

LSU AgCenter
Ornamental Horticulture E-mail Update
December 14, 2009



Ornamental Plant of the Week – December 14: ‘Jubilation’ Gardenia (from Allen Owings)

One of the newest gardenias to hit the market is the new variety Jubilation. This plant is a *Gardenia jasminoides* and was bred by Buddy Lee, the same plant breeder who developed Encore azaleas. This is a smaller-growing

plant (3-4 feet tall with a 3-foot spread) with fragrant white blooms. Plants re-bloom in the summer and fall. Plant in well drained, acid soil. Full to partial sun is best. Jubilation is a new plant in the Southern Living Plant Promotion Program (www.southernlivingplants.com).

Louisiana Turfgrass Association Conference Coming in January (from Ron Strahan)

The Louisiana Turfgrass Association will hold its annual conference on January 7, 2010. The theme of this year’s meeting will be water use efficiency.

The featured speaker is Dr. David Chalmers, turfgrass specialist at Texas A&M. Dr. Chalmers will discuss the results of a two-year research project that evaluated the drought tolerance of 25 warm-season turfgrass varieties. Grass varieties studied included eight types of bermudagrass, seven of St. Augustine grass, nine of zoysiagrass and one of buffalograss grown on 4-inch-deep or 18-inch-deep soil. In the study, drought was simulated for 60 days using a 5,000-square-foot drought simulator constructed in San Antonio, Texas. Grasses were evaluated visually for drought performance and were assigned ratings from one to nine based on how they responded to and recovered from the drought. Dr. Chalmers will discuss the performance of the varieties subjected to drought conditions at our meeting. In a separate presentation, Dr. Chalmers will discuss strategies for career success in the turfgrass industry.

Continuing with our water use theme, Jon Pons of Hunter Industries will present information concerning irrigation basics and its efficient use. Jerome Nettles will discuss his research that is currently evaluating the use of pre-emergence herbicides and their negative effects on turfgrass root architecture. These negative effects could cause a temporary reduction in root efficiency.

Dr. Dearl Sanders will inform the audience on aquatic weed management in irrigation ponds. Dr. Ron Strahan will discuss the latest on MSMA regulations and alternative herbicide options. Dr. Jeff Beasley’s turfgrass graduate students will discuss their research.

Panel discussions will cover irrigation troubleshooting, frequent agronomic problems encountered on golf courses and sports fields, and lawn and landscape installation. The overall theme of the panel discussions will be “money-saving tips.”

The location of this year’s meeting is the Lawton Room at Tiger Stadium on the campus of LSU in Baton Rouge. Registration fee for the meeting is \$50. Pre-registration is recommended, but on-site registration will be available from 8:00 to 9:00 am. More information concerning the registration for the 2010 LTA Annual Conference is in this newsletter. We look forward to your attendance on January 7. Contact Ron Strahan at rstrahan@agcenter.lsu.edu for more information.

Fruit Grafting Workshops (from Carl Motsenbocker)

The Louisiana Sustainable Agriculture Research and Education (SARE) program will hold two fruit-grafting workshops this spring for county agents and other agricultural professionals. The first workshop will be March 5 at the Idlewild Research Station in Clinton, and the second will be March 18 at the Calhoun Research Station in Calhoun. Space is limited to 15 people for each workshop. Contact Andre Brock (abrock@agcenter.lsu.edu) for the workshop at Idlewild and Rafash Brew (rbrew@agcenter.lsu.edu) for the workshop at Calhoun.

The tentative agenda is for the workshops to begin at 9 a.m. with presentations on fruit growing and use of grafting, grafting tools and safety and a working lunch followed by demonstration of various grafting techniques and hands-on participation in grafting. The plant materials to be used will include apples, pears and pecans. The workshop will end by 3 p.m. Travel expenses for the participants are covered by the grant. The workshops are funded through an enhancement grant by the USDA Southern Sustainable Agriculture Research and Education Professional Development Program. Contact Carl Motsenbocker at cmotsenbocker@agcenter.lsu.edu for more information on these programs or visit the SARE website at <http://www.lasare.agcenter.lsu.edu>.

ASHS Press Release on LSU AgCenter Research (from Yan Chen)

(press release from the American Society for Horticultural Science based on a recently completed research project at the Hammond Research Station)

Rapid population growth and urbanization have raised concerns over stormwater runoff contamination. Studies on watersheds indicate that excess nutrients, specifically nitrate–nitrogen and soluble reactive phosphorus are found in stormwater runoff in many new urban areas. These pollutants degrade water quality and have an impact on the downstream ecosystem by contributing to the growth and decomposition of oxygen-depleting microorganisms.



A research team recently used a nutrient recirculation system (NRS) to assess the ability of four ornamental and three wetland plant species to remove nitrogen and phosphorous from stormwater runoff. The study showed that canna is a promising ornamental species

for stormwater mitigation, and harvesting the aboveground biomass of canna can effectively remove nitrogen and phosphorous from the treatment system.

A variety of stormwater treatment technologies such as constructed wetlands and retention ponds have been developed in response to increasing regulatory pressures, but water quality issues are still found in many stormwater treatment structures. To meet increasingly rigorous EPA regulations, significant nitrogen and phosphorous reductions are necessary to improve water quality before it is discharged into the ecosystem from stormwater retention structures.

A relatively new technique using floating wetlands (also called “floating islands”) for stormwater improvement has been tested in a wastewater treatment pond and a laboratory-scale constructed wetland; the results have suggested that the use of floating systems can increase mitigation capacity and provide efficient nitrogen and phosphorous removal in small treatment structures in urban areas. When ornamental plants are added to floating wetland systems, the benefits can be both aesthetic and environmental.

In a study published in a recent issue of the journal *HortScience*, a research team headed by Yan Chen of Louisiana State University AgCenter’s Hammond Research Station, analyzed the nutrient removal abilities of herbaceous perennial ornamentals (canna, iris, calla lily, and dwarf papyrus) compared with those of wetland plants (arrow arum, pickerelweed, and bulltongue arrowhead) in three experiments. The nutrient recirculation system (NRS) was filled with a nutrient solution with total nitrogen (N) and phosphorous (P) concentrations of 11.3 and 3.1 mg/liter, respectively, to simulate high levels of nutrient contaminations in stormwater.

The results showed that ‘Australia’ canna had the greatest water consumption, total biomass production, and aboveground nitrogen and phosphorous content, followed by pickerelweed. ‘Golden Fleece’ iris had higher tissue nitrogen concentrations than canna, but much lower biomass production. Dwarf papyrus had similar total biomass as pickerelweed, but less shoot biomass. Nitrogen and phosphorous removed from the NRS units planted with canna (98.7% N and 91.8% P) were higher than those planted with iris and arrow arum (31.6% and 31.5% N, and 38.5% and 26.3% P, respectively). NRS units planted with dwarf papyrus had similar nutrient recovery rate as pickerelweed, but much less total N and P were removed as a result of less water consumption. The NRS units planted with calla lily had lower nutrient removal than canna and pickerelweed.

Results from the study suggest that ornamental canna has the potential to be used as mitigation plants in urban stormwater floating biofiltration treatment. Because canna is a perennial plant and allocates the majority of its biomass to shoots, it can be harvested regularly, offering consistent removal of biomass from the treatment system. Chen noted that more research needs to be done to evaluate factors that might affect its application, such as “nitrogen and phosphorous loading and hydraulic conditions, planting densities, poly culture, harvesting frequency, and growth maintenance techniques.”

Original article:

Nitrogen and Phosphorous Removal by Ornamental and Wetland Plants in a Greenhouse Recirculation Research System

Yan Chen, Regina P. Bracy, Allen D. Owings, and Donald J. Merhaut

HortScience 44:1704–1711.

Sustainable Landscape News Articles (from Allen Owings, Dan Gill and John Young)

Sasanquas – December 11

http://www.lsuagcenter.com/news_archive/2009/december/news_you_can_use/Sasanquas-create-winter-color-in-the-landscape.htm

Commercial Ornamental Horticulture Events Upcoming

January 7, 2010

La Turfgrass Association Annual Conference
Lawton Room, LSU Campus
Baton Rouge, La.
Contact Ron Strahan at
rstrahan@agcenter.lsu.edu

January 13, 2010

Louisiana State Horticulture Society Annual Conference
Calcasieu Parish LSU AgCenter Office
Lake Charles, La.
Contact Robert Turley at
rturley@agcenter.lsu.edu



January 21-23, 2010

Gulf States Horticultural Expo
Arthur Outlaw Convention Center
Mobile, Ala.
www.gshe.org

February 10-11, 2010

Southern Nursery Assoc. Trade Show and Research Conference
Cobb Galleria
Atlanta, Ga.
www.sna.org

February 18, 2010

LA Irrigation Association Re-certification
LSU AgCenter, Avoyelles Parish Office
Mansura, La.
Contact Severn Doughty at
scd357@cmaaccess.com

February 23, 2010

Landscape Pest Management Workshop
Hammond Research Station
Hammond, La.
Contact Allen Owings at
aowings@agcenter.lsu.edu

March 9-10, 2010

Greenhouse Tomato Short Course
Eagle Ridge Conference Center
Raymond, Miss.
www.greenhousetomatosc.com
Contact Rick Synder at
ricks@ra.msstate.edu

March 11-12, 2010

Certified Nursery Professional Training
Burden Center
Baton Rouge, La.
Contact Severn Doughty at
scd357@cmaaccess.com or Dan Gill at
dgill@agcenter.lsu.edu

March 14-17, 2010

Azalea Society of America
National Convention
New Orleans, La
Contact Regina Bracy at
rbracy@agcenter.lsu.edu

March 20, 2010

Louisiana Society for Horticultural Research Annual Meeting and Plant Release
Ira Nelson Horticulture Center
Lafayette, La.

March 25, 2010

NW La Nursery Association Meeting
Keeling Irrigation
Shreveport, La.
Contact Severn Doughty at
scd357@cmaaccess.com

May 25-27, 2010

La State Horticulture Society Tour
Lower Miss./Mobile, Ala./Milton, Fla.
Contact Allen Owings at
aowings@agcenter.lsu.edu

June 17-18, 2010

Certified Nursery Professional Training
ULL Horticulture Center
Lafayette, La.
Contact Severn Doughty at
scd357@cmaccess.com or Dan Gill at
dgill@agcenter.lsu.edu

September 2, 2010

NW La Nursery Association Meeting
ArkLaTex Gardens
Shreveport, La.
Contact Severn Doughty at
scd357@cmaccess.com

September 16-17, 2010

Certified Nursery Professional Training
City Park Botanical Garden
New Orleans, La.
Contact Severn Doughty at
scd357@cmaccess.com or Dan Gill at
dgill@agcenter.lsu.edu

November 18, 2010

NW La Nursery Association Meeting
Location TBA
Shreveport, La.
Contact Severn Doughty at
scd357@cmaccess.com

February 26, 2011

NW La Nursery Association Tour
SFA Arboretum
Nacogdoches, Texas
Contact Severn Doughty at
scd357@cmaccess.com

Spring Garden Shows and Related Events – 2010**February 21, 2010**

Camellia Garden Stroll
Hammond, La.
Contact Sandra Benjamin at
sbenjamin@agcenter.lsu.edu

March 13, 2010

Spring Garden Day
Hammond, La.
Contact Sandra Benjamin at
sbenjamin@agcenter.lsu.edu

March 19-21, 2010

Louisiana Nursery Festival
Forest Hill, La.
www.louisiananurseryfestival.com

March 20-21, 2010

Northshore Garden Show
Fairgrounds
Covington, La.
Contact Rusty Batty at
rbatty@agcenter.lsu.edu

March 27-28, 2010

11th Annual SW LA Garden Fest
Burton Coliseum
Lake Charles, La.
www.gardenfest.org
Contact Robert Turley at
rturley@agcenter.lsu.edu

March 27-28, 2010

Baton Rouge Spring Garden Show
Parker Coliseum
Baton Rouge, La.
Contact David Himelrick at
dhimelrick@agcenter.lsu.edu

April 10-11, 2010

New Orleans Spring Garden Show
Botanical Garden at City Park
New Orleans, La.
Contact Brent Jeansonne at
bjeansonne@agcenter.lsu.edu

May 1, 2010

Bonne Terre Garden Fair
Location TBA
Houma, La.
Contact Barton Joffrion at
bjoffrion@agcenter.lsu.edu

May 8, 2010

21st Annual Festival des Fleurs
ULL – Blackham Coliseum
Lafayette, La.
Contact Billy Welsh at
welsh@louisiana.edu

June 5, 2010

Daylily Festival
Abbeville, La.
Contact Stuart Gauthier at
sgauthier@agcenter.lsu.edu

Arborist Workshops – 2010

Contact Hallie Dozier at
hdozier@agcenter.lsu.edu

January 22, 2010 – Shreveport
First Aid and CPR

April 16, 2010 – Shreveport
Aerial Lift Safety

May 7, 2010 – Farmerville
Hazard/Danger Tree Cutting and Felling

July 30, 2010 – New Orleans
Bringing Business Your Way

August 6, 2010 – Shreveport
Tree Roots: Structures and Remediation

September 10, 2010 – Hammond
High Angle and Emergency Response

October 1, 2010 – New Orleans
Tree Climbing, Fall Protection

November 12, 2010 – Pollock
Tree Detectives

January 14, 2011 – Baton Rouge
Trees, People and the Law

**New Orleans Horticulture Society
Meetings**

Contact Stacy Cobb at 504-834-3094

December 17

LNLA Board Meetings

Contact Severn Doughty at
scd357@cmaccess.com

January 23, 2010 – Mobile, Ala.