

**PROCEEDINGS OF**



**RESEARCH CONFERENCE**

**Sixty-first Annual Report**

**2016**

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**61st Annual  
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Special thanks are extended to the sponsors of the 2016 SNA Research Conference, Bennett's Creek Nursery and Lancaster Farms. Without the financial contributions of these sponsors, the conference could not be held.

We extend our gratitude to all the researchers and nurserymen who attended the 61st Annual SNA Research Conference and/or contributed to these Proceedings. You make this annual event a success.

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## **Using Research Data Safely and Effectively**

Good research is conducted under an exact set of controlled conditions, varying only the specific treatments which are to be evaluated. Results from the specific treatments are directly applicable to your operations only if all the conditions in your operation are controlled the same as in the research. Unfortunately, this seldom happens. However, this does not mean that you cannot benefit from the research. What it does mean is that you should use the research information on a trial basis if your plant species, soil type, watering method, size and age of plant, climatic region, etc. is different than that described by the researcher.

What an alert grower should expect to gain from these research reports is ideas – ideas as to the best control for insects, disease, nematodes and weeds – labor saving ideas such as chemical pruning and using growth regulators to minimize maintenance. Also, ideas on water management, nutrition, alternative growing media, new plants for landscaping and guides for improving profits and marketing skills can also be found.

Should you desire additional information on any report, please contact the author.

**THE PORTER HENEGAR MEMORIAL AWARD**

for

**HORTICULTURAL RESEARCH**

**John Lea-Cox**



The Southern Nursery Association honored Dr. John Lea-Cox with the Porter Henegar Memorial Award during the 61st Annual SNA Research Conference.

Originally known as the Research Award of Merit, the recognition was created in 1968 to honor those individuals who have made outstanding contributions to ornamental horticulture research and specifically to members of the association. In 1972, the award was renamed the Porter Henegar Memorial Award in honor of one of SNA's former Executive Secretaries. Nominations are made each year by the SNA's

Director of Research and past award winners.

Dr. John Lea-Cox is Professor and Nursery Research and Extension Specialist at the University of Maryland, College Park where he teaches courses in Principles of Water and Nutrient Management, Greenhouse Crop Production and co-teaches Senior Capstone and Sustainable Seminar courses.

His research and extension programs are focused primarily on increasing the efficiency of water and nutrient applications in the nursery and greenhouse industries. He leads the water and nutrient management extension program for ornamental production in Maryland, with one other colleague. To date, this program has trained over 130 professionals and growers who have written over 350 water and nutrient management plans for nursery and greenhouse operations.

John currently leads a national \$5.16M USDA-NIFA specialty crops project, which is developing advanced sensor-based networks for decision-based irrigation and nutrient management in nursery and greenhouse systems. During his career, John has established or co-established five major research and extension programs, co-authored one book and five book chapters, published 24 peer-reviewed journal articles, 32 national and international conference papers, and more than 60 society, trade or extension articles. He has been invited to speak at more than 50 International and national conferences, and has given more than 300 other national, regional presentations and workshops.

John received the SNA Environmental Award in 2013 for his work in the development of advanced sensor-based wireless networks for decision-based irrigation and nutrient management.

**The Bryson L. James  
Student Research Competition  
2016 Awards**

This long-standing program was renamed in August 1989, in honor of Dr. Bryson L. James, longtime Director of Horticultural Research for the Southern Nursery Association. As Dr. James has been an active participant and leader in the annual Research Conference for more than 50 years, the award, named in his honor, is a tribute to his tireless efforts on behalf of the researchers, the association and the industry. Listed below are guidelines for the Student Competition as well as this year's winners:

1. Any student of a university or a college having researchers that participate in the Southern Nursery Association Research Conference, are not more than one (1) academic year removed from graduation and whose research was completed prior to graduation are eligible to compete.
2. Research is to be that of the presenter and a part of his/her educational studies. Contract work, unless a part of a thesis or classroom report (credit given), is not acceptable, as it may provide unlimited funding and an unfair advantage.
3. The number of student papers from a single university or college may be limited, should time restraints dictate.
4. The student must have submitted a title to the SNA Conference Editor by the deadline specified in the Call For Titles. The paper should then be submitted to the Section Editor for the Student Competition no later than the specified deadline.
5. The paper must follow the guidelines for format and subject matter as stated in the Call For Titles for the SNA Research Conference.
6. Student and advisor should be listed as co-authors.
7. Oral presentation must be limited to seven (7) minutes. An additional three (3) minutes will be allotted for questions. A penalty of two (2) points per minute or part thereof for every minute over seven (7) minutes will be assessed.
8. Judging shall be based on preparation of the paper (50 points) and oral presentation (100 points) for a total of 150 points.

**2016 Bryson L. James Student Competition Award Winners**

B.S. Candidates

- |               |                   |
|---------------|-------------------|
| 1. Avery Lamb | Auburn University |
|---------------|-------------------|

M.S. Candidates

- |                      |                                 |
|----------------------|---------------------------------|
| 1. David Gianino     | University of Georgia           |
| 2. M. Terri Williams | North Carolina State University |
| 3. Zhitong Li        | University of Georgia           |

Ph.D. Candidates

- |                            |                         |
|----------------------------|-------------------------|
| 1. Shuyang Zhen            | University of Georgia   |
| 2. Geoffrey Weaver         | University of Georgia   |
| 3. Nastaran Basiri Jahromi | University of Tennessee |

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<b>Container Grown Plant Production</b>		
NC	16-19	Reducing Fertilizer Needs for Nursery Plant Production: From Poo to Profit. M. Terri Williams, Helen T. Kraus and Elizabeth D. Riley
TN	20-24	Shade Periodicity Affects Growth of Container Grown Dogwoods Donna C. Fare and Fulya Basyal-Gurel
NC	25-28	Production of Herbaceous Perennials with Varied N:P:K Ratios and Nitrogen Rates Elizabeth D. Riley and Helen T. Kraus
TX	29-34	Effect of Volumetric Water Content on the Growth of <i>Anisacanthus quadrifidu</i> , <i>Caryopteris x clandonensis</i> , and <i>Cuphea hyssopifolia</i> Youping Sun, Genhua Niu and Hermilo Barrera
<b>Economics and Marketing</b>		
FL	36-39	The Healing Power of Plants Charles L. Guy and Raymond Odeh
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<b>Entomology</b>		
TN	46-50	Dormant Applications of Horticultural Oil and Pyriproxyfen for Control of First Generation Japanese Maple Scale Karla M. Adesso, Donna C. Fare, Jason B. Oliver and Paul A. O'Neal
TN	51-55	Simplifying Scale Insect Management F. A. Hale
TN	56-59	Efficacy of Bifenthrin for Control of Imported Fire Ant in Whole Pine Tree Substrates Anthony L. Witcher, Jason B. Oliver, David H. Oi, Glenn B. Fain, Karla M. Adesso and Nadeer N. Youssef
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