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College of Agricultural and Environmental Sciences
Cooperative Extension

Lee County Ag Newsletter

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Soybean Green Stem (Prostko)

Last week, I received a few phone calls about soybean green stem (SGS) (Figure 1). The causes of SGS are not well understood but are likely attributed to various stresses that can effect soybean pod development. Stresses include problems such as stinkbugs, aphids, thrips, disease, viruses, and environmental. The use of foliar fungicides, especially the strobilurins, have also been associated with SGS. Cultivar may also be important as well.

Herbicides such as paraquat, although very useful for soybean leaf defoliation, have been inconsistent in their effect on SGS. At this time of year (i.e. harvest), the only management tactics for SGS are making sure combine teeth are sharp, reducing combine speeds, and possibly delaying harvest until when/if/maybe a hard freeze occurs.

For more information, check out this recent (September 2021) publication about Green Stem Syndrome in Soybean from Oklahoma State University. <https://extension.okstate.edu/fact-sheets/print-publications/pss/green-stem-syndrome-in-soybean-pss-3003.pdf>



Georgia Grain News-Rome Ethredge

Ga Corn Short Course

Lots of good info will be presented at this year's short course in Tifton on Dec 14. Please preregister at the link below if possible. Also, some good grower **door prizes** at the end. Certified crop advisor credits will be earned:

(Nutrient Management CEUs: **0.5**
Soil & Water Management CEUs: **0.5**
Integrated Pest Management CEUs: **1**
Crop Management CEUs: **0.5**
Precision Ag CEUs: **0.5**)

Also Ga Pesticide License credits will be earned.

2022 GA Corn Short Course and Annual Meeting Ga Corn Growers

Dec 14 at the TC Conference Center in Tifton

8:00-8:15 – Registration

8:15-8:30 – Welcome UGA Crop and Soil Science Dept Head, Dr. Timothy Grey

8:30-9:00 – Dr. Simer Virk – **Precision Ag in Corn production**

9:00-9:30 – Dr. Eric Prostko – **Weed control in Corn**

9:30-9:45 – Break – visit with sponsors

9:45-10:15 – Dr. Henry Sintim – **Optimizing nutrient management for corn production**

10:15-10:45 – Dr. Wesley Porter – **Irrigation management for Corn production**

10:45-11:00 – Break – visit with sponsors

11:00-11:30 – Dr. Robert Kemerait – **Disease and Nematode control for corn**

11:30-12:30 – Lunch and Updates from:

NCGA Dir. **PAC and Political Strategy**, Ann Thompson; Chairman, Georgia Corn Commission and the President Rodney Harrell, GCGA; UGA Interim Corn Agronomist, Rome Ethredge; **Recognition of Corn Yield Winners**; Dr. Dewey Lee, State Exec. Dir., **Presentation of Door Prizes**.

Pre-register at:

https://uga.ungerboeck.com/prod/emc00/register.aspx?OrgCode=10&EvtID=12232&AppCode=REG&CC=120121626516&accountcode=*acctcode or register on-site.

Save the Date

The **2022 Small Grains/Soybean EXPO** will be held on Wednesday, January 5 2022, at the Georgia National Fairgrounds in Perry GA. Terry Hollifield reports they're finalizing the program and we'll get it out soon.

UGA Programs for Controlling Ryegrass and Wild Radish in 2021/2022 Wheat

University of Georgia; A. S. Culpepper and J. C. Vance, Tifton GA

Ryegrass is the greatest weedy threat to wheat production in Georgia. Most ryegrass escapes are a result of 1) planting into fields already infested with emerged ryegrass and/or 2) making herbicide applications after the ryegrass is too large to control. However, herbicide-resistant ryegrass has become common with numerous populations being confirmed with resistance to Osprey, PowerFlex, Axial XL, and Hoelon. Ryegrass will likely achieve resistance to herbicides quicker than any other plant, even Palmer amaranth. Aggressive resistance management programs must be implemented; ignoring this warning may destroy long-term sustainability of grain production in a given field. Proper management includes planting into a weed-free seedbed, growing a healthy vigorous crop, identifying and treating ryegrass early (Tables 1 and 4), tillage including deep turning when feasible, crop rotation, and making wise resistance management decisions (Table 2).

Growers must avoid treating fields two years in a row with the same or similar herbicide chemistry.

Hoelon, Axial XL, Axial Bold
Similar Chemistry

Osprey & PowerFlex
Same Chemistry

Fierce & Zidua
Contain Same Chemistry

Table 1. Ryegrass Management

Scenario and Stage of Wheat Growth	Control Options	Comments
Emerg ed ryegrass before planting	Tillage or Roundup followed by Gramoxone	Apply Roundup 5 or more days before planting, follow with Gramoxone at planting. Deep turning is also effective when erosion is not a concern.
After planting when 80% of the wheat seeds have germinated with shoots at least ½" long. Must be activated before ryegrass emerges for residual control.	<u>Zidua 85 WG</u> : 0.75-1.25 oz/A <u>Zidua 4.17 SC</u> : 1.25-2.2 fl oz/A	Label prohibits true PRE. Plant wheat seed at least 0.75" deep; do not apply to broadcast seeded wheat. Zidua at 1.0 oz/A (85 WG) or 1.75 fl oz/A (4.17 SC) is ideal for most soils; higher rates can be used for medium textured soils or for POST applications.
After planting when 95% of the wheat is in the spike to 2-leaf stage. Apply before ryegrass is ¼" with activation needed for residual control. <i>Injury should be expected!</i>	<u>Fierce 76 WDG</u> : 1.5 oz/A <u>Fierce 3.04 EZ</u> : label expected in 2022 at 3 fl oz/A	Apply in water to wheat planted at least 1" deep; do not apply to broadcast seedings. <i>Critical tool for fields infested with populations resistant to POST herbicides. Avoid sands.</i> Do not apply Fierce EZ until labeled.
Wheat between 3-leaf and jointing; ryegrass ≤ 1 tiller. Resistant populations are present in fields across the state.	<u>Axial Bold</u> : 15 oz/A, <u>PowerFlex HL</u> : 2.0 oz/A, or <u>Osprey</u> : 4.75 oz/A	Axial Bold does not require an adjuvant. Powerflex requires crop oil concentrate at 1% v/v. Osprey requires nonionic surfactant 2 qt/A + approved ammonium nitrogen fertilizer at 1-2 qt/A.

Table 2. Critical Thinking Points for Ryegrass Control

1. ABSOLUTELY NO ryegrass emerged when planting.
2. For normal developing wheat, postemergence ryegrass herbicides **should be applied around Christmas.**
3. Suggest not mixing ryegrass herbicide(s) with 2,4-D, MCPA, Quelex, or NITROGEN as antagonism can occur!!!
4. Zidua must be activated before ryegrass emergence but label does not allow preemergence application.
5. Fierce must be activated prior to weeds reaching ½ inch; be prepared for some crop injury.



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Nick T. Place, Dean and Director



Wild radish is the most problematic broadleaf weed infesting nearly every Georgia wheat field (pictures above). Its seedpods often contaminate harvested grain thereby reducing profits. The seedpod usually does not shatter, but instead, dries down and fragments into small sections. These seedpod sections are very close in size and shape to wheat seed and are difficult to remove in cleaning (right). Managing wild radish in wheat is not difficult if timely control decisions are implemented (Tables 3, 4, & 5).



Table 3. Wild Radish and Other Broadleaf Weeds

Scenario and Stage of Wheat Growth	Control Options	Comments
Emerged broadleaf weeds, including radish, before planting.	Tillage or Roundup mixtures	Quelex or Harmony Extra TS plus Roundup applied before planting provides control of most weeds without plantback concerns.
Wheat between 2-tiller and full tiller. Radish < 8" diameter, henbit, chickweed, most other broadleaf weeds.	MCPA (16 oz/A) + Harmony Extra TS <i>OR</i> Quelex 0.75 oz/A	MCPA rate based on 3.8 lb ae/gal. 2,4-D could replace MCPA <u>at full tiller wheat</u> . Many Harmony type products are available; see label and Table 5.
Early flush of broadleaf weeds when the initial herbicide application is needed before 2-tiller wheat.	Harmony Extra TS <i>OR</i> Quelex 0.75 oz/A (2-leaf - 2 tiller wheat) <i>followed by</i> MCPA 16-20 oz (2-tiller – full tiller wheat)	Sequential applications may be needed to control early emerging intense populations. 2,4-D could replace MCPA <u>at full tiller wheat</u> . Many Harmony type products are available; see label and Table 5.

Table 4. Both Ryegrass and Wild Radish

Scenario and Stage of Wheat Growth	Herbicide Option	Comments
Wheat between 3-leaf and jointing; radish < 6" diameter and ryegrass < 1 tiller.	PowerFlex HL 2.0 oz/A	Add crop oil concentrate at 1% v/v. Harmony Extra TS can be added to improve broadleaf weed control.
Wheat between 3-leaf and pre-boot, apply Axial Bold to control ryegrass. Follow up with a broadleaf treatment between 2-tiller and full-tiller.	Axial Bold 15 oz/A <i>followed by</i> MCPA + Harmony Extra TS <i>OR</i> Quelex	Wait at least 7 days between applications. No adjuvant required with Axial Bold. Ideal rate for MCPA = 16 oz/A; Quelex = 0.75 oz/A; Harmony Extra TS = see table 5.

Table 5. Critical Thinking Points for Broadleaf Weed Control

1. For normal developing wheat, postemergence broadleaf herbicides **should be applied around Christmas**.
2. Harmony Extra Total Sol rate ranges from 0.45 to 0.9 oz/A; 0.75 oz/A ideal usually. Other formulations exist.
3. 2,4-D is better than MCPA on larger weeds but MCPA poses less crop injury potential, so be timely and use MCPA.
4. MCPA offers 2 to 3X more residual radish control (only about 10 days though) when compared to Quelex or 2,4-D

Crop Budgets

The 2022 Row Crop Enterprise Budgets have been posted online at <https://agecon.uga.edu/extension/budgets.html>

If anyone needs a printed copy of these budgets,
please call me.-Doug

A Short Crop Gets Shorter-Lenny Wells

Nov 11, 2021

The never-ending array of challenges each pecan crop presents continues with the 2021 pecan crop. From the beginning this year's crop has appeared late and short. The intermittently cold spring pushed budbreak back and greatly slowed the progression of foliage expansion, and thus flowering and crop development by at least 10 days. This may have led to some pollination problems which limited crop set. Following crop set in early summer, I noticed that throughout the state, young orchards (30 years and under) appeared to have a pretty good crop while most older orchards appeared very light to almost blank. Every crop gets shorter as the season progresses but when the season starts out with a limited crop as we saw this year, that crop gets shorter quickly. From my perspective the 2021 crop is setting up to be the shortest crop Georgia has seen since perhaps 2006 in which we produced 42 million lbs as a state.

Frequent rainfall throughout the growing season led to scab issues and we lost some nuts to scab but considering the scab pressure we saw this year was at least as bad, if not worse, than what we saw in 2003 and 2013, growers did an excellent job of minimizing the damage from scab. A bigger issue for the 2021 season that came along with the frequent rainfall was the extended periods of cloudy weather. I will have a more detailed explanation of this in the upcoming issue of the Pecan Grower magazine but basically, solar radiation was reduced throughout the growing season. However, the event which did the greatest damage across the state appears to have occurred over a 7 day period between Sept. 16 – Sept. 22. I mined weather data from various UGA weather stations across the state and found that, at all locations examined, during this 7 day period, solar radiation was half of what it should have been during that time. This occurred at a critical juncture in nut development.

Kernel filling normally takes place from mid August-mid September for mid-season maturity varieties. Because the crop was around 10 days late, this had the problem event occurring right during the heart of kernel-fill, which is a very high energy demand period in the development of the crop. Pecan trees, like all plants, require adequate sunlight for photosynthesis to drive these processes. When this key resource

is cut in half at such a critical time, the trees simply cannot fill the crop as they should. As a result we are seeing a lot of light nuts on mid season varieties blowing out of the harvester or in the cleaning plant. This has reduced the volume of the crop greatly, even from orchards that appeared to have a good crop.

Early maturity varieties like Pawnee and Elliott escaped this problem because they had largely finished filling before the extended cloudy weather of that 7 day period in mid-September. The mid-season varieties seem to have suffered most on trees that had a heavy crop load.

Normally as we approach mid-November most of our varieties are ready to harvest and we see a large volume of nuts already harvested. This year, however, we have seen relatively little crop volume come in. Many growers are saying they are ending up with about 30% of a normal crop from harvested orchards of mid-season varieties, which make up a large percentage of Georgia's orchards. Some growers plan to delay harvest until a frost or freeze helps the remaining nuts open so they can minimize harvest costs by only having to harvest over the orchard one time.

Back in July the Texas pecan estimate had Georgia at 85 million lbs. This appeared possible to me at that time but my number throughout the season was more like 70-75 million lbs. We never really know until the crop is in, but given how things have played out, I now think it unlikely that we make more than 60 million lbs and we may see that number fall even further, below 50 million lbs for the first time in 15 years.

Merry Christmas!

I am scheduling production meetings and will get the list out to you after the first of the year. Provided there are no last-minute policy changes due to a severe Covid outbreak, I look forward to seeing you at meetings next year. I wish all of you a Merry Christmas and a Happy New Year!

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