

Red River

U.S. Department of Agriculture <b>Accomplishments Report AD-421</b> U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions			Date (Month, Day, Year) 03/20/2012
1. Accession 0217933	Agency Identification No. 2. SAES 3. LA.B	5. Work Unit/Project No. LAB03977	6. Status Annual Report
7. Title Research on Traditionally Grown and Grafted Greenhouse Tomatoes			
12. Investigator Name(s) (Last Name and Initials) Hanna, H. Y.			
20. Termination Date 12/31/2013		40. Period Covered (mo/da/year): 01/01/2011 TO 12/31/2011	
Outputs: The information generated by this project was disseminated in Louisiana Agriculture Magazine, Tomato Magazine, and a refereed Journal. The significance of the research was presented at the American Society for Horticulture Science Annual Conference in Waikoloa, Hawaii. The findings also were also presented at the Annual LSU AgCenter Greenhouse Seminar. Two presentations were delivered at the Annual Mississippi State Greenhouse Short Course. An invited talk was given to the agriculture extension agents and growers in the country of Trinidad and Tobago. A technique for using the bottom of plants to generate new transplants was disclosed through the office of intellectual property for patent potential. Elementary students and retirees were frequent visitors to the research station to learn about commercial and hobby greenhouse production of tomatoes. Hundreds of people visited the station to buy greenhouse tomatoes as a locally produced and high quality fruit. Many of them toured the greenhouse facilities for a brief discussion on the significance of the research program. The project increased public awareness of LSU AgCenter programs and services.			
Outcomes/Impacts: Outcomes of this project have impacts that will make grafting tomato plants more economical to the field and the greenhouse industry. Surveys in 2006 revealed that the number of grafted seedlings for the greenhouse industry in North America exceeded 40 million. Using plant tops (scions) for grafting results in discarding a similar number of plant bottoms (stumps). A technique was developed to eliminate wasting the plant bottom (stumps) of valuable hybrid tomato cultivars and to restore their physical structure to the pre-grafting statures. The technique resulted in the production of a grafted and a non-grafted tomato plant from the same seedling. Tomato plants produced from stumps can be sold at market price to generate substantial income for graft-producing businesses and growers. This method along with the technology for disinfecting the root media without chemicals, and the interplant heating system resulted in local, national and international exposure.			
Publications: Hanna, H.Y. 2011. Fuel type and releasing the heated air near plant roots reduced production cost of greenhouse tomatoes. 2011 ASHS Annual Conference-Oral session Abstract (P.134).  Hanna, H.Y. 2011. Greenhouse tomatoes, simultaneous reconditioning and disinfecting perlite reduces recycling cost for repeat use. Louisiana Agriculture 54(3):30-31.  Snyder, R. G. 2011. Greenhouse Short Course provides great education for tomato growers. Tomato Mag. 15(3):14-15.			
Participants: H.Y. Hanna (PI), Carrie Lott and Beverly London, LSU AgCenter.			
Target Audiences: Extension and research personnel in Louisiana, the United States, and internationally who are seeking further training in controlled environment agriculture; current and prospective tomato growers who want to rely on science based information before making their business decision; home owners who want to grow fresh vegetables in small greenhouses; students who want to acquire training before making future careers in agriculture, and school teachers who want students to know the origin of food supplies.			
Project Modifications: Nothing significant to report during this reporting period.			
Approved (Signature)		Title	Date
			