

Sweet Potato

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7. Title The LSU AgCenter Virus-Tested Foundation Seed Program: Foundation Seed Production, Program Enhancement and Evaluation			
12. Investigator Name(s) (Last Name and Initials) Smith, T. P.			
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Outputs: The results of this project provided virus-tested, certified sweet potato seed stock to sweet potato producers. Sweet potato varieties that are important in commercial production, sweet potato breeding trials and other research programs, were included in the virus-tested foundation seed program. Approximately 40 acres of virus-tested foundation sweet potato seed were planted at the LSU AgCenter Sweet Potato Research Station in 2011, which produced over 15,000 bushels of seed. This seed is utilized by producers to supplement and enhance their individual sweet potato seed production. A publication describing the Bonita sweetpotato variety was published in 2011. Pest management research and a technical article describing soil insect damage in sweet potato an abstract describing sugarcane beetle research in sweet potato. The findings of this research were presented at state and national industry meetings including five invited presentations which included discussions on the virus-tested foundation seed program, pest management, and pesticide production. Results also were communicated to the industry via social media formats, newsletters and other extension-based publications, and over 80 attendees from five states participated in an on-farm field day in West Carroll Parish, Louisiana. This research will be shared and utilized by researchers, extension agents and sweet potato producers in Louisiana and throughout the United States to ensure that the LSU AgCenter virus-tested foundation seed program continues to contribute to the viability and sustainability of sweet potato producers.			
Outcomes/Impacts: Viruses and mutations accumulate quickly in commercial sweet potato seed stock, which leads to cultivar decline, ultimately affecting yield and overall crop performance. Positive results from this research will be realized across Louisiana sweet potato production areas and throughout the United States. New recommendations on management of sugarcane beetle resulted in significantly less damage from this insect in 2011. Experimental breeding material and new releases from the breeding program are included in the foundation seed program each year. Virus-free foundation sweet potato seed allowed producers to improve yields and profits with no increase in cost of production, ultimately contributing to their economic sustainability. A new sweet potato variety has been identified for frozen products. A Louisiana-based processor is interested in having growers produce this line. Pest management research will continue to improve IPM strategies which ultimately improves the quality of sweet potato seed offered to the industry.			
Publications: Labonte, D. R., A. Villordon, C. Clark and T. Smith. 2011. Bonita Sweet potato. HortScience 46:948-949. Smith, Tara P., and T. Arnold 2011. Evaluation of Selected Insecticides for Management of Sugarcane Beetle in Sweet potato, 2011. Proceedings of the Annual Meeting of the Sweet Potato Collaborators Group, Gulf Shores, AL. January 22-23, 2011. Smith, Tara P., and R. Story. 2011. Evaluation of Preplant and Layby Insecticides for Control of Soil Insects in Sweet Potato, 2010. Arthropod Management Tests Vol. 36. (In <a href="http://www.entsoc.org/Protected/AMT/AMT36/Text/amt36.aspReport=E">http://www.entsoc.org/Protected/AMT/AMT36/Text/amt36.aspReport=E</a> ) Reames, E. and T. Smith. 2011. Louisiana Sweet Potatoes, Louisiana Yams. Louisiana State University Agricultural Center, Pub. No. 3184. Smith, Tara P. 2011. Sweet Potato in Louisiana Summary of Agriculture and Natural Resources, 2011.			

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Smith, Tara P. 2011. Louisiana Sweet Potato News. Vol. 6, No. 1-3.

Participants:

T. Smith (PI), C. Clark, M. Hoy, D. LaBonte, A. Villordon D. Miller, W. McLemore, R. Bell, R. Story and C. Bonner, LSU AgCenter. Contacts include Certis USA, a private company that increases tissue culture plantlets.

Target Audiences:

Louisiana sweet potato producers, scientists, county agents and industry representatives. Also, producers, scientists, extension personnel and industry representatives in other sweet potato production regions across the United States and abroad.

Project Modifications:

Nothing significant to report during this reporting period.

Approved (Signature)	Title	Date
		