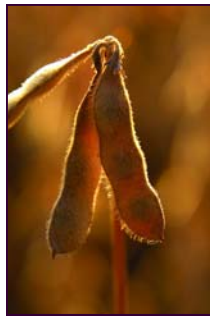




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Putting
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Georgia Soybean News

FALL 2018

Late Season Soybean Management Considerations

- Mark Freeman, UGA East Georgia Area Agronomist

With the row crop season winding down, late season management strategies are always important for preserving and maximizing yields. Scouting for and managing late season insect pests and correctly managing irrigation practices can greatly impact yields and profits to growers.

In recent years there have been many advancements in irrigation scheduling methods and technologies in soybean. However, many growers still opt for using a checkbook method or a “by feel” approach to schedule irrigation events. Regardless of which irrigation management approach you utilize it is important to understand soybean growth and development and the most critical growth stages for water demand and irrigation requirements. Peak water demand for soybean occurs from beginning seed (R5) to full seed (R6). During these growth stages it is important to eliminate all water stress and to ensure plants do not wilt. If plants do wilt or show signs of water stress yield losses have most likely already occurred. Water demand decreases following these growth stages and determining when to terminate irrigation applications while maximizing yields can be somewhat difficult.

One option is to assess the crop and soil moisture conditions when 50% of the pods have seeds that are fully formed and touching inside the pods. If soil moisture is adequate at this time the irrigation can be terminated. If soil moisture is inadequate or drying quickly, one additional irrigation application should be applied. The table below was adapted from the University of Arkansas and shows water requirements for soybeans at different growth stages and could be used as a guide for irrigation needs throughout the year. For an in depth listing of soybean growth stages and irrigation demand please refer to the [2018 UGA Soybean Production Guide](#) - available from your local county agent.

Growth Stage	Water Requirement	
	Per day	Per week
	----- inches -----	
Germination/Seedling	0.05 to 0.10	0.35 to 0.70
Vegetative Growth	0.10 to 0.20	0.70 to 1.40
Flower to Full Seed	0.25 to 0.35	1.75 to 2.45
Maturity to Harvest	0.05 to 0.20	0.30 to 1.40

Soybean Field Observations from Southwest Georgia

- Rome Ethredge, Seminole Crop Consulting

Early system, mostly maturity group 4, soybeans are currently being harvested after some rain delays and delays as rain impeded corn harvest since the same combines are used for both. Good yields in the 80 bushel range, for whole fields, are being achieved. Pests treated were leaf diseases, loopers (and VBC), kudzu bugs although they weren't a real big problem this year, stink bugs including very late but necessary sprays for red banded stink bugs. Some were planted April 13 and were ready to desiccate in 129 days.

Full season beans are looking very good. About nose high, loaded with pods and will soon hit R6 stage. Similar pest problems as early system beans but diseases not as bad. Loopers kept coming back and were sprayed 3 times in some fields.

Ultra late soybeans planted after corn harvest in late July and early August look fine and growing well. Hitting 50 day mark. Some thigh high and at R4 growth stage. Dimilin/Boron sprays going out. Loopers had to be treated a couple weeks ago in many fields. Whitefly levels thankfully much lower than previous few years.

Overall, it looks like a good soybean year so far. But in agriculture we're only 3 days away from a drought and in just a few days, a disease or insect pest can severely impact yields so we've got to stay alert and stay in the fields.



Ultra late soybeans planted after corn harvest; knee high and at R4 stage, podding.



Kudzu bug has not been a big problem this year due to naturally occurring disease and insecticides. Other pests such as Loopers and red banded stink bugs have. Surprisingly, whiteflies have been low.



Group 4 Early system beans are now being harvested with 80 plus bushels per acre, whole field yields.

UGA Hosts International Soybean Conference

On August 29-30, Georgia became the epicenter for international soybean science. More than 300 plant breeders, molecular biologists and commercial researchers converged on Athens, Georgia, for the 17th Biennial Conference on the Molecular and Cellular Biology of the Soybean.

The meeting showcased new research in gene characterization, genome editing, soybean engineering, and soybean biology and environmental interaction. Presenters came from around the globe and were hosted by University of Georgia soybean scientists and College of Agricultural and Environmental Sciences professors Scott Jackson, Zenglu Li and Wayne Parrott.

“We really had some of the most cutting-edge concepts and ideas in soybean biology presented this week,” said Jackson, of the UGA Center for Applied Genetic Technologies. “From increasing yield to achieving insect and disease resistance, understanding the molecular biology of the soybean is going to help us build a more bountiful and sustainable food supply as the world’s population grows.”

“The soybean is a key crop for meeting the nutritional needs of the increasing global population,” Parrott said. “A thorough understanding of soybean genetics is important for the development of new soybean varieties to meet the nutritional, environmental and industrial requirements that soybeans could fulfill over the coming decades.”

In addition to the four-day molecular biology conference, UGA’s soybean scientists, led by Li, hosted the two-day 2018 Soybean Breeders Tour. The tour highlighted UGA’s soybean research and UGA Cooperative Extension work. It attracted about 160 soybean breeders and soybean specialists.

“We wanted to share the work we’re doing with soybeans at UGA,” Li said. “Researchers at UGA are focused on both the basic and applied sides of soybean research, and the Soybean Breeders Tour allowed us to showcase how basic and applied soybean research come together to benefit our soybean growers and to improve the security of our food system.”

For more information about soybean breeding and molecular biology at UGA, visit cropsoil.uga.edu.

Summarized from an article by Merritt Melancon, UGA CAES news editor.



US Farmers Use Crop Rotation to Maximize Sustainable Production

- Doug Winter, American Soybean Association

Ask United States soybean farmers about crop rotation, and they will likely tell you it is one of many tools they use on their farms each season to improve soil conditions and increase yields. Rotating crops is as simple as switching fields of corn and soybeans each year, as well as mixing in other crops or cover crops. The practice prevents soil depletion by one crop. Corn for instance, takes nitrogen out of the soil, while soybeans add it back in. Switching between the two crops keeps the soil balanced and healthy.

Nearly all farmers rotate the crops to benefit their operations: Ninety-four percent of soybean hectares in the U.S. are continuously rotated.¹ Alabama farmer Annie Dee uses crop rotation on her farm to leave her land better than she found it. Kayla Hamilton, a farmer from Texas, shares that mixing cover crops into her rotation helps her farm with moisture retention, preventing erosion (or the runoff of soil with rainwater) and pest control.

I've found use of crop rotation on my farms has been very effective in several areas. Nutrient accumulation from nitrogen fixation in soybeans has reduced the amount of commercially produced fertilizers that I have to use in the following year's corn crop and potash retention from wheat straw in rotations that include wheat have both had positive effects.

Also, pest control is a big advantage of rotations with particular respect to insect and crop disease host elimination. One of the other areas I've found crop rotations help in is allowing for a larger variety of herbicides to use in various crops which allows me to change modes of action and thereby slow down development of weed herbicide resistance. All of these advantages plus the improvements to soil health make crop rotation one of the most beneficial, simple, and low-cost tools we can use on our farms.

While the yield and sustainability implications of crop rotation have long been known, researchers at the University of Illinois College of Agricultural Consumer and Environmental Sciences (ACES) have released new research on how crop rotation affect greenhouse gas emissions as well. The team studied greenhouse gas emissions and yield from fields that had been maintained as continuous soybean, rotated corn-soybean, or rotated corn-soybean-wheat, under tillage and no-till management for 20 years.

ACES scientists determined that crop rotating with corn and soybeans reduced nitrous oxide emissions 35%. Nitrous oxide is a byproduct of the process of denitrification, or when the bacteria in the soil break nitrates down into inert nitrogen gas. That inert nitrogen has a global warming potential almost 300 times higher than carbon dioxide. Typically, soybeans are not fertilized and don't add to nitrous oxide emissions.

In addition to nitrous oxide reduction, the study also found that crop rotation produced an average yield benefit of more than 20 percent.

(Courtesy of USSOY Fresh From The Field Update, September 17, 2018)



Late Season Insect Considerations

- Mark Freeman, UGA East Georgia Area Agronomist

Insects can cause serious damage to soybeans late in the growing season. It is important to understand what the potential risks are late season and what insects are most likely to appear at different periods of the growing season. Scouting the crop, proper pest identification, and using correct economic thresholds are all essential parts of a proper pest management program. The table below can be used as a guide to show what insects are likely to be problematic late in the season. For more information on economic thresholds and insect control options please refer to the [2018 UGA Soybean Production Guide](#) - available from your local county agent.

Production System	Planting Date	RISK		
		Kudzu Bugs	Stink Bugs	Foliage Feeders
Early Season	April	High	Moderate	Low
Full Season	May	Moderate	Moderate	Moderate
Double Crop	June	Low	High	High
Ultra-Late	July/Aug	Low	High	High

Table Credit: Phillip Roberts

USDA Raises US Soybean Projections

By: John Baize, John Baize & Associates

August 26, 2018

This month, the United States Department of Agriculture (USDA) raised its outlook for U.S. corn and soybeans by predicting above average yields for both crops. This exceeds the already-high expectations the organization had currently posted for this growing season.

Due in part to largely favorable weather conditions across much of the U.S. this growing season, 2018 soybean production is projected to be more than 4.5 billion bushels (based on yields of more than 51.5 bushels per acre). Earlier analyst projections were for 4.4 billion bushels per acre based on yields of 49.6 bushels per acre.

This latest forecast is one more reason the international buyers of U.S. Soy can be confident in U.S. soybean farmer's ability to provide an abundant, high-quality crop.



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Trump Appoints Angle to be NIFA Director for Six Years

September 6, 2018

President Donald Trump today appointed J. Scott Angle to be director of the National Institute of Food and Agriculture, a division of the Agriculture Department, for a term of six years.

Angle was the president and CEO of the International Fertilizer Development Center, an organization based in Muscle Shoals, Ala., that helps agriculture in developing countries use fertilizer and other technologies.

Angle assumes the position of NIFA director, which does not require Senate confirmation, just as Agriculture Secretary Sonny Perdue has announced controversial plans to move most of the NIFA staff to a location outside the Washington area.

Source: www.pilotgrovecoop.com/news/story.php?id=101423.

Commission Members

Greg Mims, Chairman
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Mark Ariail
Carnesville, GA

Joe Moore
Resaca, GA

Brian Ogletree
Milner, GA

Tony Smith
Arlington, GA

Billy Skaggs
Executive Secretary



**Georgia
Soybean
Commodity
Commission**

Putting Soybean Checkoff Dollars to Work

The soy checkoff empowers U.S. soybean farmers with tools that will help them maximize their profitability. Whether it's a database of high-protein-and-oil soy varieties, the results of soy-checkoff-funded research or interviews with experts, the checkoff spreads the word about cutting-edge tips and tricks you can put to use on your farm.

For more information, check out USB farmers resources online at:

www.unitedsoybean.org/farmer-resources/tools/

www.unitedsoybean.org/farmer-resources/beyond-the-bean/

To view past issues of the Georgia Soybean News, visit

www.georgiacrop.com/resources/newsletters/.

