**SERA027: Nursery Crop and Landscape Systems (IEG-63)**

Duration: October 1, 2012 to September 30, 2017

Administrative Advisors: Regina Bracy (research), Patricia Knight (extension)

NIFA Rep(s): Thomas A. Bewick

**Statement of Issue(s) and Justification**

Accomplishments: To date, 54 taxa have been distributed for evaluation. Concluding reports have been written or are being prepared for 23 of these taxa. A new website, hosted by the Louisiana State University AgCenter (www.lsuagcenter.com/en/administration/about\_us/
professional\_organizations/sera\_ieg\_27/) has been established to provide information on current and historical efforts of our group. Individual committee members who introduce plants for evaluation are responsible for requesting data collection according to criteria they deem most appropriate for each plant, compiling the data that has been submitted, and preparing a final report. The Evaluation Committee periodically prepares summary reports on plants that have been evaluated or are under evaluation, with these reports presented at industry conferences. A presentation titled "A Historical Summary of Plant Material Evaluations by SERA-IEG 27" was made at the Southern Nursery Association Research Conference in Atlanta, Georgia in August 2008, along with publication of the report (Proc. Southern Nursery Assn. Res. Conf., 53rd Annu. Rpt. p. 156-158). A collaborative poster titled "Nursery Crop and Landscape Systems Plant Evaluations by SERA-27 in the Southeastern U.S.: 2010 Update" was presented at the Eastern Region of North America, International Plant Propagators' Society Annual Meeting in Warwick, Rhode Island, September/October 2010, and at the Southern Region of North America, International Plant Propagators' Society Annual Meeting in Raleigh, North Carolina, October 2010; along with publication of the report (Comb. Proc. Intl. Plant Prop. Soc. 60:607-609.). Planning by the group is underway for a first public seminar to be held in North Carolina in 2013, with presentations by SERA-27 members to highlight plant materials previously evaluated by the group, along with other outstanding plant materials suitable for nursery production and landscape planting in the Southeastern United States.

Statement of Issues and Justification: New germplasm continues to be discovered or created in the ornamental plant realm. The introduction of new plant material, whether through traditional breeding programs or plant exploration expeditions, has been an integral part of ornamental horticulture in the United States. This hunger for new plant material continues to exist with both horticultural professionals and consumers. Some nurseries have invested in the discovery and development of new plant releases and are using this technique to gain market share. Unfortunately, some releases are not widely tested and most have not been independently tested in unbiased trials. In addition, most Southern Region universities are engaged in landscape plant evaluations or have active plant breeding programs and seek ways to determine the adaptability range of these plants. Many new woody and herbaceous plants are introduced every year with extensive marketing programs, exclusive growing agreements, protective plant patents, and extensive distribution. However, there also exists a wide variety of plants that fall outside of this circle that, although lesser-known, may be quite worthy of use in the landscape for specific regions. When information is not available on the performance of these plants in different regions, a coordinated system of independent evaluation, along with dissemination of the resulting information to nursery and landscape professionals, becomes invaluable.

A number of the plants evaluated by the group have gained common status by the gardening community. These plants include *Cephalotaxus harringtonia* (1998), *Lagerstroemia* 'Pocomoke' (1999), *Lagerstroemia* 'Chickasaw' (1999), *Styrax japonicas* 'Emerald Pagoda' (1998), *Illicium mexicanum*'Aztec Fire' (1999), *Bulbine caulescens* (2000), *Magnolia* 'Jon Jon' (2001), ×*Sinocalycanthus raulstonii* 'Hartlage Wine' (2001), *Daphniphyllum macropodum* (2002), *Ceanothus* × *delilianus* 'Gloire de Versailles' (2005), *Callicarpa dichomata '*Duet' (2007), and *Syringa* 'Betsy Ross' (2007).

This project relates to the following Southern Region Priority Areas for Multi-state Research Activities: Goal 1, An agricultural system that is highly competitive in the global economy; Goal 4, Greater harmony between agriculture and the environment; and Goal 5, Enhanced economic opportunity and quality of life for Americans. In addition, participation in this project contributes to the professional development of faculty involved.

**Objectives**

1. Using multistate cooperators, evaluate these selected plants at multiple trial locations over a 3- to 5-year period.

2. Annually, meet to share and discuss quantitative and qualitative results collected from the multiple trial sites.

3. At the end of the evaluation period, the group will summarize the regional results with quantitative data, qualitative comments, and an overall rating for the plant

4. Collectively and individually disseminate information gained from the plant evaluation system such as cold hardiness, heat tolerance, growth rate, environmental adaptation limits, etc. to a wide variety of audiences.

**Procedures and Activities**

Objectives will be accomplished by implementing the protocol for plant evaluation that was developed by IEG-63 in 1994 and subsequently modified. State representatives and invited guests will meet annually to exchange plant information results, distribute plant material for future evaluation, and select candidates for future evaluation. Plants will be evaluated for not less than three years at participating sites in the Southeast Region using the established protocol. Responsibility for timely reports (at the annual meeting) rests with the evaluator. The introducer will then provide a finished summary to the chair. For each plant that the group judges worthy of regional approval, the chair will appoint a committee to develop and disseminate propagation and production protocols to the nursery industry. The same committee will compile and distribute landscape-use information on the plant to the nursery and landscape industry and to the gardening public.

**Expected Outcomes and Impacts**

The following are expected to be completed by the group over the next five years:

1. Introduce at least 15 plants into the SERA-27 evaluation program.

2. Complete reports for all plants whose evaluation period has ended and publish summaries with photos on the SERA-27 website. (If the introducing member no longer participates in the SERA-27 program and is not able to prepare a final report, the Plant Evaluation Committee will complete data collection and prepare the final report).

3. Present updates on SERA-27 evaluation activities at two or more professional or nursery research meetings through oral and/or poster presentations, such as the Southern Nursery Association Research Conference or regional meetings of the International Plant Propagators' Society.

4. Conduct an initial public seminar with presentations by SERA-27 members to highlight plant materials previously evaluated by the group, along with other outstanding plant materials suitable for nursery production and landscape planting in the Southeastern United States. Determine the potential for future seminars in other geographic locations and, if feasible, conduct as second seminar. Also evaluate the potential of these seminars to generate revenue that can be used to offset costs associated with distributing future plants in the SERA-27 evaluation program.

**Internal and External Linkages**

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| **Participant**  | **Station/Institution and Department**  | **Objective No.**  | **Research**  |  |  | **Extension**  |
| **KA**  | **SOI**  | **FOS**  | **SY**  | **PY**  | **TY**  | **FTE**  | **Program/ KA**  |
| Adelberg, Jeff W \* jadlbrg@clemson.edu  | South Carolina − Clemson University  | 1,2  | 202  | 2110  | 1020  | 0  | 0  | 0  | 0  |  |
| Arnold, Michael 979−845−1499 ma−arnold@tamu.edu  | Texas AgriLife Research  | 1,2  | 205  | 2123  | 120  | 0.10  | 0  | 0  | 0  |
| 1050  |  |  |  |  |  |  |  |  |  |  |  |
| 1020  |  |  |  |  |  |  |  |  |  |  |
| Bachman, Gary R gbachman@ext.msstate.edu  | Mississippi Cooperative Extension  | 1,2  | 205  | 2110  | 1060  | 0.10  | 0.10  | 0.10  | 0.90  |
| Blythe, Eugene K \* blythe@pss.msstate.edu  | Mississippi − Mississippi State University  | 1,2,3,4,5  | 202  | 2199  | 1080  | 0.10  | 0  | 0  | 0  |
| Bush, Edward 225−578−1044 ebush@agctr.lsu.edu  | Louisiana − Louisiana State University  | 1,2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Chen, Yan yachen@agcenter.lsu.edu  | Louisiana − Louisiana State University  | 1,2  | 102  | 2110  | 1020  | 0.10  | 0.10  | 0.10  | 0  | Agricultural competitiveness and profitability •  |
| 1020  |  |  |  |  |  |  |  |  |  |  |
| Deng, Zhanao zdeng@ufl.edu  | Florida − University of Florida  | 2,3,5  | 204  | 2120  | 1080  | 0.10  | 0.10  | 0.10  | 0  |  |
| 1080  |  |  |  |  |  |  |  |  |  |  |
| 1080  |  |  |  |  |  |  |  |  |  |  |
| 1080  |  |  |  |  |  |  |  |  |  |  |
| Dunwell, Winston \* 270−365−7541 209 wdunwell@uky.edu  | Kentucky − University of Kentucky  | 1,2  | 203  | 2110  | 1020  | 0  | 0.05  | 0  | 0  | Natural resource and environmental management •  |
| Fare, Donna \* Donna.Fare@ARS.USDA.GOV  | USDA  | 1,2  | 202  | 2110  | 1020  | 0.20  | 0.10  | 0.10  | 0.20  | Agricultural competitiveness and profitability •  |
| Klingeman, William \* 865−974−7324 wklingem@utk.edu  | Tennessee − University of Tennessee  | 1,2  | 216  | 2110  | 1130  | 0  | 0  | 0  | 0  |  |
| 1060  |  |  |  |  |  |  |  |  |  |  |
| Knox, Gary \* 850−875−7100 gwknox@ifas.ufl.edu  | Florida − University of Florida  | 1,2  | 124  | 2110  | 1080  | 0.20  | 0.20  | 0.20  | 0.80  | Agricultural competitiveness and profitability • Natural resource and environmental management • |
| 1080  |  |  |  |  |  |  |  |  |  |  |
| LeBude, Anthony V \* anthony\_lebude@ncsu.edu  | North Carolina − North Carolina State University  | 1,2  | 203  | 2110  | 1020  | 0.20  | 0  | 0  | 0.80  | Agricultural competitiveness and profitability • Community resource and economic •  |

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|  |  |  |  |  |  |  |  |  |  | development Natural resource•  |
|  |  |  |  |  |  |  |  |  |  | and environmental  |
|  |  |  |  |  |  |  |  |  |  | management  |
| Lindstrom, Jon \*  | Arkansas − University  | 1,2  |  |  |  | 0  | 0  | 0  | 0  |  |
| 479−575−2645  | of Arkansas  |  | 202  | 2110  | 1060  |  |  |  |  |  |
| tranell@uark.edu  |  |  |  |  |  |  |  |  |  |  |
| Niemiera, Alex X  | Virginia Cooperative  | 1,2  |  |  |  | 0.10  | 0  | 0  | 0  |
|  | Extension  |  | 202  | 2110  | 1060  |  |  |  |  |  |
| niemiera@vt.edu  |  |  |  |  |  |  |  |  |  |  |
| Owings, Allen \*  | Louisiana − Louisiana  | 1,2  |  |  |  | 0.25  | 0  | 0  | 0.75  | Agricultural•  |
| 225−578−2158  | State University  |  | 204  | 2110  | 1060  |  |  |  |  | competitiveness  |
| aowings@agctr.lsu.edu  |  |  |  |  |  |  |  |  |  | and profitability  |
| Robbins, James \*  | Arkansas Cooperative  | 1,2  |  |  |  | 0.20  | 0.20  | 0.20  | 0.75  | Agricultural•  |
| 501−671−2237  | Extension  |  | 202  | 2110  | 1080  |  |  |  |  | competitiveness  |
| jrobbins@uaex.edu  |  |  |  |  |  |  |  |  |  | and profitability  |
| Ruter, John \*  | Georgia − University of  | 1,2  |  |  |  | 0.10  | 0  | 0.10  | 0.02  | Agricultural•  |
| 229 386 3907  | Georgia  |  | 202  | 2110  | 1080  |  |  |  |  | competitiveness  |
| ruter@tifton.uga.edu  |  |  |  |  |  |  |  |  |  | and profitability  |

**Educational Plan**

Information gained from the plant evaluation system such as cold hardiness, heat tolerance, growth rate, environmental adaptation limits, etc. will be disseminated collectively and individually to producer, landscaper and consumer audiences via scientific articles, industry trade magazines, webpages and presentations in extension and popular information channels.

**Organization/Governance**

Officers elected for 2011 - 2012 were Eugene Blythe (Mississippi State University) – Chair and Matthew Chappell (University of Georgia) - Secretary, and Gary Bachman (Mississippi State University) -Executive Committee. Ed Bush (Louisiana State University) is Chair of the Plant Evaluation Committee. Administrative Advisors: Regina Bracy (Louisiana State University) and Patricia Knight (Mississippi State University). CSREES Representative: Thomas A. Bewick.

Guidelines for SERA-27 Officers:

CHAIR The Chair is responsible for coordinating activities throughout the year, working with the Plant Evaluation Committee to ensure plant evaluation information is collected and compiled, and planning the working program for the next meeting. She/he may delegate or request assistance from the Secretary or Executive Committee Member to accomplish these objectives or making recommendations and decisions as needed throughout the year.

SECRETARY The Secretary is responsible for taking minutes of the meeting and distributing them in coordination with the IEG Chair and Administrative Advisor. The Secretary also works with the Chair to develop an annual report that is submitted to the Administrative Advisor for posting on the NIMSS system. The minutes and annual report must be written, reviewed, approved and posted on the website and the NIMSS system within 60 days after the annual meeting. It is the intent of the SERA-27 for the Secretary to serve as the Chair the next year.

EXECUTIVE COMMITTEE MEMBER The Executive Committee members functions as a member of the Executive Committee in decision-making between annual meetings and to assist the Chair as assigned. It is the intent of the SERA-27 for the Executive Committee Member to serve as the Secretary the next year.

MEETING HOST The host for our annual meeting is responsible for making arrangements for meeting space, local tours/events, a hotel, etc. The Host coordinates with the Chair regarding local requirements for the formal program/agenda for the annual meeting. The Host and/or Chair provides the details of the local arrangements, travel, and agenda to the Administrative Advisor who maintains the e-mail addresses of members. The Host/Chair may also send such information to the members by mail. The Administrative Advisor can provide Email addresses.

PLANT EVALUATION COMMITTEE CHAIR The chair of the standing Plant Evaluation Committee reminds members to submit evaluation data at the appropriate time and in the predetermined format, logs plants made available or to be made available for distribution, records who requested each plant, and compiles and summarizes the data annually for the SERA-27 meeting.