

SERA-27 Nursery Crop and Landscape Systems Business Meeting Minutes - 2016

JUNE 28, 2016

LOUISVILLE, KY – HOST INSTITUTION – UNIVERSITY OF KENTUCKY

MEETING SITE: YEW DELL BOTANIC GARDEN

MEETING CALLED TO ORDER – 4:42PM

Members Present:

Zhanao Deng, University of Florida (President)

Gary Knox, University of Florida

Allen Owings, Louisiana State University

Dewayne Ingram, University of Kentucky

Zenaida Vilorio, University of Kentucky

Win Dunwell, University of Kentucky

Ed Bush, Louisiana State University

Lisa Alexander, USDA-ARS

Thomas Ranney, North Carolina State University

Anthony Witcher, Tennessee State University

Alex Niemiera, Virginia Tech

Matthew Chappell, University of Georgia (Board Member)

Advisor:

Patricia Knight, Mississippi State University

Distinguished Guests:

Tom Eaker, North Carolina State University

Kristin Neill, North Carolina State University

Lauren Deans, North Carolina State University

Not Represented:

Clemson University, Oklahoma State University, Texas A&M University, University of Arkansas, West Virginia University

GENERAL BUSINESS MEETING

Welcome – Zhanao Deng

Zhanao welcomed everyone and thanked everyone for participating in this Annual Business Meeting and Winston Dunwell for his hospitality, as well as that of the University of Kentucky and Yew Dell Botanic Garden. He tried to apologize for not being more communicative yet all in attendance shunned his self-degradation and thanked him for his service.

Introduction of those in attendance – see above.

Current officers and official state representatives.

Zhanao Deng, University of Florida (President)

Geoff Denny, Mississippi State University (Secretary) – Not Present

Matthew Chappell, University of Georgia, Member at large (Acting secretary)

Review and approval of 2015 business meeting minutes and annual report, Zhanao Deng

Allen Owings, Motioned acceptance

Alex Niemiera, Seconded motion

All ayes – No nays

At this point, a short side conversation commences on accomplishments. This will be summarized below in the 'old and new business' section of this report.

STATE REPORTS

The following includes verbal reports. Written reports should be submitted separately and included as an addendum to the minutes.

All present were instructed by Matthew Chappell to send state reports to Geoff Denny.

University of Florida – Gary Knox

- University of Florida has an updated “Plant Science Degree”
 - o There are multiple tracks to this degree – of which one is ‘Environmental Horticulture’
 - o Within this, there are a ‘steady’ number of undergraduate students, 12 M.S. students and 19 PhD students.
- Sandra Wilson resigned the department chair position in spring 16. She was reassigned to the faculty in Gainesville.
- A new department chair position is currently being advertised and Gary is soliciting nominations. All present nominated Gary.
- Additionally, Ed Gillman is retiring. Hope is that his position will be re-advertised ASAP.
- The department (and IFAS) has several new positions. There is a new Environmental Turfgrass faculty member, a new Controlled Environment faculty member and a new and a new Center Director at the Mid-Florida Research and Extension Center.
- The department is back to 2008 faculty members – a perceived success for the unit.
- In FY 2016, there was a ‘small’ merit raise, the first in several years.
- From an Extension standpoint, there seems to be a transition to a “regional specialized agent”. Several of these have been hired recently in areas such as water quality.

University of Kentucky – Winston Dunwell

- Robery Houtz was re-appointed as department chair for 6-year term.
- In FY-16, a merit raise was appropriated. However, it was a lump-sum rather than a percentage. For example, if you were adequate you received a \$1,000 raise and exceptional you received a \$4,000 raise.
- In FY17, a 2% merit raise has been proposed.
- There have been some unusual budgetary cuts. Incremental budget cuts have been taken, with ‘programs’ being cut. To date, these cuts have been less than 5% annually over the last two years. However, in FY18, 50% of the budget will be returned to a ‘pool’ that will be distributed based upon a yet to be determined set of standards, developed at the university and/or regents and/or legislative level. Scary!
- As a result, there seems to be a pre-filling of positions that are currently filled with persons nearing retirement.
- Above and beyond this, a Greenhouse Management / Floriculture position is a top priority.
- Zenaida Vilorio was hired to conduct Nursery Management applied research and Extension work. She seems to be doing a wonderful job in her short time at UK.

Louisiana State University – Ed Bush and Allen Owings

- New courses approved for university core credits in science have seemed to increase enrollment. Examples include a humanities course (e.g. the effect of coffee production of humanity) and a general horticulture course. What a wonderful development!
- David G. Himelrick (pomologist) retired this year. Looking for a replacement. Tough to fill because he was a wonderful R-E-T split.
- Faculty need to be hired to replace teaching EFTs (FTEs?) – there is quickly becoming a deficit in this area. The pomologist position is a particular emphasis.
- There are currently 40 undergraduate students. No report of M.S. or PhD numbers.
- From the Experiment Stations, budget cuts are getting more difficult to absorb.

At this point, we moved from Yew Dell Botanic Gardens to a restaurant.

USDA – Lisa Alexander

- Lisa Alexander finally has gotten her feet under her at USDA-ARS. All are excited to have her on-board. She has lots of energy and plants waiting for us to test out.
- Richard Olsen's position at USDA-ARS is about to be advertised.
- Donna Fare is retiring – the hope is to replace her position but it is unsure what the tides of change will bring. Grower input to maintain a nursery focus is vital to maintaining the current focus.

Tennessee State University, Anthony Witcher

- Currently, there are Entomology, Chemical Ecology and Nursery Production faculty on staff. This appears to be a good team.
- Anthony – for those who are unaware – has a background in weed management and alternative substrates.
- There has been a recent College realignment. While the name of the eventual college is unsure, it will combine all plant sciences.
- There was a focus in FY15 & FY16 to increase graduate student enrollment and agriculture faculty. However, recent budget alignment seems to have focused on reducing graduate student enrollment to reduce overall budget.

North Carolina State University, Thomas Ranney

- Overall, the department is rather stable.
- Denny Werner is in a phased out retirement whereby he continues to teach and has scaled back his breeding programs to focus on *Cercis*.
- Hired Sara Villani – to replace Kelly Ivors. Focus is ornamental disease management and housed in Fletcher.
- Currently have approximately 170 undergraduate and 58 graduate students.
- There has been a college reorganization, but it has been relatively minor. For example, entomology and plant pathology have merged into a 'Plant Protection' unit.
- There is a new 'Translational Genomics' position announced that has an applied focus. This is a new position, with a January 1 hopeful start date.
- Tom has three new *Hydrangea arborescens* that are PPAF and could be trialed next year. No details were disclosed.

Virginia Tech, Alex Niemiera

- The Haan Horticulture Gardens have a new Director, Robert McDuffie. He seems to have hit the ground running, with new improvements in the works.
- Greg Peck resigned in the spring to move back to Cornell. VT is re-advertising for this position, with the hope it stays in Winchester.
- A shift in student interest is evident – from ornamentals to fruits and veggies. This was agreed upon by many in the room (UT, UK, UGA, NCSU).
- HORT-CSES-PPWS will merge soon (within 18 months) into a "School of Plant Science". This will have 60-70 faculty and will maintain independent majors, despite being a single academic unit.
- There is a new provost. With this comes a new focus, based upon productivity in defined parameters that are somewhat unusual (based on historical preferences) to faculty. It will be interesting to see how this plays out. It seems funding and matrices are critical to future performance measurements.

Mississippi State University, Patricia Knight

- Eugene Blythe will submit formal report from MSU

ELECTION OF OFFICERS

- Board Member
 - o Anthony Witcher, Tennessee State University nominated
 - Gary Knox – Motioned
 - Alex Niemiera – Seconded
 - All ayes – no nays

PLANT EVALUATION COMMITTEE REPORTS

- No evaluations presently
- Allen and Ed reiterated the need for a uniform online document that can be distributed. Matthew indicated he would provide this document.
- As an alternative – the person who contributes plants can submit form with data requested.
- A photograph is also needed for each plant being trialed – from the contributor – that collaborators can use in presentations.
- It is the responsibility of the contributor to determine if plant protection (e.g. MTA) is required for testing. Testers shall assume no protection is required if none is requested by the ‘inventor’.
- Potential 2017 trials include:
 - o Tom Ranney – 3 *Hydrangea arborescens*
 - o Matthew Chappell – 5 *Gardenia*, 3 *Baccharis*, 1 *Camellia*

STATUS OF 2015-16 PLANT EVALUATION REPORTS

- Minimal discussion. Matthew Chappell lost all perennials from Blythe (MSU).

FUTURE MEETINGS

- 2017 – McMinnville, TN
 - o Gary Knox – Motion
 - o Tom Ranney – Second
 - o Aye – all --- No – None

NEW BUSINESS

- 2018 Meeting
 - o Matthew Chappell offered to host – Athens or Savannah, GA. Majority rules. Tabled until 2017 meeting.
- Geoff Denny, as incoming President/Chair, is responsible for the 5-year updated USDA plan. He should solicit assistance from other members but especially Deng and Chappell (as well as those who prepared the previous report).
 - o Patricia Knight, while not 100% certain, thought the due date for tis report would be on or around September 30, 2017.
- We should do a look-back to the last report to enhance the upcoming report. It is online at the LSU website.
- Overall – our accomplishments should be highlighted, with reference made to our goals laid out in the previous 5-year report.
- A good example of our success is the symposium that has accompanied recent meetings. This has increased our impact.
- Also – we need to investigate new grant opportunities in FY17.
 - o These could include the following:
 - Southern SARE
 - HRI
 - SCRI Planning grant
 - o The main issue is what we want to pursue. Gary Knox suggested a short meeting at ASHS to plan. Matthew Chappell mentioned we need a plan of action in place when any relevant RFAs are released due to everyone's busy schedule and tight recent timelines laid out by granting agencies.
 - o We also need to organize presentations/posters and proceedings articles/abstracts at meetings that are on the docket:
 - SNA
 - IPPS
 - ASHS
 - ASHS-SR
 - IPPS – SR (poster)
 - IPPS – ER (poster)
 - o Matthew is going to make an effort to publish the Japanese maple data in FY17, to increase impact of the group as well. It seems this is a good data set.
- It is also important to measure the impact of our talks.
 - o Alex Niemiera suggested the following – adapted by Chappell and forwarded to Win Dunwell for inclusion in the 2016 symposium.
 - What is your evaluation of the presentation(s):
 - Would you purchase the plants discussed today?
 - If not – is it because you do not have a gardening space suitable for the plants discussed today?
 - Do you feel your horticultural knowledge was increased today?

Motion was made to adjourn meeting at 7:24PM by Win Dunwell. Seconded by Ed Bush. All ayes – no nays.

SERA 027 Annual Report
University of Florida
Statewide Environmental Horticulture Program

Gary Knox¹ and Zhanao Deng²

Total Undergraduate Enrollment

- Environmental Horticulture undergraduate students are encompassed in "Plant Science"
 - A joint undergraduate collaborative major serving Environmental Horticulture, Agronomy and Plant Pathology and, new in 2016, Entomology and Soil Science
- Instruction takes place at: Main Campus (Gainesville), Ft. Lauderdale REC, Mid-Florida REC (Orlando area), and West Florida REC (Pensacola area)
- Does not include students in fruit/vegetable programs
- Represents mostly juniors and seniors
- Numbers not available currently

Total Graduate Student Enrollment for Environmental Horticulture (selected years)

Year	M.S.	Ph.D.	Total
2005	21	16	37
2006	18	14	32
2007	15	14	29
2008	15	13	28
2009	20	12	32
2012	17	13	30
2014	15	15	30
2015	19	16	35
2016	12	19	31

Extension

Florida Extension is moving to Regional Specialized Agents, with a specialized agent in each topic (Agriculture, Water, Horticulture, etc.) assigned to each of five 12-county extension districts.

Significant News

- Sandra B. Wilson resigned as Environmental Horticulture Department Chair
- The Environmental Horticulture Department is seeking a new chair; see <http://hort.ifas.ufl.edu/chair/> for details

2015 – 2016 Faculty Retirements or Departures

- Ed Gilman, Professor, Arboriculture (Gainesville) – 2016

New Environmental Horticulture Faculty in 2015/2016

- Sandy Wilson is now a faculty member in Gainesville
- Travis Shaddox, Asst. Professor, Environmental Turfgrass Science (August, 2015), Fort Lauderdale REC
- Roger Kjellgren is new Center Director at Mid Florida REC (Apopka; Orlando area)
- Celina Gomez, Asst. Professor, Controlled Environment Horticulture, Gainesville (expected Fall 2016)
- New Foliage Plant Breeder being hired at Mid Florida REC

Overall Budget

- A merit raise averaging 2.5% was given effective January 2016 and 1.5% will be given effective January 2017

2016 Virginia SERA -27 State Report

Submitted by Alex Niemiera, Department of Horticulture, Virginia Tech

1. At Virginia Tech, the Horticulture Department, the Crop Soils and Environmental Sciences Department, and the Plant Pathology, Physiology, and Weed Science Department are in the process of being coalesced into a School of Plant and Environmental Sciences. The Horticulture department will maintain its two majors (Environmental Horticulture and Landscape Horticulture and Design) but the Horticulture degree will be morphed into a Plant Science degree. Involvement of Alex Niemiera (VA representative) in future SERA meetings will be contingent upon support from the new director of the School.
2. The Horticulture Department currently has about 70 undergraduate students (majors: 80% Environmental Horticulture and 20% Landscape Horticulture and Design) and about 30 graduate students.
3. The pomologist position at the Winchester VA experiment station has been vacant for about 6 months (previously held by Greg Peck who went to Cornell). A search was held and two offers were made but these two offers were not accepted. A new search will take place.

Mississippi State University
Report for the Annual SERA-27 Meeting
June 28, 2016

University enrollment for last year set a record with over 20,873 students (including an unprecedented 17 percent increase in first-time freshmen), with 2,387 in the College of Agriculture and Life Sciences (an increase of 8.2% from the previous year.). The Department of Plant and Soil Sciences had 157 undergraduate students and 79 graduate students during the spring 2016 semester, including 9 M.S students and 7 Ph.D. students in horticulture. Full-time faculty in the state with primary emphasis on ornamental crops includes 3 in research, 4 in extension, and 2 in teaching.

At the South Mississippi Branch Experiment Station in Poplarville, Dr. Gene Blythe in continuing cool-season, spring, and summer annual variety trials, plus some perennial trials. Four additional companies sent plant materials for trials in 2016. The All-America Selections perennial trial (with a 3-year trial period) was added to the AAS ornamental seed trial and ornamental vegetative trial this year. The South Mississippi Branch Experiment Station participated in the fourth year (2015) of the National Plant Trials Database, and is continuing in 2016. Dr. Blythe also participated in a task force aimed at recommending improvements to the National Plant Trials Database. HighLights newsletter is being sent via Email to a broad clientele and all Extension personal in the state to provide quick updates on the trial gardens and horticultural research at the experiment station. Information is also being posted on the Facebook page for the MSU South Mississippi Branch Experiment Station.

Three items previously provided by Mississippi for SERA-27 trials, *Artemisia afra*, *Eucalyptus neglecta*, and *Tagetes nelsonii*, continue to do well in our Poplarville trial garden, with no loss or plant damage during winter 2016. *Artemisia afra* has shown no reseeding thus far. *Tagetes nelsonii* has shown limited reseeding. Updates on these three items from other trialing states will be requested in order to complete a final report. *Centaurea gymnocarpa* was distributed last year.

At the Truck Crops Branch Experiment Station in Crystal Springs, Dr. Shaun Broderick is currently evaluating new ornamental bedding plant material from Syngenta, Ball Horticultural Co., and Proven Winners in spring/summer annual trials. All of the trial data are uploaded to a website (blogs.msucare.com/ornamentals) where results and photos of the trails can be viewed. In the 2015 trial, a new fungal pathogen, *Macrophomina phaseolina*, was identified on 8 cultivars of interspecific hybrid impatiens. The impatiens rapidly declined in the landscape during the hottest part of the season within a 2-week window. This soil-borne disease had not been reported before in these impatiens and may become more problematic if record-breaking heat occurs. Dr. Broderick will continue researching this pathogen to identify methods to control it on impatiens and screen for resistance. His

research also includes breeding new ornamental plant material. He is currently researching species barrier formation in *Penstemon* and is breeding hollyhock (*Alcea*).

Publications:

Blythe, E.K., C. Pounders, M. Anderson, E. Watts, and B. Watts. 2015. Survey of 575 daylily cultivars for severity of daylily rust in a southern Mississippi landscape. *HortTechnology* 25:551-564.

Broderick, S.R., C.J. Balbalian, and M. Tomaso-Peterson. 2016. First report of stem canker of interspecific impatiens hybrids caused by *Macrophomina phaseolina* in the United States. *Plant Disease*. URL: <http://apsjournals.apsnet.org/doi/abs/10.1094/PDIS-02-16-0211-PDN>.

Submitted by Gene Blythe, Associate Research Professor, Coastal Research and Extension Center

SERA-IEG N.C. State University Report 2016

Horticultural Science Department

The ornamentals working group consists of Brian Jackson, Anthony LeBude, Tom Ranney, Barbara Fair, Lucy Bradley (100% Urban Horticulture Extension), Brian Whipker, Joe Neal, Mark Weathington (Director of the JCRA), Helen Kraus (100% teaching), Anne Spafford, Julietta Sherk (11 people). Denny Werner is in phased retirement but is still keeping a camel's hair paintbrush in the game. Sara Villani in Plant Pathology, positioned at the Mountain Horticultural Crops Research and Extension Center (MHCREC), is the statewide plant pathologist for ornamentals and apples and she recently began in January 2016. Other members of the ornamentals working group include Steve Frank (Entomology), and three new Area Specialized Agents that are 100% extension and cover approximately 30 counties each.

Our current undergraduate enrollment is 168 for Fall 2017. Graduate student enrollment is approximately 48. Twelve incoming for Fall 2017, with 17 PhD, 21 M.S., and 6 MHS as of spring 2016. There are more entering than leaving this summer, so the total is 48.

LeBude is attending a NC1186 meeting in New York this week and taking some extra time afterwards. His main goal right now is trying to determine the effect of high pH source water used for irrigation on plant growth. Many nurseries in eastern NC have high pH pond water in late summer and he is trying to both its acute and chronic effects on plant growth and development. He currently has one graduate student starting this fall as a MHS student and she will be working to reduce water frequency and volume in some major nurseries by utilizing leaching fractions to control irrigation. He still collaborates with the Southern Nursery Integrated Pest Management (SNIPM) to create mobile device applications, books, reports, and survey growers about their use of best management practices for nursery production. He also maintains both an Asian hemlock trial and holly trial measuring hardiness and landscape adaptation. To a lesser extent he collaborates with a small group working with landowners to use biological control for hemlock wooly adelgid.

Tom Ranney

SERA-27 OK Report 2016

Departmental Update:

Dr. Janet Cole has been Department Head for Horticulture & L.A. for almost two years now. Lou Anella has taken over as the Undergraduate Coordinator as Dr. Brian Kahn (vegetables) will retire in October. Dr. Mike Smith (pecans) is retiring at the end of July. Dr. Neils Maness continues his role as Graduate Coordinator. Our newest hire was for a tenure turf faculty position in fall 2015 and two L.A. positions in spring 2015.

Budgets have been reduced by 9% because of state budgets hurt by low gas prices. There is basically a hiring freeze, so not sure when we will be able to hire back the retirements and Dr. Cole's position. Dr. Cole was able to hire an adjunct to teach her nursery production class.

Our undergraduate student numbers continue to hover at near 115 and graduate student numbers are at about 12 all of which are M.S. students. College of Agricultural Sciences and Natural Resources is in the planning phases for a new building, and we have been asked to start discussing a new teaching greenhouse facility.

Our Lab Group's Update:

Plant evaluation mainly consists of evaluating Proven Winners, Ball Horticulture, and Garden Debut plant material. Dr. Mike Schnelle along with Jen Olsen have a rose trial looking at Rose Rosette disease. David Hillock continues to run the Oklahoma Proven program which selects a single annual, perennial, shrub, and tree each year that is well adapted to Oklahoma.

Submitted by Dr. Bruce L. Dunn, July 2016

SERA-IEG-27 University of Arkansas Report 2016

Horticulture Department

Faculty:

I am pleased to announce that the hiring of THREE faculty in the HORT department in 2016.

- Dr. Amanda McWhirt, recent graduate of NCSU: 25% research/75% extension; Fruit & Vegetable Production
- Dr. Jackie Lee, hired from Oklahoma State Univ.: 100% extension, Fruit & Vegetable IPM
- Dr. Margaret Worthington will start August 15: 80% research 20% teaching; Fruit Breeding.

As of this report we have the following faculty vacancies:

- Turf Extension Specialist: vacant 6 years (June 2010)
- Horticulture physiologist: vacant 4 years (2012)
- Ornamental Breeding/selection: vacant 3 years (May 2013)

In addition, Dr. Garry McDonald is transitioning to a 9-month 100% teaching position by fall 2017 but will retain a small research appointment. He has also recently been named Chair of the Undergraduate Program Committee.

Graduate student enrollment is 14 total, with 10 Masters and 4 Ph.D.

Undergraduate enrollment has stayed stable at approximately 59.

Budget:

State:

Year-to-date Net Available General Revenues: Year-to-date net available general revenues total \$4,826.1 million, which is \$162.6 million or 3.5 percent above year ago levels. After eleven months into the fiscal year, net available revenue is above forecast by \$104.8 million or 2.2 percent.

University:

As of this writing, no statement has been made about raises for classified or non-classified Division of Agriculture employees but merit raises have been approved for campus funded positions. Additionally, departments have not received information on budget allocations although a slight reduction in M&O is expected.

SERA plants:

Nothing to report

Respectfully submitted:

Dr. James Robbins

Dr. Garry V McDonald

SERA-27 State Report - Tennessee State University

Anthony Witcher

The College of Agriculture, Human, and Natural Sciences was restructured this past year, with the biology and chemistry departments splitting to form a separate college. Undergraduate and graduate student enrollment within the Department of Agricultural and Environmental Sciences has remained steady, yet departmental funding for graduate assistantships has been reduced. The Nursery Research Center in McMinnville, TN added two new research faculty in the last year, a Horticulturist and a Plant Pathologist. Currently, the Extension Specialist (Nursery Crop Production) position located in McMinnville is vacant but in the process of being advertised and re-filled.

SERA-27 TN Report 2016

Departmental Update:

Dr. Scott Senseman has been Department Head for Plant Sciences since July 2013, joining UT Plant Sciences' from TX A&M (Weed Science, Dept. Soil & Crop Sciences). Scott has advanced initiatives to re-evaluate our on-going undergraduate curriculum and revise the undergraduate concentrations offered within the major. The department has 38 tenure-track faculty and also includes several research assistant professors.

Andy Pulte, who received his PhD this spring, continues service in his 7th year as the Undergraduate Coordinator. Bill Klingeman continues as Graduate Coordinator for the department. Dr. Paul Denton (tobacco extension) and Mr. Sam Rogers (landscape design/native plants) retired in 2013. Dr. Fred Allen (variety testing) retired in December (2015). Our newest hire is of a tenure crop physiologist/agronomist position, to start fall 2016. A search remains in progress for a 75% (Res)/ 25% (Ext) Field Crop Agronomist/Agroecologist. Other recent faculty hires have been in forage systems and management (2013), tobacco extension (2014), cotton and small grains physiology (2014), and residential/consumer horticulture (2014). Budgets have held relatively steady across the past 3 yrs, following significant 2010-2013 reductions, and 2016 budgets for UT Institute of Agriculture included a slight increase from 2015, primarily due to better-than-expected state tax revenues.

Our undergraduate student numbers increased to 140 in 2015 (5-yr average: ~118). Graduate students (about 35) are split, with slightly more M.S. students (5-yr averages: 2 MS; 15 PhD). Averages (5-yr) of awarded degrees: BS (30); MS (~10); PhD (~3.5). UTIA/College of Agricultural Sciences and Natural Resources remain in planning for a new instructional building (Ellington Plant Sciences replacement). "New" greenhouse facilities are fully occupied by faculty from at least 5 of 8 UTIA departments.

Our Research Group's Update:

Phil Flanagan (research associate) retired in December. Our research associate II position was filled in June by Dr. Grace Pietch (flowering plant (*Gaura*) breeding). Plant evaluation-related projects include Bill Klingeman's assistance and mentorship to Entomology and Plant Pathology graduate students on projects to evaluate pollination ecology and disease resistance among endangered/threatened asters (*Pityopsis* and *Helianthus*), and generating from seed (for re-introduction), wood lily plants from a TN population that had been over-sprayed with herbicide. Other projects (Klingeman) include trap augmentation efforts to enhance walnut twig beetle monitoring (vector of Thousand Cankers Disease of walnut), population genetics of beetle and the fungal pathogen, plus molecular diagnosis of fungus and beetle. Amy Fulcher continues improvements to the IPMPro and IPMLite nursery scouting/pesticide recordkeeping mobile app, Intelligent Spray Systems and nursery irrigation research and is working to conclude several plant growth regulation projects.

Submitted by Dr. Bill Klingeman, July 2016

SERA-27 Texas Report 2016

Departmental Update:

Dr. R. Daniel Lineberger continues as Department Head for Horticultural Sciences. I continue to serve as the Associate Head for Undergraduate Programs and Dr. Patricia Klein continues in her role as Associate Head for Graduate Programs. Dr. Larry Stein continues in his role as Associate Head for Extension. We are interviewing for a new tenure track potato breeding position as Dr. Creighton Miller continues to phase out his efforts. Dr. Fred Davies and Dr. Jayne Zajicek retired last September from tenure track positions. We were not able to replace Dr. Zajicek's position, but were permitted to hire a lecturer, Dr. Andrew King, to teach Dr. Davis' courses.

Our undergraduate student numbers continue to hover at near 150, approximately 100 of whom are in our B.S. program and the remainder in our B.A. program. The addition of Dr. Whitney Griffin has joined our faculty as a lecturer in residential landscape design and landscape construction and maintenance areas should help to regain some of our lost students in that field. Graduate student numbers are at about 50 of which approximately two-thirds are Ph.D. and one-third are M.S. students. Our graduate enrollment has shifted heavily in the direction of Ph.D. students with a reduction in M.S. students in response to University prioritization of tuition waivers. In late spring of 2016 the Department celebrated the opening of the new horticulture teaching, research, and extension center (HortTREC) adjacent to the pecan orchards in the Brazos bottoms about eight to ten miles from campus. Budgets are projected to remain flat this year with perhaps a small allocation to faculty raises, some of which may be mandated to be allocated from existing Department budgets. Outsourcing of physical facilities, grounds and many other campus support services continues to cause serious issues for some on-going research and teaching activities. New policies are moving to Departments being responsible for repairs to the buildings they occupy, including offices, labs, classrooms, etc. rather than being maintained from central university budgets. Since not increases in base funding are proposed for the Departments, it is unclear where these resources are to originate.

Our Lab Group's Update:

Research efforts in our lab group continue in a variety of areas including testing of plants from SERA-IEG members and is an active participant in the Texas Superstar® selection efforts through CEMAP, a joint research, extension and industry plant selection and marketing effort. A recently graduated Ph.D. student (Dr. Sean Carver, now with Pioneer Seed) continues to evaluate collections of some promising native herbaceous perennial groundcovers and low evergreen shrubs species from along the Texas coastal dunes for initial screening and is in the process of releasing at least one selection of *Oenothera drummondii* to a cooperating marketing group. Additional selections from several species are in trial and development. Some of these selections are now being trialed by industry partners for commercial potential. A new student, Mr. Evan Baker, will begin his Ph.D. work this fall, likely on a plant selection project.

A large scale transplant study has been continued after M.S. student (Ms. Lauren Garcia) graduated to extend the timer frame to five years in the field to assess the lone germ impacts of container size on tree establishment and water use on three species of trees each grown in five container sizes ranging from 1 gallon to 45 gallon sizes. The study is being replicated in Texas and Mississippi (by Dr. Geoff Deny). One paper was published this year on the first year establishment across the two sites to Arboriculture and Urban Forestry; a second on the physiological and growth responses is in revision for resubmission and another economic cost analysis is in internal revision stages.

Submitted by Michael A. Arnold, July 2016