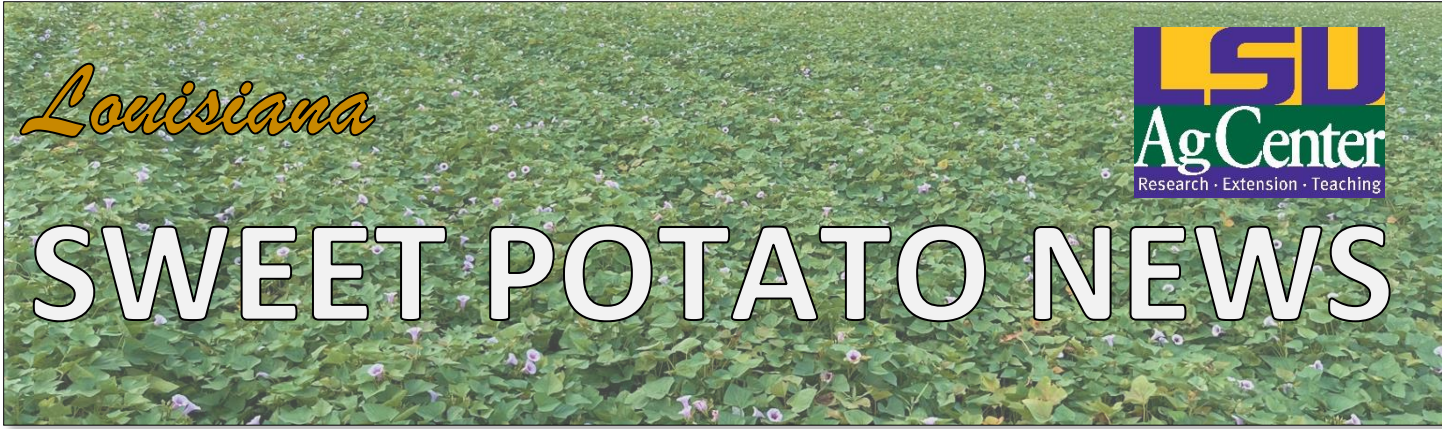




Louisiana



SWEET POTATO NEWS

Spring 2024

Vol. 19 No. 1

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2024 LOUISIANA SWEETPOTATO SEASON UNDERWAY

Cole Gregorie, LSU AgCenter Sweet Potato Specialist

Cultivating the future... The 2024 sweetpotato production season is right around the corner in Louisiana. Across the state, numerous producers have already wrapped up bedding seed sweetpotato roots, leveraging the favorable early conditions. Meanwhile, others are gearing up for fieldwork in the next suitable dry period. These initial steps are critical as bedded seed roots will generate the sweetpotato slips needed to plant this year's sweetpotato crop, with many producers targeting early May to have planting operations underway.

Producers recently convened at the Lamb Weston growers meeting in Delhi, LA, where they interacted with one another and received updates from the LSU AgCenter's sweet potato researchers. There was a bit of excitement portrayed among growers for the upcoming season, with a central point of enthusiasm being the announcement of a new sweetpotato variety from the LSU AgCenter, developed by sweetpotato breeder Dr. Don LaBonte. The variety will be named "**Avoyelles**". (full description on pg. 2)

Avoyelles, formerly referred to as LA 18-100, draws its name from Avoyelles parish in central Louisiana which has a rich history of sweetpotato production. Avoyelles is an early maturing variety that producers are hopeful can enable them to exit the field sooner, while maximizing yields and mitigating late-season weather risks, such as hurricanes. Last year's growing conditions were challenging due to the drought that plagued Louisiana. Thankfully, the state yields were strong, though it was a costly crop as irrigation, in some instances, was estimated to raise production cost 30%. Fortunately, the dry harvest conditions made for a crop that has stored extremely well which should mean that quality sweetpotatoes will be available for market at Easter.

Initial reports suggest that the 2024 sweetpotato acreage will align closely with that of 2023. While the industry is bidding a sad farewell to retiring growers, it welcomes some new faces that appear ready to enter the industry, giving Louisiana around 5,500 expected acres this season. Recent data from 2021 and 2022 underscores the sweetpotato's continued economic significance to Louisiana agriculture, with an estimated farm gate value of \$50 million, affirming its vital role despite fluctuating acreage.

Louisiana Sweet Potato Commission Announcement

Rene Simon-Director, Louisiana Sweet Potato Commission

The Commission had a busy start to the new year with Louisiana hosting the United States Sweet Potato Council's annual meeting in New Orleans in January. The event was a huge success with attendance from all the sweet potato producing states and some international guests as well. The attendees were treated to Louisiana's famous hospitality and good times. The educational program highlights were led by the LSU AgCenter's researchers and also included a presentation by Chris Purdy, Deputy Administrator, Specialty Crops Program, USDA Agricultural Marketing Service. Mr. Purdy gave an update on selling sweet potatoes to USDA. In addition to the above-mentioned speakers, Mr. Bob Farmer of the Farmer's Almanac delighted the crowd with his humorous take on rural life. At the convention's closing ceremony, Mr. Larry Fontenot, and Mr. Venoy Kinnaird (posthumously) were awarded the Distinguished Service Award for their many contributions to the industry. The success of the convention was because of the hard work of the Host Committee, led by Louisiana Sweet Potato Association President Jason Ables. The Committee hired Part 2 Events to handle the details of the convention. Because of Part 2's work, the convention events went off without a hitch. Again, a big Thank You to all that helped to all that worked and attended the convention.

Since the convention, the work of promoting Louisiana's largest vegetable crop continues. It is now boiling season and remember to add sweet potatoes to your seafood boil. They add just the right amount of sweetness to the spiciness of your crawfish, crabs, or shrimp.

Here's hoping for a good growing season for 2024 and best of luck to all our farmers.

It's official - we are releasing LA 18-100 as 'Avoyelles'!

Dr. Don LaBonte, LSU AgCenter Sweetpotato Breeder



'Avoyelles' is an orange fleshed; light rose to copper skinned sweetpotato. The skin is lighter than 'Beauregard' or 'Orleans' and mostly smooth; lobing has been reported in a few testing environments particularly on jumbos. The flesh is uniformly deep orange and a bright color when baked. It is acceptable as a frozen fry product. Its most salient feature is 'Avoyelles' can be harvested 90-100 days after planting (DAP) representing 10-20 days earlier than 'Orleans' or 'Beauregard' with superior yield of the U.S. #1 grade. 'Avoyelles' is highly resistant to southern root-knot nematode, *Meloidogyne incognita*; 'Orleans' and 'Beauregard' are susceptible. The variety has maintained a consistent shape across silt-loam soils of the Gulf South and in sandy soils. 'Avoyelles' plant production from propagation beds is less than 'Beauregard' or 'Orleans' unless pre-sprouted for 7 days at 85°F. Grower observations indicate excellent transplant survivability in



Louisiana FFA State Officers "Presentation of Colors" at the National Sweetpotato Convention

hot and dry conditions in comparison to 'Beauregard' or 'Orleans'.

Industry Need and Fit: Producers often run out of roots late in the storage season and the quality of 10-month-old stored sweetpotato can be inferior to a newly harvested crop. Producers often harvest an undersized crop early in the production season to fill orders and 'Avoyelles' represents an opportunity to supply retail and processors before the primary crop is harvested with less loss of tonnage. 'Avoyelles' also represents an opportunity to begin harvest several weeks in advance of the main crop. This extends grower capacity to increase acreage without an increase in equipment resources.

Observations on Avoyelles:

- Demonstrate excellent transplant survivability and stand in high temperature, dry conditions. Plants tend to have more stem girth than 'Beauregard' and 'Orleans'.
- Irrigation has been found to optimize yield with fewer growing days needed. 'Avoyelles' still performs well in poor environments.
- Some ribbing (longitudinal ridges along storage root) has been noted in late to harvest crops (120+ days after planting) and on jumbos. This phenomenon seems greatest when plants renew growth after rains end extended drought. A tendency for growth cracks on oversized jumbo roots has also been observed under these conditions.
- 'Avoyelles' can quickly go from U.S. #1 grade to the less valuable jumbo grade with timely rains. That's why 'Avoyelles' is unlikely to be a main crop for fresh market growers. It is an early variety. 'Avoyelles' is suitable for bulk processing production where tonnage is important.
- Storage roots for plant beds do need to be pre-sprouted for 7 days at 29 C. Storage roots bedded straight out of 18 C storage produced plants sporadically and in less than desired numbers.
- Dual (S-metolachlor) – observations on ground treated with Dual prior to or just after planting have shown some damage (mis-shaped roots) to a greater extent than other varieties like 'Beauregard' or 'Orleans'. Trials to substantiate this have not been successful. It is advised for now to apply Dual at 7-10 days post planting.

Sweet Potato Research Station Turns 75

Dr. Tara Smith, Research Coordinator, Sweet Potato Research Station

The LSU AgCenter Sweet Potato Research Station is the only research station in the United States that is solely devoted to sweetpotato research and development. The 308-acre station located in Chase, LA, was established through a direct appropriation of the Louisiana legislature and celebrates its 75th birthday this year. Dr. Julian C. Miller pioneered the idea of the Sweet Potato Research Center in 1948 and in 1949 the first foundation seed was planted at the present-day Sweet Potato Research Station. The mission of the Station was to produce top quality planting stock to serve the commercial sweet potato industry in Louisiana and to conduct research in various disciplines to enhance production of sweetpotato, including breeding, cultural practices, and pest management. The LSU AgCenter sweetpotato foundation seed program has long served the Louisiana sweetpotato industry by providing high quality seed to commercial producers. The station serves directly and indirectly all parishes involved in sweetpotato production in Louisiana. In 2007, the station began shifting the business model of the foundation seed program to increase direct sales of transplants for propagating purposes and more recently became a member of the National Clean Plant Network for Sweetpotato. Direct sales of plants now exceed seed sales at the unit. This is a testament to the LSU AgCenter's reputation as a premier supplier of virus-tested sweet potato planting stock.

We will celebrate the 75th anniversary of the station and highlight our research programs at the Sweet Potato Research Station Field Day that will be held on August 29, 2024, at the station. More details to follow.



Dr. Julian C. Miller

Update: the LSU AgCenter Sweetpotato Pathology Laboratory

Dr. Imana Power, LSU AgCenter Plant Pathology

One main focus of the LSU AgCenter Sweetpotato Pathology Research and Service Program is focused on developing management strategies to reduce sweetpotato cultivar decline. As part of the National Clean Plant Network-Sweetpotato (NCPN-SP), six target viruses are considered the most critical for therapy using meristem-tip culture followed by virus testing using biological and molecular tests. These viruses are Sweet potato feathery mottle virus (SPFMV), Sweet potato virus G (SPVG), Sweet potato virus 2 (SPV2), Sweet potato leaf curl virus (SPLCV) and Sweet potato chlorotic stunt virus (SPCSV). Although these methods are effective, they require a considerable amount of time to complete, in laboratory and greenhouse settings. Accurate, sensitive, on-site diagnostic methods would be ideal; therefore, two graduate students are currently working on improved diagnosis of these six target viruses as part of the CleanSEED project (USDA-NIFA Specialty Crop Research Initiative). Zoe Woody started in Fall 2023 and her research is focused on developing

sensitive, accurate, and efficient molecular methods to detect sweetpotato viruses in the field. Clayton Blake started in Spring 2024 and his research is aimed at using hyper-spectral imaging to detect symptomless virus-infected sweetpotato in the field.

Another primary focus area is screening sweetpotato breeding lines for multiple disease resistance. Over the years, several disease-resistant cultivars have been released, with differing levels of resistance against *Streptomyces* soil rot, circular spot, *Fusarium* wilt, Java black rot, bacterial root rot, *Fusarium* root rot, black rot, and *Rhizopus* soft rot. However, new and re-emerging diseases, and the occurrence of extreme environmental conditions that impact postharvest disease development require continual research and identification of resources of resistance. The use of molecular markers would enable marker-assisted selection, i.e. identifying resistant germplasm without extreme environmental interactions. Therefore Francella Arce, a graduate student who started in Fall 2023, will be screening sweetpotato germplasm for multiple disease resistance using previously developed markers.

Dr. Power's Plant Pathology Graduate Students



Zoe Woody



Clayton Blake



Francella Arce

Don't forget about nematodes when preparing for the 2024 growing season!

Dr. Tristan Watson, LSU AgCenter Nematologist

There are two primary nematode species that we are actively managing in our sweetpotato fields, the southern root-knot nematode (*Meloidogyne incognita*) and the reniform nematode (*Rotylenchulus reniformis*). Collecting soil samples prior to planting your field can be a great way to determine if nematodes are going to be an issue during the growing season. Soil samples should be representative of the field, and ideally should be collected to a depth of 10 inches in the soil profile. Soil samples can be analyzed for nematodes at the LSU AgCenter Nematode Advisory Service (\$10/sample; mail to: 302 Life Sciences Building, Baton Rouge, LA, 70803), or at a private diagnostic laboratory. Management tactics, including nematicides and resistant sweetpotato varieties, are available to minimize yield loss associated with nematode feeding.

In Louisiana, sweetpotato growers have a newly registered nematicide available for use in the 2024 growing season. Salibro™ (active ingredient: fluazaindolizine; produced by Corteva Agriscience™) can be applied as a (1) pre-plant soil incorporated spray at 30.7 to 61.4 fl oz/A, (2) in-furrow spray at 15.4 to 61.4 fl oz/A, or (2) in-season drip chemigation at 15.4 to 30.7 fl oz/A. Keep in mind that the product has a 12-hour re-entry interval, 14 day minimum retreatment interval, and a 40 day pre-harvest interval. Always follow the instructions listed on the product label prior to application.

LSU AgCenter is also proactively developing tools to manage the invasive guava root-knot nematode (*Meloidogyne enterolobii*) through a USDA funded project called "SweetARMOR". To date, our research team has been able to develop sweetpotato genotypes with stacked resistance to both major root-knot nematode species. We are currently working on characterizing the resistance mechanisms in these new genotypes, identifying the genes involved in resistance, and further refining the resistant genotypes to have superior agronomic traits prior to release as new nematode resistant varieties.



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Sweet Potato Award Winners

Faculty:

Dr. Tara Smith: Was awarded the 2024 National Impact Award, by the National Sweet Potato Collaborators Group. "I am grateful to serve in my current role... ..I remain committed to our industry in both Louisiana and nationally" Smith said.



Students:

Lisa Arce: Placed first in the Ph.D. competition at the 2024 National Sweet Potato Collaborators Group with her presentation: **RNASeq Analysis Reveals Key Pathways Involved in Low Nitrogen Tolerance at the Onset of Storage Root Formation in Sweetpotato cv Bayou Belle.**



Mae Ann Bravo: Placed third in the Ph.D. competition at the 2024 National Sweet Potato Collaborators Group with her presentation: **Soil Amendments Alter Soil Chemical Properties, Storage Root Yield, and Toxic Heavy Metal Accumulation in Sweetpotato cvs. Bayou Belle and Beauregard.**



Mary Ann Munda: Placed first in the Masters competition at the 2024 National Sweet Potato Collaborators Group with her presentation: **RNA-seq Analysis Reveals Differentially Expressed Genes in Sweetpotato cv. Beauregard under Lead Stress.**



Upcoming Events for 2024

Summer Sweetpotato Commission Meeting:

Morning of June 20th at the Avoyelles Extension Office
8592 HWY 1, Mansura, LA 71350

'Avoyelles' Variety Release Celebration:

Afternoon of June 20th at the Avoyelles Extension Office
8592 HWY 1, Mansura, LA 71350



Freshly Dug Avoyelles Sweetpotatoes

LSU AgCenter Sweet Potato Research Station 2024 Field Day August 29

Hosted by LSU AgCenter

Sweet Potato Research Station
130 Sweet Potato Rd.
Chase, LA 71324
Registration: 8:30 a.m.
Field Tours: 9 a.m.

Sponsored meal to follow



Spring Recipe

Breakfast Casserole with Sweetpotatoes

Start the season off right with this fabulous one pot Breakfast.

Ingredients:

- 1 Pound frozen sweet potato crisp tater tots
- 1 (6-ounce) Package Canadian bacon, diced
- 1 Onion, chopped
- 1 Green bell pepper, cored and chopped
- 1 ¼ Cups shredded sharp Cheddar cheese
- 4 Eggs
- 2 Egg whites
- ½ Cup skim milk
- Salt and pepper to taste

Instructions: Use 3-6-quart slow cooker, insert plastic liner if desired. Depending on size of slow cooker, layer tater tots, Canadian bacon, green pepper and cheese, two or three times. In bowl, whisk together eggs and milk. Season to taste. Pour egg mixture over layers in slow cooker. Cover and cook on LOW 5-8 hours or until egg mixture is set. Tip: For vegetarian option, omit Canadian bacon. If desired, when done, you can sprinkle more cheese on top.

Serving Size: 8



For more information, contact the LSU AgCenter Sweet Potato Research Station
P.O. Box 120 | Chase, LA 71324 | Phone: 318-435-2155 | Cole Gregorie 318-680-9833 or Myrl Sistrunk 318-267-6712
Office Hours: Monday – Friday 7:30 a.m. – 4:30 p.m.

The LSU AgCenter and LSU provides equal opportunities in employment and programs.

For more information, visit the [LSU AgCenter website](https://www.lsuagcenter.com).