LA
GA Peanut Farm Show	Thu Jan. 19, 2023 8 am-2:30 pm	UGA Tifton Campus Conference Center
2022 Georgia Ag Forecast	Fri. Jan. 27, 2023 7:30 am	UGA Tifton Campus Conference Center
<b>Irwin/Ben Hill Extension Weed Meeting</b>	<b>Thu. Feb. 9, 2023 8:00 am</b>	<b>Morehead Country Store</b>

**Recent**

*Planning now for 2023 production meetings - weed meeting is set and planning now for peanut, cotton, row crop disease, pecan, and more. Please share your suggestions. Tobacco Settlement forms due to claims agent online or by mail on or before Dec 12<sup>th</sup>. Young Farmer Peanut Award applications due this Friday (see more below).*



*Tobacco Settlement Meeting with J. Michael Moore (forms at our office)*



*Congratulations Guy Hancock new GA County Agent Association Treasurer*



*4-H and FFA Hog projects are underway across the county and state*



*Over 60 4-H'ers had ice cream party for sweet tater decoration entries*



*Soil sampling (see articles below)*



*Peanut yield concerns linger as peanut harvest ends (see podcast links)*

**Precision Soil Sampling: Grid Size Efficacy Vs. Cost Considerations**      **Virk, Tucker, Harris**

Variable-rate application of lime and fertilizer is a common practice to address soil nutrient variability within the agricultural fields. When it comes to precision soil sampling to determine site-specific nutrient requirements, grid sampling still remains one of the most widely used methods due to its ease of implementation and not requiring any additional data layers. In a grid sampling strategy, the field is divided into grids of a pre-defined size and soil samples are collected from each grid to determine the spatial soil pH and nutrient variability within the field. The size of the sampling grids can range from 1.0 to 5.0 acres (or larger) but a smaller grid size is generally recommended to accurately capture the difference in nutrient levels. However, smaller grid size also means more samples and greater sampling costs. While soil sampling on larger grid sizes ( $\geq 5$  ac) may help cut down on sampling costs, it also presents an argument about the effectiveness of larger grids in accurately depicting the spatial variability within the field. Therefore, one of the most common questions being asked every year is related to the size of the sampling grid. This is an important question as growers want to make better data-driven nutrient management decisions while also being cost-effective with their soil sampling strategy.

To answer this question, we conducted soil sampling using grid sizes of 1.0, 2.5, 5.0, 7.5 and 10.0 ac in nine different fields ranging from 20 to 93 acres in South Georgia in 2022. The actual spatial nutrient variability within each field was also determined using high intensity sampling (2-3 samples/ac). Spatial nutrient maps and the corresponding variable-rate prescription maps were created using each grid size. From that, the application accuracy, total fertilizer applied and the application cost were calculated for each strategy. Figure 1 below shows the spatial K maps for soil sampling using 2.5 (left), 5.0 (center) and 10.0 (right) ac grid size for one of the fields. The difference among the maps depicting soil K variability is pretty obvious and was expected. A similar trend was noticed for soil pH and P in all fields.



The application accuracy (%) and total application cost (\$/ac) averaged across lime, P and K for each grid size are presented for three out of nine fields in the table below. The application cost includes the cost of the soil sampling plus analysis and the cost of total amount of fertilizer recommended by each strategy. As expected, the application accuracy is highest (>85%) for the smallest grid size of 1 ac for all three fields and the accuracy decreases, drastically in some cases, with an increase in size of the grid. While the application cost also decreases with increase in grid size but it is worth noting that not all of that is due to the reduced sampling costs but more or so from the under-application in certain parts of the field. In some fields such as Field 3, the lower accuracy at 2.5 ac grid size can also result in similar or greater application costs than smaller grid sizes due to high fertilizer over-application. Thus, the larger grid sizes do help lower the sampling/application costs but not without the expense of reduced accuracy. Additionally, the under-applied areas within the field can further affect the crop yield potential, especially if the nutrient levels are critically low and therefore would impact overall profitability.

Grid Size (ac)	Field 1		Field 2		Field 3	
	Accuracy (%)	Cost (\$/ac)	Accuracy (%)	Cost (\$/ac)	Accuracy (%)	Cost (\$/ac)
1.0	85	136	90	125	88	129
2.5	60	116	80	115	65	130
5.0	51	110	70	110	51	124
7.5	46	98	63	120	63	129
10.0	44	120	55	113	53	101

The data shown here is not to recommend that all grid soil sampling should be conducted using 1.0 ac grid size but to emphasize that the choice of grid size largely depends on the amount of variability and how much historical data is available for a given field. In general, grid sampling on 1-ac should be used in a field initially during first year of production, in a new field or when there is no field history available, in order to get a baseline of nutrient variability. In consequent years, the baseline information along with other data such as soil type, EC or yield should be used to either sample on larger 2.5 ac grids or eventually transition to a zone-based management as it tends to provide the better combination of accuracy and cost effectiveness. In most cases, for soil sampling to

remain valuable and provide any realistic depiction of soil nutrient levels in the field, grid size should not exceed 2.5 ac. We are currently working on different zone management strategies and will be collecting and sharing more of that data in 2023.

## **Cattle Forage Comments from Jeremy Kichler's Colquitt County Agents Newsletter**

### Watch Out for Prussic Acid !!!

This is the time of year cattle producers need to be careful of Prussic acid. Prussic acid poisoning may occur when livestock consume certain forages and wild plants. Prussic acid is also called hydrocyanic acid or HCN. HCN can build up to toxic levels in leaves of plants such as Johnsongrass, sorghum, sudangrass, sorghum-sudan hybrids and wild cherries.

There have been many questions about grazing sorghum. Grazing susceptible forages may be very dangerous. This is because cattle prefer grazing young leaves and shoots which could be high in HCN or Prussic acid. Also, this time of year producers have to be careful. The reason for this is that any condition that alters normal plant growth including drought or frost will usually cause higher levels of HCN.

Here are some other things to keep in mind.

1. Higher nitrogen rates will increase HCN potential.
2. There is more HCN in the leaves than in the stems. The topmost younger leaves contain more HCN than do the lower leaves.
3. Younger plants contain more concentration of HCN than older plants.

Here are some guidelines for avoiding Prussic acid poisoning.

1. Do not turn in hungry cattle. Feed some hay first then turn in cattle in late afternoon.
2. Follow fertilizer recommendations to assure adequate soil phosphorus. Avoid high levels of nitrogen.
3. Forage sorghums may not be safe for grazing until headed out.
4. Allow plants to reach at least 18 to 24 inches in height before grazing. HCN is present in large amounts only in the rapidly growing portion of the plant.
5. Use EXTREME CAUTION when allowing animals to graze after frost. A light frost may only kill the tops of plants. New shoots may develop which are high in HCN and these new shoots are preferred by livestock.
6. Plants that are safe to graze before the frost (above 18 inches or headed sorghum) can be safely grazed 7 to 10 days following a killing frost.
7. Plants that were too short for safe grazing before a killing frost should not be grazed for at least two weeks.
8. If you are not sure call someone who knows.

How much nitrogen to apply to my winter grazing? If you have cool season annual forages, apply 40 to 50 lbs. of nitrogen (N) per acre at planting or soon after the plants emerge to increase growth, tillering (thickening of the stand), and provide earlier grazing. A second application of 40 to 50 lbs. of N per acre should be applied in mid-winter to increase winter and spring forage production. If you have ryegrass in your forage program then a third application of 40 to 50 lbs. of N per acre may be needed in early spring.

When can I start to graze my winter forages? Grazing is one of the best uses for cool season annual grasses; however, the species differ somewhat in their tolerance of grazing. Ryegrass and rye are generally very tolerant of repeated grazing, while triticale generally does not regrow quickly. Barley, wheat, and oats have poor grazing tolerance.

Grazing can begin as soon as the plants are well-established and have accumulated four inches (or more) of growth. Begin with a light stocking rate and gradually increase as the growing conditions improve and forage growth rate increases. Consider the forage quality, nutritional needs of the animals, amount of forage present, availability, and the cost of other feed items when deciding how many animals to graze. Restricting the animal's time on the paddock, rotating animals between paddocks, or using strip grazing techniques will improve utilization and reduce damage to the stand. Grazing when the soil is too wet (when animals' hooves can bog in the soil) can severely damage winter annuals and will decrease potential production.

## **Answering the age-old question: Is cottonseed going to make my bulls infertile?      Davis, Stewart**

As winter slowly approaches and producers are planning their winter supplementation, the question comes in each year; can I feed whole cottonseed to my bulls or will it make them infertile? Our answer to this question is always absolutely not IF you stay within the recommended feeding levels. Currently, the recommended inclusion rate is 0.5% of body weight or 20% of the total ration. This recommendation is made, however, due to the amount of fat in whole cottonseed (~20%), rather than the amount of gossypol, which is a common driver for concern when feeding whole cottonseed. Gossypol is a yellow pigment that is found in the stem, leaf, lint, and seed of the cotton plant but is highly concentrated in the seed.

Gossypol acts as a natural defense agent for the cotton plant by promoting infertility in insects who consume it. Gossypol has been studied extensively for years and has shown to be toxic to monogastrics (humans, pigs, mice, etc.) and pre-ruminants (calves, sheep, goats, etc. who's rumen has not developed yet). Most research indicating issues when feeding whole cottonseed to bulls was conducted in the 1960's through the 1990's and included whole cottonseed at up to 40% of the diet which is much higher than the recommended level. Additionally, many researchers that reported issues were feeding Pima cotton, which is much higher in gossypol than Upland cotton and uncommon in the southeastern United States. Due to the lack of current research applicable to our

area, a study was conducted at the University of Georgia to determine if whole cottonseed has an effect on performance or semen morphology of 16-18 month old beef bulls.

Over two years, forty-six Angus and Red Angus bulls were transported in the fall to a research barn in Tifton, GA. The bulls were randomly assigned to one of three treatments: DD- 7 lbs. dried distillers grain, WD- 3.5 lbs. dried distillers grain and 3.5 lbs. whole cottonseed (0.33% of BW), or WW- 7 lbs. whole cottonseed (0.7% of BW). Bulls were weighed and given a breeding soundness exam on day 0, 30, and 60. The project was scheduled for 60 days to mimic a controlled breeding season as well as to allow spermatogenesis to occur.

Bulls that were fed whole cottonseed (WW) had a lower average daily gain than bulls fed dried distillers grain (DD; 2.12 vs 3.06 lb/d), but there were no differences in normal semen morphology. To pass a breeding soundness exam, bulls must maintain normal morphology equal to or greater than 70%. As shown in Table 1, all bulls in this study had normal morphology greater than 70%. From a nutritional standpoint, whole cottonseed is an excellent feedstuff when utilized correctly and due to high levels of cotton production in Georgia, whole cottonseed is often readily available. Nutritionally, it is high in energy (95% TDN), protein (24% CP), and fat (approximately 20%) and is a great supplemental feedstuff in times of limited or low quality forage availability. When the price of whole cottonseed allows it to be used, it can be an excellent feedstuff. If you are having issues with fertility in your bulls, make sure all the other aspects of bull management are in place (e.g. breeding soundness exam, injuries, etc.). Very rarely, if ever, will whole cottonseed cause infertility in bulls when fed properly.

Table 1. Percentage of normal spermatozoa

Treatment	Day		
	0	30	60
DD	80 %	74 %	77 %
WD	78 %	78 %	76 %
WW	79 %	75 %	74 %

Sweet Potatoes for Sale at our office

**Irwin County 4-H**  
107 West Fourth Street  
Ocilla, GA 31774  
229-468-7409

**SWEET POTATOES FOR SALE!!**

\*All Proceeds go toward 4-H Programming

**STOP BY TODAY**

**\$10 - 10 lb. bag**  
**\$30 - 40 lb. box**

UNIVERSITY OF GEORGIA  
EXTENSION



Come and visit – many good reviews of these sweet potatoes this year

2023 Annual Blueberry Update

UGA Bacon County Extension will be hosting the 2023 Annual Blueberry Update on Wednesday, January 4, 2023 from 9:00 a.m. until noon. The event will be held at The Blueberry Warehouse, 130 GA Hwy 32 Bypass, Alma, GA 31510. DEADLINE TO REGISTER: January 2, 2023 - Cost: FREE --includes lunch. Register here: [https://docs.google.com/forms/d/e/1FAIpQLSdPYr-oL0VD0dY\\_-7NonZU\\_-6QB-sa15Z6MCYXcoyi0kc3kXw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSdPYr-oL0VD0dY_-7NonZU_-6QB-sa15Z6MCYXcoyi0kc3kXw/viewform)

Sign Up Now for 2023 Southeast Regional Fruit and Vegetable Conference

Make plans to travel to Savannah, Georgia to attend the 2023 Southeast Regional Fruit and Vegetable Conference on January 5-8 and celebrate 21 years of the South's premier fruit and vegetable show! Find out more details about the conference at <https://seregionalconference.org/>. Registration information at <https://seregionalconference.org/registration-3/>

## SCHEDULE

### Thursday Jan 5, 2023

7:30 AM  
Registration Open  
8:00 AM to 5:00 PM  
Produce Safety Alliance  
Grower Training Course  
9:00 AM to 5:00 PM  
Bridging the GAPS:  
Approaches for Treating  
Irrigation Water On-  
Farm  
10:00 AM  
GFVGA Board of  
Directors Meeting  
10:30 AM to 5:00 PM  
SE Regional Educational  
Session

12:00 PM  
Lunch  
5:00 PM  
GFVGA Annual Business  
Meeting  
**Friday Jan 6, 2023**  
7:00 AM  
Registration Open  
9:00 AM  
SE Regional Trade Show  
Opens  
9:00 AM to 5:00 PM  
SE Regional Educational  
Sessions  
12:00 PM  
Lunch  
4:45 PM  
Welcome Reception

5:45 PM  
Live Auction  
6:15 PM  
Trade Show Closes  
Evening  
Dinner on Your Own  
**Saturday Jan 7, 2023**  
8:00 AM  
Awards Breakfast  
8:00 AM  
Registration Open  
9:00 AM  
SE Regional Trade Show  
Opens  
9:00 AM to 5:00 PM  
SE Regional Educational  
Sessions  
12:00 PM

Lunch  
2:00 PM  
Silent Auction Closes  
2:30 PM  
Trade Show Closes  
5:30 PM  
Reception by the River  
**Sunday Jan 8, 2023**  
8:00 AM  
Worship Service  
8:30 AM  
Industry Roundtable  
Discussion  
10:30 AM  
Conference Adjourns!

## 2023 Beltwide Cotton Conference

The National Cotton Council and its cooperating partners welcome all to the 2023 Beltwide Cotton Conferences January 10 through 12 (Tuesday through Thursday) at the New Orleans Marriott, New Orleans, LA. Three days of individual reports, panel discussions, hands on workshops and seminars are designed to provide attendees with information they need to help producers make key cotton production/marketing-related decisions. A dynamic program, along with the opportunity to network with peers from across the Cotton Belt, separate this conference from all others in agriculture. This conference will be educational, as well as enjoyable. Come, learn and experience all the sites and attractions that New Orleans has to offer. Mark your calendar and plan to attend. The website for more information is <https://www.cotton.org/beltwide/>.

## Peanut Pod Cast

Here is the link to the latest Peanut Pod Cast. You should be able access all of the previous pod casts also.

Anchor: <https://anchor.fm/macie-wheeler1/episodes/Episode-5---October-Frost--Grade-and-Yield-Decline-e1pj4c6>

Spotify: <https://open.spotify.com/show/3JSXq7ZTzhTVPUfUD8YxwR>

Apple Podcasts: <https://podcasts.apple.com/us/podcast/all-about-the-pod/id1638194766>

## Georgia Peanut Farm Show

Make plans to attend the 46<sup>th</sup> annual Georgia Peanut Farm Show and Conference scheduled for Thursday, Jan. 19, 2023, from 8:00 a.m. – 2:30 p.m. at the University of Georgia Tifton Campus Conference Center in Tifton, Georgia. The one-day show is free and open to all farmers and industry representatives to attend. Visit with nearly 100 agribusinesses and organizations in the peanut and agricultural industry, earn private and commercial pesticide applicator credits, as well as learn about cutting-edge research and developments during the University of Georgia Peanut Production Seminar and industry-wide sponsored Peanut Seed Seminar. Farm Show chairman Rodney Dawson is looking forward to the 2023 show. “I encourage farmers to attend this one-day show in Tifton,” Dawson says. “The knowledge they will gain from industry representatives and seminars is an investment in the future of their farm.” The Georgia Peanut Commission, in cooperation with OneBlood, will host a blood drive from 9:30 a.m. – 2:30 p.m. on Thursday, Jan. 19. At the close of Thursday, there will be nearly \$10,000 in door prizes presented to farmers, as well as a Grand Door Prize, vendor products, certificates and equipment. For more information on the show, contact the Georgia Peanut Commission office at 229-386-3470 or visit <https://gapeanuts.com/>.

## Nominations open for Outstanding Georgia Young Peanut Farmer Award      GA Peanut Commission

TIFTON, Ga.— Nominations are now open for the Outstanding Georgia Young Peanut Farmer. The state winner will be announced at the Georgia Peanut Farm Show on Thursday, Jan. 19, 2023, in Tifton, Georgia. The award is sponsored by the Georgia Peanut Commission and BASF. The Outstanding Georgia Young Peanut Farmer Award is based upon the applicant’s overall farm operation; environmental and stewardship practices; and leadership, civic, church, and community service activities. “We have so many young peanut farmers making a difference in their communities and I consider this awards program a great opportunity to recognize one young peanut farmer for their contributions to the agricultural industry,” says Joe Boddiford, chairman of the Georgia Peanut Commission. The award is open for any active Georgia peanut farmer who is not over 45 years of age, as of Jan. 19, 2023. An individual may receive the award only once. There is no limit on the number of applicants from each county in Georgia. “BASF is honored to be a sponsor of the Outstanding Georgia Young Peanut Farmer Award,” says Dan Watts, district manager of BASF Crop Protection Products. “We are committed to agriculture and bringing new innovative solutions to producers that will allow them to continue to be successful.” Applications are due to the GPC office by Monday, Dec. 2, 2022. The award application is available online at [www.gapeanuts.com](http://www.gapeanuts.com) or by contacting Joy Crosby at 229-386-3690 or [joycrosby@gapeanuts.com](mailto:joycrosby@gapeanuts.com).

### 1. Use deep tillage to disrupt hard pans.

Wheat responds well to deep tillage when hard pans are present in our soils, particularly sandy soils. Prepare soils for planting by first tilling with a V-ripper, chisel plow, paraplow or subsoiler. Firm the seed bed with a cultipacker or small, light disk to reduce deep ruts from planting. Till the soil only to a depth necessary to break the hard pan. Simple disking is not as effective as deep tillage but it is preferred over no-tilling wheat. No-till wheat can be productive (mostly on heavy, clayey soils) but the yields, in general, are 5 to 25 bushels per acre less than conventionally tilled wheat.

### 2. Plant high yielding, pest resistant, well adapted varieties.

Yield data for all the recommended varieties for Georgia are found in the current Georgia Wheat Production Guide or Georgia Small Grain Variety Performance Test Bulletin ([www.swvt.uga.edu](http://www.swvt.uga.edu)). Be sure to note each of the variety characteristics of the variety you choose such as vernalization, maturity, lodging resistance, pest resistance so as to manage each variety properly for highest yield.

**Check with your local county Extension office for the latest information on recommended varieties. While some may perform to satisfactory levels, others have characteristics that may be too difficult to overcome with good management.**

### 3. Plant the appropriate seeding rate for your planting method.

Wheat can be successfully established by either drilling or broadcasting the seed and incorporating into the soil to a shallow depth of **1 to 1.5 inches**. In general, drilling wheat yields 7 to 8% more yield. If incorporation of broadcast seed is poor, then yield differences are even greater. In a drill, plant 22 to 25 seeds per row foot (7.5- inch drill width). This is equivalent to approximately 35- 40 seeds per square foot. Use 10 to 15% more seed when planting after the recommended planting window. When broadcasting the seed, calibrate the equipment to plant 40 seeds per square foot. If broadcasting, be careful in covering seed. Disk harrows can easily bury seed too deeply, and vertical tillage can leave seed on top of the ground. Field cultivators provide shallow incorporation and are more dependable in depth. When possible, always use high quality, certified seed and save a tag of each separate lot for good record keeping.

Remember, bin-run seed can present more of a problem with contamination, loss of germination and/or mix up in varieties. Also, be aware that fungicide seed treatments are helpful during warm, wet fall temperatures. See UGA pest control handbook for labeled treatments and rates.

### 4. Plant during your recommended planting period.

The recommended planting dates for Georgia are the seven days prior to and after the five-year average first frost day for your farm. Varieties with long vernalization requirements should be planted in the first seven to ten days prior to the first frost day. Extremely early varieties with short vernalization requirements must be planted in the very last days of the recommended window. These varieties will suffer winter injury if planted too early as they would enter the jointing phase (Zadoks GS 32) prior to the time that sub-freezing temperatures generally do not occur.

### 5. Scout fields for early insect infestations and control potentially damaging insects.

Hessian fly and aphids are the two insects generally causing yield loss in the fall. Control insects by either planting resistant varieties and or using an approved insecticide. Protect wheat from Hessian fly by planting resistant varieties or treating seed either with Cruiser® (thiamethoxam), NipsIt Inside® (clothianidin) or a brand of imidacloprid. See the current Pest Control handbook for proper rates: <https://extension.uga.edu/content/dam/extension/programs-and-services/integrated-pest-management/documents/handbooks/2021-pmh-comm-chapters/SmallGrain.pdf>

These seed treatments are also effective against aphids. Aphids vector the Barley yellow dwarf virus and it is important to protect wheat from this virus. For both insects, scout wheat fields 25 to 35 days after emergence for the presence of either aphids or Hessian fly. Apply a foliar approved pyrethroid insecticide if either is present and no seed treatment has been used. Again, scout just prior to topdressing. If aphids are present, then combine insecticides with the nitrogen fertilizer to prevent spring infestations. Thresholds and rates are listed in the Pest Control handbook and Wheat Production Guide:

<https://grains.caes.uga.edu/content/dam/caes-subsite/grains/docs/wheat/2020-2021-Wheat-Production-Guide.pdf>

Control aphids when there are:

2 per row foot in the seedling stage, or

6 per row foot when plants are 6-10 inches

2 per stem at stem elongation 5 per flag leaf at boot stage

10 per head including flag

Do not treat in the soft dough stage.

#### 6. Control weeds early to prevent yield loss. (PLEASE READ THE LABELS)

Fields should be free of weeds, especially ryegrass and radish at time of planting. Then control ryegrass, wild radish, wild turnips, onions, garlic, henbit, chickweed, and vetch early (usually around Christmas) for maximum weed control efficiency and high yield. Waiting to control these weeds till the spring causes considerable yield loss due to lost tillers and reduced herbicide effectiveness. Scout wheat 21 to 28 days after emergence. Note any weed infestations. Control broadleaf weeds when weeds are small (i.e. 2 to 3 inch wild radish, mustard). Products such as Quelex 0.2 WG or Harmony Extra with TotalSol® are preferred due to their effectiveness and a large window of safe application; however, these herbicides often miss radish larger than 3 inches. For larger radish, these herbicides should be mixed with MCPA and applied at the appropriate wheat stage of growth. Do not apply 2, 4-D on wheat that is not fully tillered or injury will occur. Also, do not apply 2,4-D to wheat beyond the first hollow stem phase or injury will occur.

Control non-resistant ryegrass once plants emerge but before the first tiller for maximum control. Products such as Axial Bold.0.685EC®, Osprey 4.5 WDG® and PowerFlex 13.13 HL WDG® are effective. Osprey and PowerFlex also have activity against small broadleaves. For residual control of ryegrass, Zidua 85 WG® provides the greatest opportunity if activated prior to ryegrass emergence and can be applied from spike through the 4 leaf wheat stage. For fields with ryegrass resistant to postemergence herbicides, additional steps are needed. Again, Zidua offers excellent ryegrass control if the herbicide is activated prior to the weed emerging. Axiom 68 WG is fair on ryegrass and is labeled and best used at the spike stage. Fierce 76 WDG is labeled for spike thru the 2-leaf stage. Do not apply preemerge or to broadcast seeded wheat due to varying plant emergence. Please read the label carefully on any chemical as to avoid any injury on your wheat. See the current Pest Control Handbook or Wheat Production Guide for specific remarks, rates and timing information.

#### 7. Soil test and apply all nutrients according to recommendations for high yield.

Wheat should be planted in soils that have a pH of 6.0 to 6.5. If fertilizing for the wheat crop only, apply all phosphorus and potassium in the fall during seed bed preparation according to soil test recommendations. Nitrogen should be used in the fall to encourage tiller production prior to the onset of winter. Tillers produced in the fall generally produce the most grain per unit area (**generally fall tillers account for 85% of the final yield**). It is important though, not to over-fertilize with nitrogen as it may cause excessive growth and result in winter injury. In general, apply N (based on the previous crop rotation) as follows:

Cotton: 35 to 40 lbs ac

Corn: 30 to 35 lbs ac

Fallow: 25 to 30 lbs ac

Soybeans: 15 to 20 lbs ac

Peanuts: 0 to 10 lbs ac

**NOTE: If using poultry litter, obtain a nutrient analysis so as to adjust the rate of application according to the nutrient content. In general, 2 tons per acre is sufficient for fall growth. Applying more may increase risk to excessive growth and winter injury.**

#### 8. Topdress wheat with nitrogen in a timely manner in late winter and early spring.

During the later days of January, begin counting tillers to determine the need for additional nitrogen applications for the proper tiller production. If tillers counts (a stem with at least three leaves) exceed 80 or more per square foot at Zadoks GS 25, then apply all remaining nitrogen at GS 30 (stem elongation). Usually this occurs during early to mid-February in the southern half of Georgia. In extreme N. Ga, stem elongation may not occur till early March.

If the tiller count is less than 80 per square foot, then apply 30 to 40 lbs of N per acre to encourage tiller production prior to the onset of stem elongation. Complete the topdressing prior to 1<sup>st</sup> node stage. Nitrogen rates will vary according to the soil type, variety lodging resistance, irrigation capability, previous crop, etc. In general, total N rates range from 100 lbs N per acre to 120 lbs N. Be sure to include sulfur with the nitrogen. Sulfur deficiencies occur when the ratio of nitrogen in a tissue test exceeds 18:1. Tank mix an approved pyrethroid if aphids are present to reduce the risk to the barley yellow dwarf virus. Supply 15 to 20 lbs of S per acre if soils are sandy.

#### 9. Scout fields for diseases.

Powdery mildew, stripe rust, leaf rust and leaf and glume blotch are diseases that can be controlled with an approved fungicide application. Begin scouting fields closely when the plant starts jointing reaches GS 32-37 (Feekes GS 7-8). In general, powdery mildew and stripe rust will likely appear first. If no disease is present by Heading GS 58 (Feekes 10.5) but expected then apply the proper rate of your fungicide choice to maintain the high yield potential and test weight. See the current Pest Control Handbook or Wheat Production Guide for rate and timing information.

Another disease that has become worse in the past few years, Fusarium Head Blight aka scab, can cause yield loss, low-test weights, low seed germination, and contamination of grain with mycotoxins. Yearly incidence is tied to weather during flowering. Fungicide sprays specific for scab are useful but timing is critical.

FHB is best recognized on emerged immature heads where part or the entire head appears prematurely bleached. Usually a pinkish/orange mycelium is present.

#### 10. Harvest as early as possible.

Soft red winter wheat easily sprouts when the grain is exposed to rainy conditions after maturity. Harvest the crop as soon as possible to avoid field losses and to maintain good quality grain. Dry the grain if harvesting above 15% moisture. Usually, wheat can be easily harvested between 16-18% moisture.

#### **Soil Testing – Now is A Good Time**

While you are in the field getting your crop harvested you have easy access to the entire field to pull samples. The field history is also fresh in your mind and those trouble spots can be identified and sampled separately. Now is a good time (the preferred time) of the year to take soil samples. Soil samples pulled now will show a truer reading than a sample in deep winter. Harvest is past the mid-point and for some nearing completion and our eyes will soon turn toward next year. The soil should be dry enough to till when sampling. The \$6 fee for commercial crops which drops to \$5 fee per sample if you go over 100 samples. We have soil bags and soil probes available for your use. We also can get you UGA soil test recommendations when you take grid samples on your farm.

On the soil bag, please fill out your name and address completely. You will also need to write the name of the crop you intend to plant. The examples listed below gives you an idea of what needs to appear on the soil sample bag. If you are sampling for pasture please indicate what type of pasture. If your sample is irrigated cotton please state your yield goal. If it is dry land cotton please also write this on the bag. If the sample is corn please indicate if it is dry land or irrigated. Most other crops, turf, fruits or ornamentals just need the actual name of the crop to be grown. We will help you when you arrive with your samples.

Below the crop line on the soil bag is the sample number line. Please write your samples in no more than three characters or digits. An example is A13, B12, 145. You may use letters and/or numbers just don't go over three characters or digits.

#### Sampling Instructions

When soil samples are submitted to the laboratory for analysis, reliable analytical results are necessary for making limestone and fertilizer recommendations. Any soil test results are no better than the sample. To get a representative sample follow these steps for sampling.

- Use a sample tube, auger, spade, trowel or other tool, which can take a thin vertical slice of soil to the desired depth.
- Take at least 15 to 20 cores of thin slices at random over the field. One sample should cover no more than 15 acres. Homeowner samples will need to represent the test area. We have informational pamphlets available for you. Place each core in a plastic bucket and mix the soil through.
- The area to be sampled should have been fertilized and limed uniformly in the past. When sampling avoid small areas where soil conditions are different. In these areas sample separately.
- Sample depth will vary depending on the crop. The following sampling depths are recommended.

Plowed Fields-----plow depth	No-tilled fields----4 inches	Pastures-----4-6 inches
Orchards-----8-12 inches	Lawns-----4 inches	Gardens-----6 inches

*As always for more information contact your Irwin County Extension Office.*

*Thank You, God Bless You,  
Phillip Edwards - Irwin County Agent*



*The mention of trade names in this newsletter does not imply endorsement by the Georgia Extension Service, nor criticism of similar ones not mentioned.*

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