

# IOWA STATE UNIVERSITY

## DEPARTMENT OF HORTICULTURE **2016 Alumni Newsletter**



Your are invited to the

**Department of Horticulture**

*Alumni Reunion*

Saturday, June 3, 2017

ISU Alumni Center Ballroom  
420 Beach Avenue  
Ames, Iowa

Cash bar and hors d'oeuvres at 5 pm  
Dinner at 6 pm  
Program to follow

Casual attire is encouraged. Cost is \$30 per person.  
Please make your reservation by February 1, 2017.



# Horticulture Alumni Reunion Reservation

June 3, 2017  
 ISU Alumni Center Ballroom  
 420 Beach Avenue

Cash bar and hors d'oeuvres at 5 pm – Dinner at 6 pm

Please fillout and return this reservation form to:

Kim Gaul  
 2206 Osborn Drive  
 106 Horticulture Hall  
 Iowa State University  
 Ames, IA 50011-4009

**OR** scan completed form and email to [alumreunion2017@iastate.edu](mailto:alumreunion2017@iastate.edu)

**Reservation deadline is February 1, 2017 with payment due by March 30, 2017.**

Number attending \_\_\_\_\_ x \$30 = \_\_\_\_\_

**No need to send payment now. ISU will send you a bill. Please be aware that we will not be able to provide refunds. Once your form has been received, you will be responsible for making payment.**

Please provide the information below for those who will be attending. If Hort alum, please provide current position and year of graduation. Please print legibly.

First, middle and last name	Hort Alum		Current position	Year Graduated
	Yes	No		

Mailing address: \_\_\_\_\_

City, state and zip: \_\_\_\_\_

Email address: \_\_\_\_\_

Phone: \_\_\_\_\_

University ID # (if known): \_\_\_\_\_

Please indicate below if you have any of the listed dietary restrictions and we will try to accommodate you.

- Dairy-free      Name \_\_\_\_\_
- Gluten-free      Name \_\_\_\_\_
- Vegan              Name \_\_\_\_\_
- Vegetarian        Name \_\_\_\_\_

Please email us at [alumreunion2017@iastate.edu](mailto:alumreunion2017@iastate.edu) and let us know if you need any accommodations for a disability.

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## *Greetings* **Fellow Horticulturists!**

**I**s it safe? Dare we come out from beneath our collective pillows after this most recent and bruising political season? You know, back in the day politics used to inspire me, but this year...not so much. In fact, I was more relieved than energized last November when the campaign ads finally stopped assaulting my television screen. Families, close friends, and even the nation itself have been divided by a process that should, at least in the end, bring all of us together. And if you choose to dwell too long on the political fortunes of this candidate or that party, well, it can get downright depressing. So what are we to do? Tune out? Drop out of the process all together?

Of course, the short answer to those questions is a resounding no! As conscientious and contributing members of society, we are obliged to remain informed, try our best to keep an open mind, and do what we've always done. And that is, provide as best we can for our families, our friends, along with those civic and charitable organizations we hold near and dear to our hearts. Oh, and for me personally, I have decided to watch less (far less) cable news and do more pruning! That's right...in my mind there is nothing more therapeutic than grabbing my favorite pruning saw and hand pruners and heading out into wild and untamed residential neighborhoods to do some rescue pruning. You heard me right, rescue pruning! And don't tell me you haven't noticed. For the past ten or fifteen years, we've been planting trees like crazy, but all-too-often no one goes back to help these trees in the pruning department. I mean seriously, you wouldn't adopt a new dog or cat and then ignore the important house training ritual, right? But that is exactly what's going on in our neighborhoods and along our streets. Okay, maybe my little crusade doesn't rise to the same level of importance as reigning in our national debt, addressing the health care needs of our citizens, or striving for world peace, but in a world that seems totally out of my control, pruning a tree and in turn helping my community forest at least provides me the illusion of stability and self-determination.

But my call to action is already in full swing throughout the land because as you read the pages that follow, you'll hear about current students and alums just like yourself who've taken control of their lives and careers, and are now engaged in some really inspiring, challenging, and meaningful endeavors. And isn't that our way? Horticulturists really don't pay a lot of attention to who's occupying the seat of power in Washington DC, Des Moines, your county, city, etc. No, our job is to grow the best crop we can, create beautiful places, and in general, contribute to all of the good things in life. And we do these things on a daily basis regardless of which way the political winds of change are blowing.

My point? Just as it's always been, I encourage you to be proud of your accomplishments, your profession, your academic home back here at Iowa State, and the way you make the world a better place. Seriously, when is the last time you heard of anyone getting mad at a raspberry, shaming a tomato, or being offended by a crabapple? We are the good guys/gals in this real life reality show, and no amount of political wrangling will change any of that.

So, whether it's "I'm With Horticulture" or "Make America Great Again Through Horticulture", I think those are two slogans we all can grow to love!

Best wishes for a safe and prosperous 2017!

**Jeff Iles, Professor and Chair**  
Department of Horticulture



## *A Message from* **Dean Wendy Wintersteen**

**T**eamwork is important in every part of what we do as a college, in and out of the classroom. Every year, the College of Agriculture and Life Sciences formally recognizes the efforts of a team doing great work in education, research or extension.

This year, the CALS Team Award went to the Iowa Master Gardener Program, part of our Agriculture and Natural Resources Extension efforts. Team leadership is provided by Master Gardener Coordinator Denny Schrock in the Department of Horticulture.

The Iowa Master Gardener team involves faculty and staff from the horticulture, entomology and plant pathology, and extension field specialists working closely with county coordinators to manage 2,400 volunteers. More than 13,000 trained volunteers help to deliver research-based horticultural information and education statewide. Each year they provide more than 100,000 hours of service to their communities, valued at more than \$2 million. This fall, by the end of September, Master Gardener volunteers had logged more than 60,000 hours for 2016, statewide. Over the past three years, Iowa Master Gardeners have had more than 2 million client contacts.

That's simply amazing. And what a huge benefit to the state of Iowa. Thanks to Denny for his coordination efforts, and to all members of the Iowa Master Gardener team.

Teamwork also is something you expect on the playing field — and you'll find horticultural expertise there, too. As Cyclone football season began this fall, six of our horticulture students were teaming up with ISU Athletics to keep the Jack Trice Stadium turf in tip-top shape. One of the students was senior Georgianna Heitshusen, who interned at the 2016 Super Bowl in Santa Clara, Calif — the first woman ever selected for this honor, and a once-in-a-lifetime experience in teamwork for her.

Thank you for all you do to support our horticultural team at Iowa State!

**Wendy Wintersteen, Dean**  
College of Agriculture and Life Sciences

# Horticulture Faculty

**Rajeev Arora**, Professor

[rarora@iastate.edu](mailto:rarora@iastate.edu)

Crop physiology – study of plant response to low temperature stress

**Nick E. Christians**, University Professor

[nchris@iastate.edu](mailto:nchris@iastate.edu)

Reducing maintenance costs and energy consumption in the turfgrass industry; alternative pest management strategies for turfgrasses

**Barb Clawson**, Resource and Career Coordinator,  
Senior Lecturer

[bclawson@iastate.edu](mailto:bclawson@iastate.edu)

**Diana Cochran**, Assistant Professor

[dianac@iastate.edu](mailto:dianac@iastate.edu)

Extension specialist for fruit production

**Christopher Currey**, Assistant Professor

[ccurrey@iastate.edu](mailto:ccurrey@iastate.edu)

Greenhouse and controlled-environment production of ornamental and food crops

**Kathleen Delate**, Professor

[kdelate@iastate.edu](mailto:kdelate@iastate.edu)

Sustainable/organic horticultural and agronomic crop production and marketing

**Kevin Duerfeldt**, Lecturer, Global Resource Systems

[kduerf@iastate.edu](mailto:kduerf@iastate.edu)

**Shui-zhang Fei**, Associate Professor

[sfei@iastate.edu](mailto:sfei@iastate.edu)

Turfgrass breeding, genetics, and biotechnology

**Mark Gleason**, Professor, Plant Pathology

[mgleason@iastate.edu](mailto:mgleason@iastate.edu)

Research, extension, and teaching on sustainable disease management of fruit (apple, strawberry), vegetable (muskmelon), and ornamental (hosta) crops; plus turfgrass and shade trees

**William R. Graves**, Professor and Associate Dean  
of the Graduate College

[graves@iastate.edu](mailto:graves@iastate.edu)

Physiology and ecology of woody landscape plants

**David J. Hannapel**, Professor

[djh@iastate.edu](mailto:djh@iastate.edu)

Molecular biology of growth and development; characterization of potato tuber proteins involved in the process of tuberization; regulation of potato gene expression by hormones and environmental factors

**Cynthia Haynes**, Associate Professor

[chaynes@iastate.edu](mailto:chaynes@iastate.edu)

Consumer horticulture; human issues in Horticulture; youth and undergraduate education

**Jeffery K. Iles**, Professor and Department Chair

[iles@iastate.edu](mailto:iles@iastate.edu)

Landscape plant establishment and maintenance; landscape plant selection

**Ted MacDonald**, Adjunct Assistant Professor

Global Resource Systems

[jtmacd@iastate.edu](mailto:jtmacd@iastate.edu)

**Dorothy Masinde**, Senior Lecturer, Global  
Resource Systems

[masinde@iastate.edu](mailto:masinde@iastate.edu)

**David D. Minner**, Professor

[dminner@iastate.edu](mailto:dminner@iastate.edu)

EARTH – Education and Resiliency Through Horticulture

**Ajay Nair**, Assistant Professor

[nairajay@iastate.edu](mailto:nairajay@iastate.edu)

Extension specialist for vegetable production

**Gail R. Nonnecke**, University Professor, Morrill Professor

[nonnecke@iastate.edu](mailto:nonnecke@iastate.edu)

Horticulture: Management and physiology of small fruit crops; Global Resource Systems: Interdisciplinary major in the College of Agriculture and Life Sciences, Global Technical, cultural, leadership, and integration competencies

**Lisa Orgler**, Lecturer

[lorgler@iastate.edu](mailto:lorgler@iastate.edu)

**Denny Schrock**, Lecturer, Coordinator, Master

Gardener Program

[dennys@iastate.edu](mailto:dennys@iastate.edu)

**Aaron Steil**, Lecturer

[ajsteil@iastate.edu](mailto:ajsteil@iastate.edu)

**Adam Thoms**, Assistant Professor

[athoms@iastate.edu](mailto:athoms@iastate.edu)

Effective and economical strategies for commercial turfgrass management; investigating performance of turfgrass subjected to various management techniques, putting greens, athletic fields and safety turfgrass adaptation in Iowa

**Ann Marie VanDerZanden**, Professor, Director, ISU  
Center for Excellence in Learning and Teaching (CELT)

[vanderza@iastate.edu](mailto:vanderza@iastate.edu)

Horticulture: Functional landscape design, construction, and management; curriculum development related to landscape issues

**Mark Widrlechner**, Affiliate Associate Professor

[isumw@iastate.edu](mailto:isumw@iastate.edu)

Plant Introduction Station Agronomy/Horticulture. Germplasm conservation, evaluation of landscape plants

# Awards and Recognitions

2016

## College of Agriculture and Life Sciences

**Dorothy Masinde** received the Outstanding Achievement in International Ag Award and the University International Service Award. She was honored at the University Faculty and Staff Awards Ceremony on September 26, 2016.

**Lisa Orgler** received the 2016 Early Achievement in Teaching Award at the University Faculty and Staff Awards Ceremony on September 26, 2016.

The **Master Gardener Team** was presented the 2016 College of Agriculture and Life Sciences Team Award at the College of Agriculture and Life Sciences Spring Awards Program, February 2, 2016.



Dr. Wendy Wintersteen presents the Master Gardener Team Award certificate to Susan DeBlick.

## North American Colleges and Teachers of Agriculture

**Ann Marie VanDerZanden** was presented the Teaching Award of Excellence from the North American Colleges and Teachers of Agriculture (NACTA). The award was given at the 2016 Annual NACTA Conference in June at Manoa, Hawaii.



Dr. Ann Marie VanDerZanden holds the plaque she received at the NACTA Conference.



# Horticulture Staff

## TECHNICAL STAFF

**Kenny McCabe**, Research Associate with Dr. Graves

**James Schrader**, Assistant Scientist III with Dr. Graves

## GREENHOUSE MANAGER

**Peter Lawlor**

## HORTICULTURE RESEARCH STATION STAFF

**Nick Howell**, Superintendent

**Jeff Braland**

**Brandon Carpenter**

**Lynn Schroeder**

**Dan Strey**

## EXTENSION AND OUTREACH STAFF

**Susan DeBlieck**

**Richard Jauron**

## GLOBAL RESOURCE SYSTEMS STAFF

**Maggie Sprecher**

**Hannah Darr**

## OFFICE STAFF

**Kim Gaul**, Administrative Specialist

**Colleen Johnson**, Office Support Staff

**Deb Cochran**, Office Support Staff

**Savannah Hartman**, Hourly Student

## IT STAFF

**Dianne Brotherson**

## BUILDING STAFF

**Josh Cunningham**, Custodian

## AREA STAFF

**Joe Hannan**, Field Specialist, Adel, Iowa

**Vince Lawson**, Superintendent, Muscatine Island Research Station, Fruitland, Iowa

**Patrick O'Malley**, Field Specialist, Iowa City, Iowa

**Mike White**, Viticulture Field Specialist, Indianola, Iowa

# NEW Horticulture Faculty and Staff

**D**r. Adam Thoms was hired as an Assistant Professor in Horticulture specializing in Commercial Turfgrass Management. Dr. Thoms began his appointment July 1, 2016.

Adam was born and raised in Waverly, Iowa and obtained a B.S. in horticulture from Iowa State University. He received his M.S. in plant sciences (turfgrass management) from the University of Tennessee with his research project focusing on the traffic tolerance and management of various Bermuda grass cultivars. Adam was the research leader for the University of Tennessee Center for Athletic Field Safety, and oversaw all of the athletic turf research conducted at the University of Tennessee. His main research focus was to maximize the performance and safety of natural and synthetic turf surfaces used for athletic fields. He received his Ph.D. in plants, soils and insects from the University of Tennessee in 2015. Adam is active in both the Sports Turf Managers Association and the Synthetic Turf Council.



**M**y name is Hannah Darr and I am entering the role of Program Assistant for Global Resource Systems. I will be working closely with the service learning programs in the U.S. Virgin Islands and Uganda, in addition to providing any needed support to on-campus GRS activities. I graduated from Iowa State University with a B.S. in Global Resource Systems and Emerging Global Diseases. I enjoyed my adventure at Iowa State so much that I decided to stay!

I am originally from Indianola, Iowa, famous for the National Hot Air Balloon Classic that the town hosts each summer. Although I grew up in Iowa and moved to Ames for school, I've had the opportunity to do quite a bit of traveling through research, work, and personal endeavors and in the last year have been on four different continents! I am very interested in topics related to global health, public service, and community development and am excited to keep learning as I enter this new position.



# IT Happens in Horticulture!

by **DIANNE BROTHERRSON,**  
Horticulture IT Support

## FACEBOOK

Facebook is defined as a free, social networking website designed to keep in touch with friends, family and colleagues. What better way to stay in touch with our Horticulture family, friends, ISU alumni and colleagues than with Facebook! Department chair, Dr. Jeff Iles, set up a Facebook page to highlight the department's activities and news. The Horticulture Facebook page currently has 657 total page likes and you can find us by searching for "Iowa State University Department of Horticulture".

## LAPTOP ENCRYPTION

Laptops are a must for our department's faculty, staff, and students, but can be a security risk if the laptop is lost or stolen. For that reason, Iowa State University has imposed laptop encryption requirements for all university-owned laptops. Cyber security has become a much higher priority at ISU in order to keep student and employee data secure, as well as research data. Some countries, such as China, do not allow encrypted devices to enter their country and in that case, faculty traveling to China take a bare-bones, newly-reimaged, unencrypted laptop to be compliant.

## CYBOX

CyBox (similar to DropBox) is the university's solution to providing cloud-storage to all students, faculty, and staff. The service is free, unlimited and it is a place to store and share files with other students, faculty and collaborators anywhere in the world. Students can keep their account for life, even after leaving Iowa State so this has become an easy way for students to maintain their files and having that information available to them after starting their careers.



## Hortline Updates

**H**ortline was a toll-free telephone service when established in 1983. Home gardeners and extension staff could call the Hortline and receive answers to gardening questions. With the advent of the computers, individuals could also submit questions via e-mail. The number of e-mails has steadily risen.

1998	406 e-mails
2002	829 e-mails
2006	943 e-mails
2010	1,269 e-mails
2014	1,628 e-mails
2016	1,800 e-mails projected

A portion of the e-mails are plant identifications. Recent identifications include the following:



**Solomon's seal** (*Polygonatum* spp.) is a native woodland plant. Solomon's seal produces bell-shaped, yellowish green to greenish white flowers in May or June. The flowers hang down in clusters from the leaf axils. The flowers are followed by marble-size berries which turn dark blue in late summer.



**Carrion flower** (*Smilax herbacea*) is a herbaceous perennial vine. It is native to Iowa. Plants are often found in the woodlands and roadsides. The green to yellowish green flowers produce a carrion-like scent (hence the common name). After flowering, female plants produce blue-black berries in clusters or balls.



**Indian pipe** or **ghost plant** (*Monotropa uniflora*) is a native plant. It is typically found in moist, organic soils in shady woodland areas. Indian pipe has no chlorophyll. It obtains carbohydrates from nearby plants. The transfer of carbohydrates is facilitated by mycorrhizal fungi.



**Jack-in-the-pulpit** (*Arisaema triphyllum*) is a spring-flowering plant that is found in moist woodlands in

Iowa. The flowers consist of a club-like spadix (the preacher or jack) and a leaf-like spathe which curves around the spadix to form the "pulpit." After flowering, a cluster of berries form which turn scarlet in late summer.



**Pokeweed** (*Phytolacca americana*) is a herbaceous perennial that can grow to a height of 8 to 10 feet. Small,

greenish white flowers are produced in spike-like racemes. The flowers are followed by berries which eventually turn dark reddish purple. In the 1800s, the berries were used to make ink, hence the common of inkberry. While young spring shoots are edible (when boiled), all parts of large, mature plants are poisonous to humans.

Photos by Denny Schrock.

# Horticulture Resource and Career Center

by **BARB CLAWSON, Program Coordinator**

## Greetings Fellow Horticulturists and Friends:

The 2016/17 year is starting out fast and furious. The Department of Horticulture has 122 Horticulture majors, and 14 double majors. I'm happy to report 15 freshmen and 15 transfer students. They are a fine group excited about the horticulture industry.

I want to focus this article on the University of Costa Rica group that Iowa State University hosted during the summer, 2016. First, a bit of history about this exchange study abroad program. Over 140 Iowa State University students have participated in 9 study abroad trips to Costa Rica offered every other year through our Tropical Crops course, HORT 511. Approximately 140 University of Costa Rica students have visited Iowa in alternate years. The first trip to Costa Rica was in March, 1999, followed by the University of Costa Rica visiting Iowa in July, 2000.

On July 17, 2016 the plane landed at the Des Moines International Airport with 14 students from the University of Costa Rica, along with professor, Amy Wang and husband, Marvin Ramirez. This began a 10-day adventure for the group in the wonderful state of Iowa. The group began their visit with a picnic at my farm. What fun we had getting out the Milking Shorthorns, Tyler's Fair lamb, and answering questions about what it's like to live on an Iowa farm.

On the morning of July 18, the group toured Principal Park, the home baseball field of the Iowa Cubs. Chris Schlosser and former



Picnic at Barb's farm.



Chris Scholsser, Iowa Cubs turf manager speaking to the group.

horticulture graduate Chase Manning discussed turfgrass maintenance and the challenges of managing turfgrass at a professional facility.

Later, at the Greater Des Moines Botanical Gardens we had tours led by former students: Kelly Norris, Tyler Johnson, and Winston Beck. It was a beautiful day to enjoy the 'new look' of this unique horticulture facility. Dr. Donald Lewis presented the group with some visual concepts of what is a "bushel", how do convert acres to hectares, and other terminology that the group would encounter during their visit to Iowa.



Winston Beck giving the students a sample of tomatoes grown at the gardens.



Tyler Johnson explaining xeriscaping and biological control (using natural enemies for pest control) in the tropical dome and greenhouses.



Dr. Donald Lewis giving a demonstration on Iowa Agriculture.

(continued)

## Horticulture Resource and Career Center (continued)

What is downtown Des Moines without a stop at the Better Homes and Gardens Test Garden. Sandra Gerdes and Iowa State Intern Breanna Van Meeteren toured the group around the gardens.

The day ended with a good, old fashioned picnic at the Principal Park and an Iowa Cubs Baseball game.

July 19, 2016 began with a walking tour of the Iowa State University Campus lead by Lee Burras, Agronomy Professor. After a delicious lunch from HyVee we toured Reiman Gardens. Tim VanLoo and student interns Georgie Heitshusen and Colton Metzger, Horticulture graduate assistant with athletics, provided an in depth tour of Jack Trice Stadium, the Bergstrom facility, and the new Cyclone Sports Complex (CSC). The day ended with a potluck picnic at the CSC and a little soccer. The event was sponsored by the Departments of Entomology Plant Pathology and Horticulture.

Deal's Orchard in Jefferson was the first stop on July 20, 2016. Former horticulture graduate and orchard owner, Jerald Deal hosted the group and served a wonderful lunch on site. Graddy's Tomatoes in Carroll was an amazing display of hydroponically grown tomatoes.

Van Wall Equipment in Perry was first on the list for July 21, 2016. The students received a tour of the Van Wall Equipment headquarters and had the opportunity to ride in some very large equipment on site. From the John Deere dealership we went to the ISU BioCentury Farm with a tour of biofuel production by Andy Suby. The day ended with a wonderful tour of Marilyn and Brian Westrum's farm north of Boone. After the group



UCR students enjoying the shade at the Meredith Test Gardens.



Brian Westrum and the Ticos on the Westrum farm south of Boone.

looked at crops, machinery and grain bins, the Westrums provided a picnic dinner – including Iowa-grown sweet corn in their climate controlled machine shed.

Miscanthus research trials were led by Dr. Emily Heaton on the Sorenson ISU reserach farm south of Ames, on July 22, 2016. From miscanthus we went to Huxley and Slater. Matthew Prochaska provided a tour of the Monsanto Learning Center at Huxley, and Jon Buseman and Von Kaster led field tours of the Syngenta Research



Ticos walking the High Trestle Trail in Madrid.

Center in Slater. Paul Domoto and Chris Hudnall teamed up with a tour of Snus Hill Winery near Madrid. The group enjoyed the Friday night music and meal at Snus. The evening closed with a breathtaking walk down the High Trestle Trail in Madrid.

The Des Moines Farmers Market is a must see on Saturdays during the spring, summer and fall months in Iowa. July 23, 2016 began with a leisurely walk through the vendors followed by an enlightening educational guided tour of the spectacular World



World Food Prize Headquarters in Des Moines, Iowa.



Dr. Cochran explains hops research at the station.



People movers at the Horticulture Research Station.



Neal Smith National Wildlife Refuge and Hy-Vee warehouse visits.

Food Prize Headquarters by Jacob Hunter. The rest of the day was spent shopping at the Jordan Creek Mall in West Des Moines.

The finest Gallo Pinto wine in Iowa was sampled at a brunch at Winnie and Mark Gleason's on July 24, 2016. The morning included fabulous food, fun, socializing and croquet in the Gleason's back yard.

Nick Howell brought out the people movers for a relaxing tour of the Horticulture Research Station on Sunday afternoon.

Dr. Diana Cochran explained the hops research she has going on out at the Station.

John Newton, Department of Horticulture Grad, put the students on golf carts for a tour of Veenker golf course. At the end of the tour the students were given golf clubs and balls to learn the game of golf. Dinner was provided by the staff at Veenker and a relaxing night at the Furman Aquatic Center followed.

Neal Smith National Wildlife Refuge near Prairie City, Iowa has a mission to "actively protect, restore, reconstruct and manage the diverse native ecosystems of tallgrass prairie, oak savanna, and sedge meadow." On the beautiful early morning of July 25, 2016, the Ticos experienced the feeling the early settlers had in coming to Iowa. A Refuge Biologist, toured them around the refuge. Christopher Witte explained the STRIPS project that was close to the Refuge. STRIPS stands for Science-based Trials of Rowcrops Integrated with Prairie Strips. The STRIPS project is composed of a team of scientists, educators, farmers and extension specialists working on the prairie strips farmlands conservation practice. Dr. Richard Gladon, retired Greenhouse Professor at Iowa State University, accompanied the group to tour the Hy Vee Perishable Foods Warehouse in Chariton, Iowa. The students had the opportunity to see how bananas from Costa Rica go

through the ripening process in the warehouse for Hy-Vee.

The visiting University of Costa Rica students spent their last day, July 26, 2016, visiting with professors on campus, shopping in Ames, and packing for the trip home. Once again, the partnership between the University of Costa Rica and Iowa State University Departments of Entomology, Plant Pathology and Horticulture, provided a wonderful learning experience for our guests. We bid them goodbye, and hope to see them when a group from Iowa State University will visit them March 8-17, 2017.

Stop by the department when you have time and visit. We'd love to see you!

**Pura Vida!**

**Barb Clawson**

Program Coordinator

Department of Horticulture

# Graduate Student Horticulture Society



Officers from left to right: (front row) Nick Flax and Laura Irish, (back row) Alex Litvin, Brandon Miller, Zachary Hudson, John Krzton-Presson, and Kristine Neu.

The Graduate Student Horticulture Society kept quite busy during the 2015-2016 academic school year. With many active members, and an enthusiastic officer team we were able to engage in several professional development and service learning activities. In December we were given a behind the scenes tour of the Greater Des Moines Botanical Garden courtesy of ISU Horticulture Alumnus Winston Beck. In February GSHS hosted a departmental seminar speaker, Dean Engelmann. Dean is the co-owner of Tangletown Gardens, and his presentation on sustainable food production drew in over 60 attendees from several departments. In April, GSHS spearheaded the official campus Arbor Day planting, with the installation of several trees, over 75 shrubs, and 300 plus perennials. The new landscape installation runs from west of Horticulture Hall along the corridor to Osborn Drive. The planting, designed by graduate student Katrina Knudsen, features several selections of witchhazel, earning it the name Witchhazel Walk. The academic year was brought to a close with our participation in the Reiman Gardens Plant Sale Extravaganza. Our members grew vegetable and herb transplants which were sold to customers over Mother's Day weekend. GSHS would like to thank the department faculty and staff, our excellent alumni, and the Ames community for their support of our endeavors!

Co-presidents: Laura Irish and Kristine Neu

Treasurer: Zachary Hudson

Historian: Brandon Miller

GPSS Senator: Nick Flax

Social Co-chairs: Alex Litvin and John Krzton-Presson

*Congratulations!*

## Graduate Degrees and Students

### GRADUATE DEGREES HORTICULTURE-FALL 2015

**Raymond Albert Kruse**

*Major: Horticulture, M.S.*

**Kenneth Gene McCabe**

*Major: Horticulture, M.S.*

**Bryn Jonathan Takle**

*Major: Horticulture and Sustainable Agriculture, M.S.*

**Kellie Jean Walters**

*Major: Horticulture, M.S.*

### AGRICULTURE-SPRING 2016

**Samantha Kae Green**

*Major: Agricultural Education, M.S.*

### HORTICULTURE-SPRING 2016

**Paul Britten Merrick**

*Major: Genetics, M.S.*

### CURRENT GRADUATE STUDENTS

Moriah Bilenky (M.S.)

John Crister (M.S.)

Nick Flax (M.S.)

Austin Gimondo (M.S.)

Zachary Hudson (Ph.D.)

Laura Irish (M.S.)

Katrina Knudsen (M.S.)

John Krzton-Presson (M.S.)

Alex Litvin (Ph.D.)

Yang Liu (Ph.D.)

Isaac Mertz (Ph.D.)

Colton Metzger (M.S.)

Brandon Miller (M.S.)

Kyungwon Min (Ph.D.)

Mwape Mwanakatwe (M.S.)

Kristine Neu (Ph.D.)

Bryn Takle (Ph.D.)

Anna Talcott (Ph.D.)

Kalynn Tan (M.S.)

Libby Trecker (M.S.)

Sharon Tusiime (Ph.D.)



## John Critser

**Advisor:** Dr. Diana Cochran

**Degree Sought:** Masters of Science

**Major:** Horticulture

**Current Research:** I am currently working on ways to improve fruit quality in cold hardy grape varieties through use of various cultural techniques.

**Career Goals:** After my masters I hope to continue to work with fruit crops in an academic setting.



## Austin Gimondo

**Advisor:** Dr. William Graves

**Degree Sought:** Masters of Science

**Major:** Genetics

**Current Research:** My project involves developing a new slow release granular fertilizer comprised of microalgae grown on municipal wastewater, biochars, and bioplastic polymers. Our goal is to partially supplant industry reliance on synthetic fertilizers while also removing unwanted nitrogen and phosphorous from wastewater and returning it to production systems.

**Hometown:** Chandler, Oklahoma

**Career Goals:** I plan to move on to a Ph.D. program in plant breeding after my M.S. here and then maybe stay in academia as a professor.



## Laura Irish

**Advisors:** Dr. Denny Schrock and Dr. Cindy Haynes

**Degree Sought:** Masters of Science

**Major:** Horticulture and Sustainable Agriculture

**Current Research:** My research involves the collaboration between Master Gardeners and SNAP-Ed. I plan to investigate how Iowa Master Gardeners impact food safety and food security. I also plan on interpreting how the inclusion of fresh produce effects local food pantries and how the Master Gardeners play a major role in the relationship food banks have with local producers/donators. The project contains three parts: winter webinar series to educate Master Gardeners, mini-grants to encourage Master Gardeners around the state to either grow, connect, or teach, and demonstration gardens that provide the background for how impactful community gardens can be to local food security.

**Hometown:** Grayslake, Illinois

**Career Goals:** Ideally I would enjoy teaching community college or working in extension while running my family's small, diverse farm. Educating the general population on the ease of growing their own food as my personal goal.

# Graduate Student FOCUS



## Mwape Mwanakatwe

**Advisors:** Dr. Cindy Haynes

**Degree Sought:** Masters of Science

**Major:** Interdisciplinary Graduate Studies

**Current Research:** My area of research is in the field of horticultural therapy. I am looking at whether horticultural activities like gardening can be used as therapy for women of color and minorities who have experienced domestic and/or sexual abuse. All women are at risk to be abused, but in certain communities the risk is increased because of things like poverty and low education. Some of the outcomes of abuse include depression, low self-esteem and lack of confidence in oneself. Research shows that horticultural therapy has a positive effect in these areas, but little to no research has been done on racial minorities. This is what I am going to look at during my time here.

**Hometown:** Lusaka, Zambia

**Career Goals:** One of my favorite African proverbs says “If you educate a man you educate an individual, but if you educate a woman you educate a family (nation).” I love this so much because as a young African I have always been taught that families and communities rest on the shoulders of women. In the future I would like to help women in agriculture through extension work. I see myself developing teaching curriculum, planning workshops/conferences and heading entrepreneurial ventures that would benefit women in different countries in Africa. I also would like to develop faith-based horticultural therapy programs to help women and youth with the life issues they face. I do not have an exact job title for where I believe my vision will take me, but my goal is to inspire and empower!



## Anna Talcott

**Advisors:** Dr. William Graves

**Degree Sought:** Ph.D.

**Major:** Horticulture

**Current Research:** I am presently researching the competitiveness of invasive *Rhamnus* species in Ames, Iowa.

**Hometown:** Winfield, Illinois

**Career Goals:** I would like to teach at the high school or collegiate level.





A rather elaborate array of fertigation tubing for a New Guinea impatiens experiment used to meter precise amounts of nutrients and water added during production.

# GREENHOUSE Update 2016

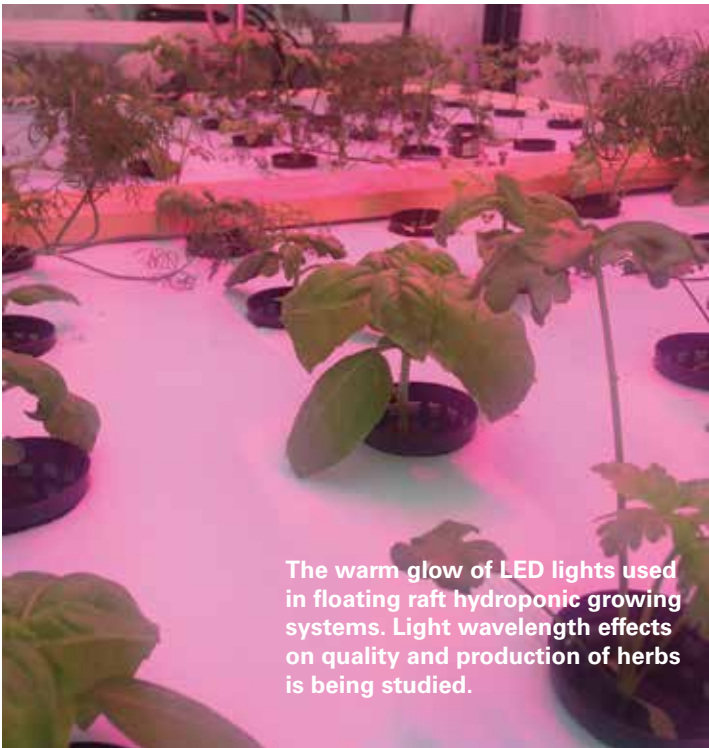
by PETE LAWLOR, Greenhouse Manager

The exciting news from Spring Semester 2016 was the great fundraising success that was experienced by the Horticulture Undergrad and Graduate Student Clubs at The Plant Sale Extravaganza. While producing excellent plant materials for vending to the community, they also obtained hands on experience in production, timing and logistics of greenhouse crop production. The past two Mother's Day weekends they have teamed up Reiman Gardens on the south end of

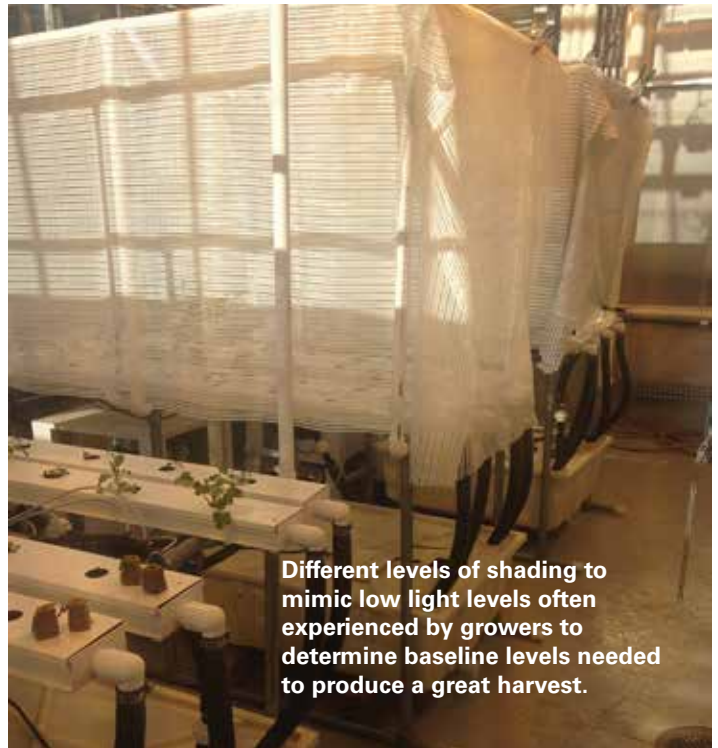
campus, Story County Master Gardeners and some other student groups to provide a mix of perennials, roses, vegetables and herbs as a replacement for the VEISHEA sales. They will then use their funds for invited speakers, food (well mostly pizza) and some entertainment over the course of the year.

If you are in the United States, and you have a lawn you are likely familiar with Ground Ivy or Creeping Charlie

(continued)



The warm glow of LED lights used in floating raft hydroponic growing systems. Light wavelength effects on quality and production of herbs is being studied.



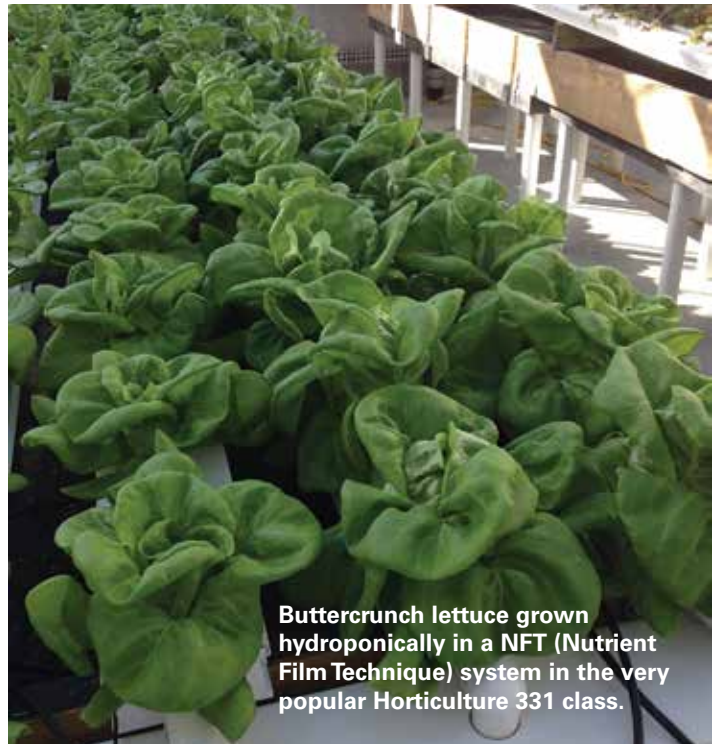
Different levels of shading to mimic low light levels often experienced by growers to determine baseline levels needed to produce a great harvest.



Untreated experimental control of ground ivy.



Twenty-eight days after applying two herbicides combined that possess different modes of action.



Buttercrunch lettuce grown hydroponically in a NFT (Nutrient Film Technique) system in the very popular Horticulture 331 class.

## Greenhouse Update, 2016 (continued)

(*Glechoma headracea*). It's that pungent ground cover with purple flowers that is very difficult to control. This past summer it has become so pervasive in Iowa that it was also found growing on the benches in the Charles Hall Horticulture Greenhouses. It was a research experiment performed by Isaac Mertz, to test the efficacy of three herbicides ability to control the bane of humankind and to determine whether that ability could be improved through tank mixing with an additional herbicide from a different chemical class labeled for ground ivy control.

The Hydroponic Food Crops Production course (Horticulture 331) is now being offered in both the Fall of 2016 and Spring of 2017. It occupies one of the largest bays in our complex and will be adding above and in canopy LED lights. Students are very excited about these developments.

LED lights are being used for research purposes in two of the research bays. Specific light wavelengths are being tested to see if they enhance the quality and quantity of hydroponically grown herbs when compared to high pressure sodium lights. A shading experiment using LEDs is also in the beginning stages.

If you find yourself in Ames, stop by for a tour of the interesting particulars at the Department's 21st century greenhouses. It would be my pleasure!

# ISU Horticulture Research Station



A group of visitors waiting to tour fruit research at the Iowa Public Radio Field Day.



'Caraflex' Cabbage growing in intern Thabisa Mazur's food production internship field.

by **NICK HOWELL, Superintendent**

The ISU Horticulture Research Station enjoyed another successful year. Coordinated by ISU Research and Demonstration Farms of the College of Agriculture and Life Sciences, the station continues to work to improve its teaching, research, and extension functions.

## STUDENTS

The Horticulture Station is an important part of the horticulture student academic experience at Iowa State. This season two students completed internships at the station. Elena Ingram, horticulture junior, worked on an herb production project and was responsible for the final data collection of a long-running blackberry trellis study. The second intern, Thabisa Mazur, horticulture junior, began in January with developing a field plan of potential crops based on available markets, planting schedules, and production protocols for each crop. Once the season began, she started her crops in the greenhouse, laid out the field, and with the crew's help, planted the field. Throughout the season, she marketed the produce on the Horticulture Research Station Community Produce website, to The Knoll, and Campus Dining. Next season, the goal is to expand this internship to include two qualified undergraduate students.

The Horticulture Station added two new graduate students in 2016. Moriah Bilenky, ISU 2013, came from Pennsylvania. She will be studying vegetable production techniques. John Critser, Auburn 2016, moved from Alabama to study grape production techniques to reduce vigor and increase production. Moriah is working with Dr. Ajay Nair and John is working with Dr. Diana Cochran for their master's degree programs.

All the students working and contributing to the station activities did an exceptional job and the Horticulture Station staff is proud of them and their accomplishments. We hope they have continued success.

## RESEARCH

The Horticulture Station's main function continues to be research. With more than 75 projects and 20 faculty members involved, the range of projects is diverse. Apples, blackberries, grapes, hops, tomatoes, peppers, potatoes, sweet potatoes, and melons were grown for research. Ornamental crops, such as turfgrass, shade trees, and flowering crabs, also were used for research purposes. In addition to the horticultural crops, projects using prairie plants and soybeans were conducted. Projects involving turtles, bees, wasps, and tree swallows added more research diversity.

(continued)



Students planting a new strawberry field.

A new project in 2016 was the expansion of the hops yard. Under the direction of Dr. Diana Cochran, this addition will look at new hops plant cultivars for their appropriateness in Iowa. Another project for Dr. Cochran was a high tunnel peach production trial. A new 42 ft x 96 ft x 19 ft tall high tunnel was constructed and planted with peaches to test its potential benefits to hardiness. This new tunnel is the largest at the station. Dr. Ajay Nair continued with extensive vegetable research projects at the Horticulture Station. With an emphasis on the use of cover crops in vegetable production, he studied the effects of annual rye on the prevention of *Listeria* contamination on cantaloupe. In addition, he looked at garlic production using cover crops. In the small tunnels, the effects of different levels of shade on colored peppers was tested. In another tunnel, he examined the effects of tomato grafting to control soil-borne diseases.

### LANDSCAPE AND INFRASTRUCTURE

A prairie seeded in the fall of 2015, consists of 10 acres below the dam of Horticulture Lake. This area with its remnant oak/hickory savanna was cleared of non-native, invasive woody plants four years ago. In 2015, the herbaceous vegetation was killed during the summer and seeded with a diverse prairie seed mix in the fall. This project, which is part of a Monarch butterfly habitat improvement project, will not only benefit the Monarch butterfly but also provide the many other benefits of a diverse prairie.

Approximately 230 apple trees were removed in 2016. These trees were the last of the conventional semi-dwarf orchards and were going into decline. New trellis system orchards have been planted in anticipation of the removal of the old orchards. The new orchards require significantly less

maintenance, produce higher quality fruit, and are a more useful apple growing system to demonstrate to Iowa orchardists and students.

Improvements in the farm irrigation system continued in 2016. A trickle and filtration system was added to the hops yard allowing increased capacity for research treatments.

### INDUSTRY AND THE PUBLIC

The station hosted 11 field days that included topics on vegetable and fruit production, hops, turfgrass and turf equipment, air blast sprayer calibration, soils, forestry, and general home gardening. One notable field day was sponsored by Iowa Public Radio in celebration of the 25th anniversary of the Horticulture Day radio program. An open house at the station included tours of the research plots and program. By the end of the event, 400 people visited the station. In addition to the field days, the farm hosted 23 tours and six other events for the public. Over 2,000 people visited the station in 2016.

With the student activities, extensive research projects, farm improvements, and industry and public functions, the Horticulture Research Station was extremely busy in 2016. The station continues to improve and expand its operations.



Colored peppers from the high tunnel.

# 2016 ISU Fruit and Vegetable Field Day



by DR. AJAY NAIR

Plant and Insect Diagnostic Clinic discussing pest and disease management for fruit and vegetable crops.

The Department of Horticulture in partnership with Iowa Fruit and Vegetable Growers Association (IFVGA), Practical Farmers of Iowa (PFI) and the Leopold Center for Sustainable Agriculture organized the 2016 Fruit and Vegetable Field Day at the Horticulture Research Station, Ames IA on August 15, 2016. The event was coordinated by Drs. Ajay Nair and Diana Cochran, Assistant Professors in the Department of Horticulture. The field day attracted 125 participants that included growers, extension personnel, county horticulturists, post docs, and graduate students. The field day provided research-based information on a variety of topics including high tunnel pepper production, tomato grafting, hops production and harvest, strip tillage for melons, and organic melon and squash production.

The event started at 2 pm with a welcome note from Drs. Nair and Cochran and Mr. Nick Howell (Farm

Superintendent). This year the field day hosted Mr. Brian Nordschow from Windridge Implements Inc., a company that specializes in small farm implements. Brian demonstrated several tools and equipment and addressed grower questions and queries. One of the highlights of the field day was the booth setup by the Plant and Insect Diagnostic Clinic. Drs. Laura Jesse, Lina Rodriguez, and Donald Lewis spoke about key pests in vegetable and fruit systems and recommended several Integrated Pest Management strategies to manage pests in a sustainable way. Eric Franzenburg (President, IFVGA) and Ms. Liz Kolbe (Horticulture Coordinator, PFI) also attended the field day and interacted with growers. The Field day gave growers an opportunity for a real time assessment of new, innovative, and sustainable research initiatives in the area of fruit and vegetable production. The first stop was the high tunnel pepper



Brian Nordschow demonstrating tools and equipment for small farms.

project. Dr. Ajay Nair highlighted the study which was investigating the effect of shade material and microclimate modification (light and temperature) in high tunnel colored pepper production.

At the second-high tunnel experiment stop participants witnessed the benefits of grafting in tomato production. Ms. Kristine Neu, graduate student in the

(continued)

## 2016 ISU Fruit and Vegetable Field Day (continued)



Diana Cochran sharing findings from the apple rootstock study.



Hayley Nelson showcasing the Protek net experiment on squash and melons.



Participants exploring the high tunnel tomato grafting project.

Department of Horticulture, discussed the potential of grafting to provide disease tolerance and enhance crop productivity, in high tunnel crop production. Several aspects such as cost, construction, maintenance, and production methodologies in high tunnel crop production were discussed.

Dr. Diana Cochran showcased the recently planted hops orchard and provided an overview of hop production. She also discussed ongoing research investigating the effect of irrigation and fertility management in hops production. Bryn Takle, graduate student, and Kenneth McCabe, Ag. Specialist, in the Department of Horticulture demonstrated the working of the hops harvester, equipment that efficiently removes hop cones from the vine. Dr. Mark Gleason and Hayley Nelson demonstrated the use of a new insect netting called Protek net used to manage cucumber beetle and bacterial wilt in squash and melons. John Krzton-Presson, a graduate student in sustainable agriculture and horticulture, discussed his research on utilizing cereal rye cover crop for strip tillage planting of melons and potential use of rolled and crimped cereal rye residue to reduce food borne pathogens on melon fruit.

The field day provided graduate students an opportunity to actively participate and engage growers in their research projects. The afternoon session of the field day was followed by supper at the farm. After the supper growers mingled with farm staff, researchers and graduate students and had discussions on needs and challenges for the fruit and vegetable industry in Iowa.

# TURF Field Day



Cultivar plots are each given a sign for the event.

by **DR. NICK CHRISTIANS**

The Iowa State University turfgrass field day was held on July 28, 2016 at the Horticulture Research Station near Ames. The field day is a show case for turfgrass research at Iowa State. It draws participants state-wide from the golf, sports turf, lawn care and sod industries. This year featured projects on the adaptation of cultivars of Kentucky bluegrass, Tall Fescue, and Creeping bentgrass. It also included studies on the new sports turf research facility that was completed in the fall of 2015. An ever popular part of the field day is the annual turf walk that includes weed and grass identification, and information on insects and diseases. Approximately 120 people were in attendance. For more information on the turfgrass research program and future field days, see the turf blog at [www.extension.iastate.edu/turfgrass](http://www.extension.iastate.edu/turfgrass).



Dr. Adam Thoms presented on sports turf.



Dr. Nick Christians spoke at turf field day.



Dr. Donald Lewis discussed insects.



# REIMAN GARDENS

Nature Connects®: Art with LEGO® Bricks exhibit roseate skimmer dragonfly sculpture.

by **MARIA TEPLY**

In 2016, Reiman Gardens celebrated color for its theme. From garden-inspired Nature Connects: Art with LEGO® bricks sculptures in classic bold colors, to a rainbow of tulips; from romantically lush landscapes designed with inspiration by landscape designer Gertrude Jekyll to bright colored plantings in the Children's Garden, the Gardens was alive with color and beauty. Many joined us on a journey to explore the amazing colors that surround us in the Gardens.

As part of the 2016 theme, Reiman Gardens again hosted the popular and very colorful Nature Connects®: Art with LEGO® Bricks exhibit with all new sculptures! The exhibit featured 13 larger than life displays made with 500,000 LEGO® bricks by artist Sean Kenney. When the Gardens first featured the Nature Connects exhibit in 2012, it was greeted with much enthusiasm. This exhibit featured brand new sculptures and plenty of opportunities to fascinate children (and adults) of all ages.

Reiman Gardens also reinstalled its annual holiday train, called the RG Express, which was custom built by Applied Imagination, an internationally recognized company whose train displays are made entirely from natural materials. Included in the show was a replica of Iowa State University's historic Dinkey train, several bridges, and scaled recreations of Iowa State University's Morrill Hall, Beardshear Hall, Campanile, and the Hub. The Campanile played carillon music.



The spring bulb show entitled "Rainbow Connection" went from mid-April – May 9 and featured 47,000 colorful tulips.





The "Orangery" display in the Hughes Conservatory featured citrus and orchids (January 18 – April 17).



The "Color & the Cottage Garden" display in the Campanile Garden (May 9 – October 15) took inspiration from Gertrude Jekyll, a 20th Century horticulturist known for her use of soft colors.



Master-Site-Plan-3D-Illustration features an elevation of the future southern portion of the Gardens.

During 2016, two changes took effect with Reiman Gardens' membership structure. Membership levels were capped at the \$500 patron level, and the top levels were then moved to a new giving society called the Director's Circle which starts at \$1,000. Benefits include insider emails from the Gardens' Director, Ed Lyon, an invitation to an exclusive donor recognition dinner, and more. Reiman Gardens also offered current Iowa State University employees (faculty, P&S, merit and contract) a 20% discount on any membership level. This discount applies only towards an

ISU employee's membership; it does not qualify for gift memberships purchased by an ISU employee.

It's important to make the beauty and educational value of Reiman Gardens as available as possible to all. So on the second Wednesday of every month, all guests may visit Reiman Gardens free of charge. The first free admission day was in September.

In 2015, Reiman Gardens celebrated its 20th anniversary. With the completion of the Gardens' first 20 years, it was time for Reiman Gardens to reevaluate its needs for the next 20 years. The new Gardens' master



Nature Connects®: Art with LEGO® Bricks exhibit corn spider sculpture.

site plan has been completed, which reworked and reinvented many of the outdoor garden spaces and also included a new visitor center. Reiman Gardens will start fundraising to turn the 20 year site plan into a reality.

Reiman Gardens would like to thank all of our members, visitors, and stakeholders for their support in 2016.



St. John Beach

# EARTH **Education and Resiliency Through Horticulture**

**SCHOOL GARDEN and SERVICE-LEARNING on ST. JOHN, U.S. VIRGIN ISLANDS**

by **GAIL NONNECKE, DAVID MINNER and HANNAH DARR**

**T**hrough the EARTH Program, Iowa State students travel to the U.S. Virgin Islands and the island of St. John for a summer or an entire semester to work, live and help in the community. University students assist with school gardens and help grow local fruits and vegetables sustainably. The “service-learners” also have the chance to help teachers in EARTH, environmental science and culinary arts classes and create learning opportunities for school children.

Over the past year, the EARTH Program hosted ten service-learners who were actively involved in youth, horticulture, agriculture and food projects at Giffit Hill School(GHS) on St. John and service projects in the greater community. We are very grateful for everyone who has

supported this program for the past 6 years and are excited to see it grow!

## **EARTH Program Mission**

The mission of the EARTH Program is to educate Iowa State University and Giffit Hill School students and the St. John Community about agriculture, the environment and food and nutrition, while creating inspiring and productive educational gardens and landscapes, to benefit the U.S. Virgin Islands, Iowa and the world.

## **2016 Updates**

2016 has brought an exciting change to the academic course options for students participating in the EARTH Program. Students can now enroll in a course, “Cultural Diversity in the U.S. Virgin Islands”. Readings, field trips, and focused interviews conducted on

St. John offer a unique opportunity for students to learn about the community and lives of those living in the U.S. Virgin Islands.

A new EARTH Program community project was launched as a component of the Service Learning Course. In cooperation with Our Lady of Mt. Carmel Church, service learners meet each Monday with other local volunteers to prepare and serve meals and distribute clothing for those in need. The EARTH Program looks to expand service efforts in the community related to food production and security.

New EARTH garden spaces were created in 2016 to meet the demand of a proposed school lunch program that will feed all students at Giffit Hill

**EARTH Blog: <http://isuearth.wordpress.com/>**



School in 2017. In preparation, the EARTH Program is growing garden produce for the school snacks with extra produce available to the school for sale in a farmers market one day a week. Some of the produce will also be used in the EARTH Program community outreach program that assists with feeding those in need at Our Lady of Mt. Carmel Church in Cruz Bay.

A new garden area of 2,400 sq. ft. area was cleared of brush and trees to create additional space for students enrolled in the Farm to Table classes and the EARTH Program to produce

fruits and vegetables. The 40 ft. by 60 ft. garden area is enclosed with poultry netting hung on treated lumber to prevent invasion by birds, iguana, and deer. This new garden substantially increases the opportunity for ISU and GHS student involvement in the GHS Farm-to-Table activities. The border area around the garden was cleared for an orchard. Low-growing fruit trees and shrub species, including dwarf papaya, Barbados and Surinam cherry, and pomegranate, will be planted in

addition to desirable indigenous trees and shrubs.

Community garden workshops sponsored by the EARTH Program and University of the Virgin Islands Extension were initiated. The EARTH program serves as an unofficial hub for gardening information on St. John and there has been an increase of vegetable and herb gardening for local restaurants.

(continued)





Terrace garden

## Spring and Summer 2016 Student Projects

Service-learners of the EARTH program developed and implemented projects at Giffit Hill School to support the school gardens and lunch program.

### HYDROPONIC VEGETABLE PRODUCTION

Water and soil often are limiting factors for garden production on the island of St. John. A student intern worked to design and build a hydroponic system to provide vegetables to the school and greater St. John community that would alleviate the resource issues of traditional gardening. The EARTH Program hopes to continue this project in the upcoming year with Giffit Hill

School and community members to demonstrate innovative solutions to enhance food security on the island.

### GRANT WRITING

A student intern with a passion for literacy was able to secure a \$500 book-grant to benefit children's literacy at Giffit Hill School. The books selected corresponded with the goals of the Farm-to-Table and EARTH curriculum at each grade level. This project was conducted in addition to working as a classroom assistant.

### SCHOOL LUNCH PROGRAM

Many student projects have made efforts to improve the nutritional quality of the school lunch program over the past years. In the spring, students worked to identify the

nutritional components of the school lunch menu and produce grown in the garden. Information collected was used by a summer intern to create a binder of school recipes that meet USDA school lunch standards.

### GARDEN RENOVATIONS

In the summer of 2016, students worked to design and build additional garden spaces to increase the square footage available for productive gardening. Utilizing the existing terrace gardens and recycled materials, the team was able to build two terraced walls. The expanded garden space will enhance the potential for food security and sustainability of the locally produced school lunch program at Giffit Hill School.

### VECTOR MANAGEMENT

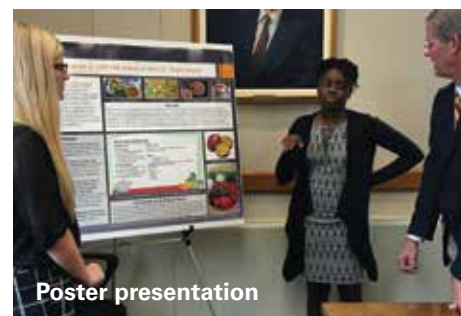
Mosquito-borne illnesses greatly impact citizens and visitors to the U.S. Virgin Islands. A project by a summer intern looked to improve vector management at Giffit Hill School and the surrounding community. Areas conducive to mosquito habitat and reproduction were identified and redesigned to reduce standing water.

### CONNECTIONS WITH THE UNIVERSITY OF THE VIRGIN ISLANDS

Makeda Mills, University of the Virgin Islands student, participated in the EARTH Program in summer 2016. Makeda, alongside ISU students from the summer EARTH Program, shared posters summarizing their projects during a session held at ISU in fall 2016.



Outdoor classroom



Poster presentation

# Study Abroad

Ireland Study Abroad with A Wee Bit of Service Learning



by ANN MARIE VANDERZANDEN

This past May twenty students and two instructors, Ann Marie VanDerZanden and Lisa Orgler, learned that Ireland truly is a magical place. Though we've been back in the states a few months now, our hearts still long for the rolling hills, enchanting woodlands, historic gardens and gracious people.

We spent eleven days exploring the central belt of Ireland from the Irish Sea to the Atlantic Ocean. Our itinerary focused on the horticulture and culture of Ireland which included visits to historic gardens, hydroponic growers, castles, rigorous hiking trails, steep cliffs, and Dublin's dynamic city center.

A highlight of the trip was a service project we did for Belvedere House and Gardens in Mullingar. We had the opportunity to install a perennial border in an established Victorian garden. This project began in the classroom with the Advanced Design Studio in Fall 2015 designing the new border. As with any project, unexpected changes at the site required a redesign by Ann Marie prior to the trip and again once we arrived. A light Irish rain, lots of plants and twenty eager students finally transformed a historic border and now have memories they will cherish forever.

One student summed it up perfectly, "What a great feeling it is to be a part of something like that, knowing that people from around the world are going to see this garden that some college kids from Iowa planted!"

We agree.



Burren shoreland



Installing a perennial border at Belvedere Gardens



Border project before



After





# Study Abroad

TRIP TO SOUTH AFRICA  
HORTICULTURE 496

by WILLIAM GRAVES

Most Iowa State students enjoy a week away from classes with family and friends when Thanksgiving comes along each fall. Late November of 2015 was different for a group of 16 students who participated in a two-week study-abroad trip to South Africa. Instead of turkey and stuffing, these students were enjoying a braai (South African barbeque), rooibos tea, and South African wine. While Ames was doused with its first significant snow of the season, this group was lathering on the sunscreen and trying to keep hydrated. After all, late November is the warm season in the southern hemisphere.

Like all wise international travelers, our group prepared and did its research before departure. Preparation included a semester-long class titled Horticulture and Ecosystems of South

Africa led by professors Chris Currey and Bill Graves. Eleven weeks were spent discussing the natural vegetation, climate, soils, and agricultural practices of our destination, as well as the rich human history and culture of South Africa. Each of the 16 students, several from majors other than horticulture, researched a subject of particular interest and presented to the class. Guest speakers enriched the curriculum on topics ranging from the geopolitics of South Africa to its struggle with HIV/AIDS.

After weeks preparing, our long journey began November 14, and the group arrived on the 16th in Johannesburg safe, sound, and more than a bit weary. We spent the first several days in that region of the



country, where highlights included stops at nurseries, garden centers, and botanical gardens, and a meeting with public-health workers who are implementing ambitious programs to reduce the spread of HIV. No inaugural trip to South Africa would be complete without a safari. We were fortunate to witness a wide array of wildlife during an overnight stop at Pilanesberg National Park with tent-camp accommodations.



A view from atop Table Mountain in Cape Town.



Proteas were a common site in the flora .



An Iowa State student reflects as she views the prison cell where Nelson Mandela was held.

The latter portion of our trip was in Cape Town and surrounding areas at the southern extreme of the continent. We traveled by train for over 24 hours from Johannesburg to the cape, witnessing changing landscapes and various ecosystems along the way, and appreciating the

train's comfortable beds and good food and drink. The horticultural importance of southern South Africa was evident in its wealth of orchards, botanical gardens, and vineyards, several of which were in the wine-producing region around Stellenbosch. A student and faculty

members from the University of Stellenbosch helped arrange visits to a game farm and local craft and produce markets. We explored a cave along the rocky Pacific coast, visited a flock of penguins, learned about unique plants of the fynbos, and enjoyed scenic views from atop Cape Town's Table Mountain. The last day of our trip was spent visiting Robben Island, where Nelson Mandela and many other political prisoners were held during the apartheid era.

South Africa was uniquely suited for student learning. It provided a remarkable blend of horticulture, diverse ecosystems with unique indigenous flora, fascinating animal life, and a complex human history that at many points in our trip stimulated emotional discussions about racism, human rights, politics, and the environment, both in South Africa and our own country. Every participant came away from the trip with broadened perspectives and enhanced understandings of our world.

# ISU Horticulture and Landscape Club: A year in review



The ISU Horticulture and Landscape Club is open to all majors. We have meetings every other week during the school year. There are four major sales as well as a number of clean-ups, throughout the year that the club organizes. Our main sales include: Fall Fest, poinsettia sale, rose sale, and spring sale. While these sales and clean-ups serve to fund club activities, the primary purpose of them is to help students build experience in the horticulture industry. Students learn skills from managing plant growth in greenhouses, to constructing floral arrangements, to planning and executing sales to the general public. The club also attends contests and conferences. In addition to the aforementioned activities, the Horticulture and Landscape Club offers a social once a month. They are a fun time allowing club members to socialize and relax from school.

We began the school year by hosting the Mid America Collegiate Horticultural Society's annual contest and meeting. Club members devoted large amounts of time making the contest and organizing various tours. Around 70 students from various universities in the Midwest came and participated. After the contest

we toured the Horticulture Research Station, the Plant Introduction Station, and the Greater Des Moines Botanical Garden to name a few.

Club members volunteer their time planting spring bulbs for the College of Agriculture and Life Sciences around Curtiss Hall. The Fall Fest sale was held during the local food fest on central campus. Club members sold sliced apples with caramel and bags of apples that were grown at the Horticulture Research Station. We had a pumpkin painting social for Halloween. One tradition of the club is to donate a yard clean-up service for the United Way auction. This time Dean Wintersteen was the lucky winner of our service. Club members raked and cleaned up her yard in preparation for winter. The poinsettia sale was hosted right before finals at various places around campus. Students ordered in cuttings in August and grew them in the greenhouse all semester. They learned various aspects of greenhouse management including proper application of PGRs (plant growth regulators) and nutrient testing. We concluded our year with a Christmas party. It included a potluck, a white elephant gift exchange, and an ugly sweater contest.

The Horticulture and Landscape Club started 2016 out with an ice-skating social at the ISU Ice Arena. Right before Valentine's Day club members were filling orders for our rose sale. Students learned how to make simple to large flower arrangements. The rose sale is hosted in the Memorial Union with club members selling roses and arrangements to the general public. We had a spring social at a local park with club members playing various games. Students ordered in succulent plugs and sold them at Cyclone Market. Club members attended the annual North American Colleges and Teachers of Agriculture contest, which was hosted by the University of Minnesota, Crookston. Club members received first place in the horticulture contest. The contest included areas of plant and tool identification, vegetable and flower judging, and a general knowledge exam.

Our last major sale of the spring semester was the spring sale. This sale is hosted jointly with the Story County Master Gardeners, Reiman Gardens, and the Graduate Student Horticulture Society. We were in charge of growing hanging baskets. Club members ordered in plugs and grew them in the greenhouses. Students learned proper fertilizing and watering skills. The last event the Horticulture and Landscape Club has participated in was helping judge the state 4-H vegetable classes at the Iowa State Fair. The Horticulture and Landscape Club keeps busy but also takes time to give back to the community and department. We are a close knit community joined by our love of horticulture.

**by Lucas Roberts, President**





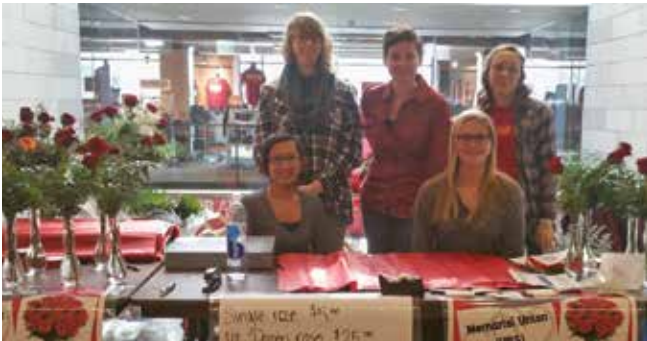
MACHS Conference



Cyclone market



NATCA Conference



Rose sale



Halloween social



Poinsettia sale



# TURF Club

by Zack Olinger  
ISU Turf Club President

The ISU Turf Club has an excellent reputation locally and nationally, and this year has been no different. Members participated in leadership activities, fundraising efforts, conferences, competitions, community outreach, and some of the most premier internships in the country. Meetings are held every other week and include industry networking guest speakers, and planning for future educational trips. The Turf Club continues to be a time honored tradition of Cyclone pride for the Department of Horticulture.

## Officers

The 2016 ISU Turf Club Officers are a group of experienced, and talented leaders. They meet every other week and are responsible for the management of the club.

President: Zack Olinger

Vice-President: Mitch Null

Secretary: Georgie Heitschusen

Treasurer: James Williams

ITI Representative: Jordan Rutherford

Advisers: Dr. Nick Christians and  
Dr. Adam Thoms



2016 ISU Turf Club Officers



STMA Student Challenge Team earned second place

## STMA- Sports Turf Managers Association

The annual STMA conference took place last January in San Diego, California. Eight members competed in the Student Challenge where members were crowned National Runner-up. We continue to keep our eye on victory at this competition and will be competing next January in Orlando, Florida to try to bring home the trophy.



Members at STMA Conference

## GCSAA- Golf Course Superintendents Association of America

The Iowa State Cyclones are known for their success at the GCSAA Turf Bowl. The Turf Bowl is a 4-hour exam; testing students' knowledge on everything from plant identification to business management in the golf course industry. The annual GIS/GCSAA conference was held in San Diego, CA last February. This year we placed 5th, but are looking to bring home another national title next February from Orlando, Florida.

## Internships

An important piece of our member's education are internships. This



Internships this past year

year the Turf Club had students throughout the country learning from the best managers in the country. Our members worked with the PGA, NFL, MLB, MILB, LPGA, USGA, and for numerous sports fields and country clubs throughout the country. A very special thank you goes to the individuals that have mentored our interns this year.

## Fundraising

The Turf Club continues to maintain the turf area at Reiman Gardens. It is a great opportunity for our members to learn calibration, safety, and application of fertilizer and pesticides. Recently the turf club has found various other turf related projects to help offset club expenses including: fall yard clean-ups, baseball field renovations, and seeding and establishment of a new turf areas.

The Turf Club is gearing up for another year of success. Without the continued support of alumni and sponsors we would not be at the same level we are today. Please consider making a contribution to the ISU Turf Club by contacting President Zack Olinger at [olingerz@iastate.edu](mailto:olingerz@iastate.edu) for more information regarding sponsorship. All sponsorships are tax deductible and help our members to become top industry professionals after graduation.

## Follow Us!

Follow us on Facebook and Twitter for updates, pictures, upcoming events, and to connect with our members.

# HORT internship



## PGA tour in Reno

Mitchell Cook, summer and fall internship

Eighteenth hole during the Barracuda Championship, moisture being checked on the green, while the rest of the hole gets handwatered.

This past summer and most of fall semester of 2016, I had the opportunity to be one of two interns from Iowa State at Montrêux Golf and Country Club in Reno, Nevada. Not only are there two of us who currently go to Iowa State, but the superintendent, Doug Heinirchs, and first assistant, Spencer Nelson, both graduated with a horticulture degree from Iowa State. Having the opportunity to work under two people who have gone through the horticulture program is amazing because they both are very knowledgeable about course maintenance and are very willing to share their knowledge with us.

Montrêux is the current host of the Barracuda Championship, one of the PGA tour events this year. Getting the opportunity to be a part of getting the course ready for the PGA tour was a very good learning opportunity. The week before and the

week of the tournament, one of the PGA agronomists was at the course constantly checking the playing surface and saying what needed to be done to get it up to the standards the PGA looks for. This year the agronomist and players praised the course on how well it played and how good the course looked during the tournament. Not only did Gage Gavin, the other intern, and myself

get to experience a PGA tour event but we also got the opportunity to work a couple days at Edgewood Tahoe during the American Century Championship, which is a celebrity tournament. Overall getting to experience two large tournaments during one internship at two different courses was a once in a lifetime experience.



Seventeenth hole photo taken from a TV tower.



This summer, I have had the pleasure of expanding my knowledge and experience as an intern for Bachman's Inc. in the heart of beautiful Minnesota. Bachman's is a 5th generation family-owned company based out of Minneapolis that has grown into one of the largest retail nursery and florist operations in the world. Today, the company includes 6 retail garden center locations, a partnership with Lunds and Byerly's grocery stores, a substantial floral sector, nursery wholesale division, hardscape center, landscaping and garden services, and everything in between. Although I got to experience the many diverse sides of Bachman's throughout the summer, a majority of my internship was focused in the Landscape and Garden Services division, which includes the departments of Exterior Landscaping, Interior Landscaping, and Garden Maintenance. I jumped between these departments quite regularly. For example, it wasn't uncommon for me to shift from the drawing desk to

the retail sales floor and then from a conference room to an installation site all in the course of one day.

Within the Exterior Landscaping department, I had the opportunity of working with the company's 8 landscape designers and observing their various styles of design, project management, and sales techniques. With this type of work, I got to travel to sites all over the metropolitan area taking measurements, elevations, and photos of properties, observing installation progress, and analyzing finished projects. I drew up many base maps and preliminarily designs for the hand drawing designers and even got to do some design projects of my own. Additionally, I learned about some of the various computer design programs that the designers use and even sat in on several client conferences. In Exterior Landscaping I also spent a few days with the garden coaches doing personal garden instruction sessions and some time with the human resources representatives inspecting completed

landscape projects and addressing customer issues.

The little time that I did spend with the Interior Landscaping department involved assisting plant leasing technicians, assembling contemporary dish gardens for commercial clients, and working on a design for a large atrium landscape renovation. I also had a blast working with the sales representative and crews in the Garden Maintenance department, where I personally designed and installed many annual pots, containers, and beds for both commercial and residential clients. This line of work took me to many fascinating locations including upscale downtown hotels and apartment buildings, historic homes, a local TV news station, and even a green roof on the University of Minnesota campus. Some other highlights from my internship include working on a landscape design for former Boston Celtics player, Kevin McHale, visiting the news set of the WCCO television station, touring Minnesota Tile and Stone, and participating in the Minnesota Nursery & Landscape Association (MNLA) Annual Golf Outing. To cap off the end of the summer, I toured Bachman's wholesale farm, Cedar Acres, in Farmington, MN to observe the entirety of the company's substantial field and greenhouse nursery production.

I certainly wasn't alone in my adventures as I worked closely with fellow intern and partner in crime, Sally. She has chosen horticulture as a second career path and comes with a wealth of experience. Our knowledge and talents truly compliment each other, and Sally has definitely become a life-long friend.

Outside of work, I was blessed with the chance to live and explore in the great state of Minnesota while taking in the people, places, and

culture of the Twin Cities. I was truly fortunate that a fellow Bachman's employee, Amber, allowed me to temporarily live with her and the dogs in her Saint Paul home. She certainly helped me make the most of my summer as we visited many local festivals, restaurants, and recreation destinations. This was my first summer away from home and my first time living in a large city, so you could say that my time in the Twin Cities was definitely a learning experience. Despite this fact, I fell in love with the area, would consider it my "home away from home", and could even see myself living there in the future.

Bachman's certainly kept me on my toes this summer with new adventures around every corner. This internship challenged me as a young professional and exposed me to the many different aspects of the ornamental horticulture industry. I would suggest Bachman's to any horticulturists looking for a fulfilling internship or career and encourage anyone to stop by one of their locations. I may have only spent a few months with the company, but I will always wear my Bachman's purple with pride. I truly value my time spent with Bachman's and look forward to what the future may hold.



I am working on a landscape design drawing with Bachman's designer and Iowa State Horticulture alum, Claire Anderson.

# HORT internship



## Nursery in Oregon

**BROOKE JERLE, summer HORT internship**

It was late January when I had made the decision to commit to a three month internship at Iseli Nursery. It was May 12th when I left home and after two and a half days, 2,055 miles, and one speeding ticket later, I had finally arrived in Boring, Oregon. The aged but quaint farm house would be my new home for the summer. I had the opportunity to be a part of a world-renowned, specialty nursery.

I was joined by three other interns, one from New York, another from Scotland, and the third from New Zealand. I was able to take part in seven different divisions at Iseli. I spent two weeks in each division and learned the responsibilities of the crew and supervisors and took part in those day to day activities. With the assistance and guidance of the managers, supervisors and staff (some who had been employed for 30 or more years) I was taught to scout for pests, was introduced to plants that I had never seen before and I even learned some Spanish!

The language barrier was difficult to overcome; however the employees at Iseli were consistently helpful and friendly. Being that the internship was more of a hands-on work experience, it was easy to communicate with the crew as to what our duties were regardless of spoken word. By the end of summer I had a new found appreciation for the nursery industry. There was an unexpected aspect of my experience that had stood out from all others –the people that surrounded me. Between the Oregonians employed at Iseli and the three other interns (whom I am proud to call my friends), I had never once felt unwelcomed.

Thanks to the comfort and support provided by those around me during my time in Oregon, I have found a want (perhaps even a need) to learn and experience more. I learned more about the nursery industry, life, and even about myself in those three months. The experiences, relationships and adventures were more than I could have ever imagined. I couldn't have asked for a better summer.



## Ball Gardens in Chicago

DERICK PERKINS, summer HORT internship

**M**y name is Derick Perkins and I am a senior studying Horticulture in the Ornamental Plant Production and Garden Center Management option. Only 2 days after my return from spending a semester studying abroad at the University College Dublin in Ireland, I started my internship with Ball Horticultural Company in West Chicago, Illinois. I worked in the Gardens at Ball, which span over 9 acres and displays the new and existing varieties from Ball Horticultural Company. The gardens also include plant material from a number of different companies in the industry. Planting commenced the day I arrived, so I saw the full process from empty beds to finished, full gardens. The 11 short weeks that I spent at Ball were jam packed with events. Darwin Perennial day, hosting Fleuroselect's annual convention (a European organization similar to All-American Selections), and the Ball Seed Field Day were the top three events in the gardens this summer. Throughout the course of the summer, I experienced

just what it takes to make a display garden happen. Blood, sweat and tears (maybe not tears, but copious amounts of sweat!) from all of the garden staff go into making the gardens look beautiful. The amount of planning and organization that go into making the gardens function is incredible!

Assisting with the install and maintenance of the gardens was only one aspect of my internship. I also had an internship project which was focused on vegetables. I worked in our All-American Selections vegetable trial areas and learned the process that trial sites go through to evaluate the varieties. I also looked after the Burpee Home Gardens and Pan-American Seed vegetable beds within the gardens harvesting and maintaining the vegetables. In addition I worked with the Burpee Home Gardens Product Manager to see the coordination amongst the breeder, production, and marketing staff that occurs in order to bring a new variety to market.

When I started I was not really sure what I was getting myself into, but throughout the summer I have been presented with some amazing opportunities to expand my network with horticultural professionals all over the world. From attending Cultivate'16, as well as multiple presentations from Ball employees, I have a greater understanding of Ball Horticultural Company's organization as well as the ornamental horticulture industry in general. Overall my internship with Ball Horticultural Company was an amazing opportunity and I would strongly recommend the experience to any of my peers.



Tour group walking a pepper field at a Mennonite farm.



# Midwest Produce

PAIGE PETERSON, summer HORT internship

I am Paige Peterson, a Junior Horticulture major with an Agricultural Business Minor here at Iowa State. I had a summer internship through the ISU Agricultural Entrepreneurship initiative summer internship program at Capital City Fruit in Norwalk, Iowa. Capital City Fruit (CCF) is a 66 year old family owned supply chain service provider of quality fruits and vegetables shipping and repacking product throughout the Midwest. CCF provides products and services to grocery store chains, wholesale chains, and institutional food service distributors, as well as other wholesale produce distributors.

This summer has been an adventure to say the least. In November I began my search for the perfect summer internship. A mass email was sent about the ISU Agricultural Entrepreneurship initiative Summer Internship Program, and as I started looking through all the positions I was pleasantly surprised to find some involving horticulture. As I went through the interviewing process with Carly Cummings, all my options were explained to me and I began narrowing them down. I knew I wanted something different and exciting; I really did not want to stay

in Ames for the second summer in a row. I wanted to go experience new things and new places. On December 21, 2015, I was given an internship offer by Capital City Fruit as the Locally Grown Intern. I accepted the offer and even though I would have to settle for living in Iowa for the summer, I was promised to be sent on trips and travel to several different states to talk to farmers and see their production practices. This internship opportunity had transformed from a good experience into an experience of a lifetime.

On my first day of work I hit the ground running. I agreed to be a part of an overnight trip with the

grower representative, Jon Miller, and the marketing intern, Bethany Benes, to a Mennonite farm in Rich Hill, Missouri. This was an awesome experience to see and talk about their growing practices, as well as learn about their community and how different farmers grow different products for us.

Since my first week with Capital City Fruit, I have visited 9 different growers, totaling 6 different states besides Iowa: Missouri, Illinois, Wisconsin, Nebraska, Minnesota, and Ohio. I have learned so much by traveling, talking to our growers, and managing the relationship between us. When I do not have to travel for a grower visit, I am at the office checking the incoming product from the farmers. I inspect for quality issues as well as packing

(continued)



Once we got to the main farm we took a tour on wagons to the different fields as the farmers explained the production practices and their crops for this year.

## Midwest Produce (continued)



Capital City Fruit headquarters in Iowa.



Packaging and shipping fresh kohlrabi from Missouri.

or shipping issues that may have happened during transportation. This allows my colleagues and I to know exactly when there is an issue and allows us to address the issues with grower immediately. I also go to local stores and check our products on the shelves, so we know the quality of the products we sell to our customers. This allows us to know the quality of our product throughout every step, from farm to consumer.

During the weekend of July 8th, I was lucky enough to be able to attend Cultivate'16 in Columbus, Ohio. Cultivate is a horticulture



A decorative wall leading to the Cultivate'16 trade show in Columbus, Ohio with new perennial plants being introduced to the market this year.



Panoramic view of the trade show floor and all the booths set up. There were 600 vendors set up on the Trade show floor.

conference that is sponsored by the American Horticulture Association. This was an amazing experience that entailed multiple educational sessions, a huge trade show, and a lot of networking. Being able to attend this conference was the highlight of my internship. I am super excited to give a presentation on all that I have learned and experienced in the next sales meeting at Capital City Fruit to share with all my coworkers.

Throughout the summer I have been very busy between all the traveling and produce quality checks, but I have still found time to work on

several different projects with many coworkers. I have been able to give presentations during sales meetings on updates and findings within my projects, as well as be a part of some prototyping for some new projects that are just getting started.

Overall, I have been a very busy intern and it has been one of the best experiences of my life. Capital City Fruit has made it possible for me to experience some things that I would have never dreamed of. I am super thankful for the ISU Agricultural Entrepreneurship initiative internship program and Capital City Fruit for this great opportunity!





# Cooperative in China

Morgan Burden, Global Resource Systems and Economics

This past summer I completed an internship in a vegetable cooperative in a small village outside of Hangzhou, China. I am fascinated by China and wanted to learn everything I could about life, their work, and even what they call the “Chinese dream”.

I worked with different aspects of the supply chain with this particular cooperative, ranging from meeting with local officials to packing the vegetables to be sent off to the customers. I spent a lot of time picking, sorting, and packing vegetables to be shipped to the city. I shadowed the owner of the cooperative and was able to go to many meetings with him to really see the Chinese business culture and how it differs from American business culture. I met many government workers, other local business owners, and even met a Chinese colonel!

This internship opportunity was especially important to me because it allowed me to experience Chinese life and culture by living with a family in a small village. It was really cool to be immersed in the Chinese culture. The way I lived, how I worked, and who I met gave me a broader perspective of my fields of study and I returned from my internship feeling like a more engaged global citizen. I learned a lot about vegetable growing, general business and Chinese culture and I enjoyed meeting new people almost every day and hearing about their lives.

This internship really shaped what I could do with my life and career. I am currently looking to study abroad in China, where I hope to learn more Chinese or even attend graduate school.



# GRS internship



# Research in France

Michaela Hoffmeyer, Global Resource Systems and Agriculture and Society

I grew up on a small diversified farm in Winterset, Iowa. Growing up, I developed an interest in the interaction between agriculture and the environment. This interest continued to grow as I embarked on my Global Resource Systems Internship at Bioversity International in Montpellier, France. I had been a Borlaug-Ruan Intern at the International Rice Research Institute in the Philippines and a service-learner with the ISU-Uganda Program in earlier years. Because of my prior experiences and future interests, I wanted to work at a research institution that also is involved in policy making. Bioversity International was a great fit for me because of their diverse staff, working in international development, and a broad range of research.

During my internship, I conducted a literature review on ecosystem services in Africa. The literature review will service as a comprehensive

review of where and what type of ecosystem services are being studied in Africa. I will have the chance to publish an article on the areas of Africa that are lacking in research with my internship supervisor. I also worked with data entry for a nutrition project in Zambia, where I translated food diaries from study areas to evaluate the impact of solar stove use on food security and nutritional status. By collecting information, analyzing data, and compiling a report, I developed valuable research skills.

My favorite part of my internship was interacting with my co-workers. As an international institute, I worked with people from Columbia, the UK, Belgium, France, and elsewhere. My co-workers and I went on several trips where we hiked nearby mountains, visited the beach, and explored the farmers market and restaurants in the center of town. These experiences helped build lasting and meaningful relationships with new friends.

Because of my internship, I feel more focused and passionate about my future. I plan on attending graduate school for Rural Sociology and the Human Dimensions of Natural Resources and the Environment. Working for Bioversity International has further increased my interest in human and agricultural impacts on the environment. I want to learn more about natural resources, and I plan on taking more classes on this topic at Iowa State in my last year. I am grateful that my internship has helped me prepare for graduate school due to my experience conducting research and writing scientific articles.



# GRS internship



## Nutrition in Uganda

Samantha Kanselaar, Global Resource Systems and Dietetics

This past summer I traveled to Kamui, Uganda as an intern with the Iowa State University Uganda Program. While in Uganda I had very diverse experiences that allowed me to utilize, grow, and improve a wide range of skills I have learned in both of my majors – Global Resource Systems and Dietetics.

Before travelling to Uganda, I worked with my professors to develop a research project focusing on nutrition. The Nutrition Education Centers (NECs), that are part of the Iowa State University – Uganda Program, provide the infants and children in the district with 3 cups of nutrient dense porridge daily. The centers have data on the nutrient content of this porridge, but are missing data regarding the dietary consumption of the clients at the household level. I chose to research and collect this data, and will analyze it for my senior research topic. I conducted interviews at the centers as well as the clients' houses.

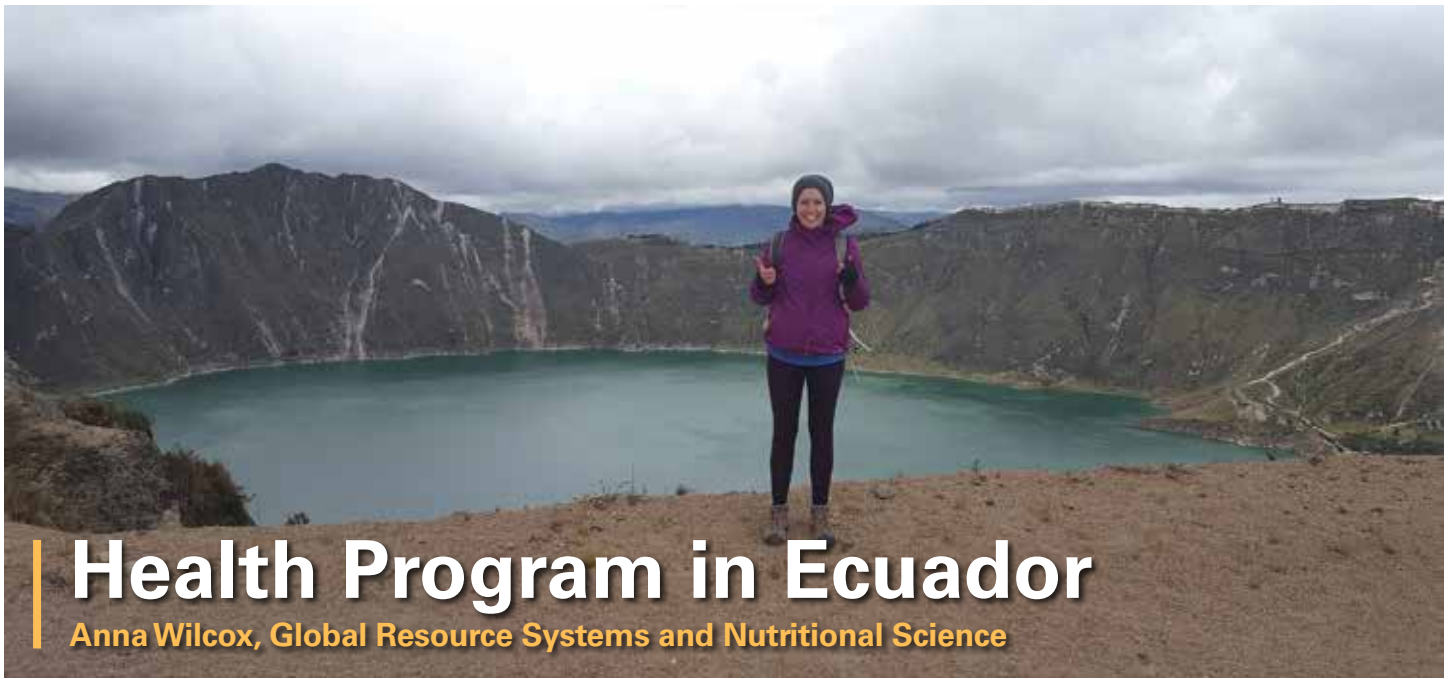
When I was not interviewing the clients, I was learning about the quality and processing of the infant and children's porridge. I assisted with preparation by sorting, drying and

mixing the ingredients. Once a week I assisted the program leaders with the women's entrepreneurship group. After the mothers have graduated from the NECS they are able to participate in the program by creating an assortment of crafts to sell for income. We used the opportunity to market the items when visitors came by setting up a small market type of environment at the workplace.

Once a week I taught integrated science classes at the Namasagali primary school, and twice a week I worked on the school feeding projects at the Nakanyonyi and Namasagali Primary Schools. This included improving sanitary practices by creating wooden benches for the pupils to sit on while they eat and a drying rack for the dishes. We also implemented charts for the cooks to record the number of meals they serve each day, the amount of ingredients used, and number of days lunch is served per week. We created a reward system to implement into the classrooms to encourage students to bring the ingredients needed for the school lunch, which is part of their school fees.

I was thoroughly busy during my stay in Uganda and I loved every minute of it! My most memorable experience of the summer was witnessing the graduated mothers from the NECs receive their first "payday" from their crafts and entrepreneurial activities. The mothers were extremely pleased with themselves after earning that money; their first paycheck inspired them to continue to work hard. By the time the second "payday" came around, I could see the impact it was already making in some of their lives. The following week one of the mothers told me how happy her husband was with the extra income for the family. He offered to help her by bringing her on the family bicycle, and she could not have had a bigger smile on her face. All of these experiences have further inspired me to have a career in the field of development.

The biggest impact from my international internships is that I have become inspired. Seeing first-hand the empowerment that these people feel after realizing their own potential to improve their livelihoods, is what drives me to continue in a career path of development work, to help other women realize their potential.



# Health Program in Ecuador

Anna Wilcox, Global Resource Systems and Nutritional Science

I completed my GRS internship in Cuenca, Ecuador where I worked with projects in school nutrition. I picked this internship because I wanted an experience that would tie together both of my majors in a Spanish speaking country, and needless to say, it was a great fit!

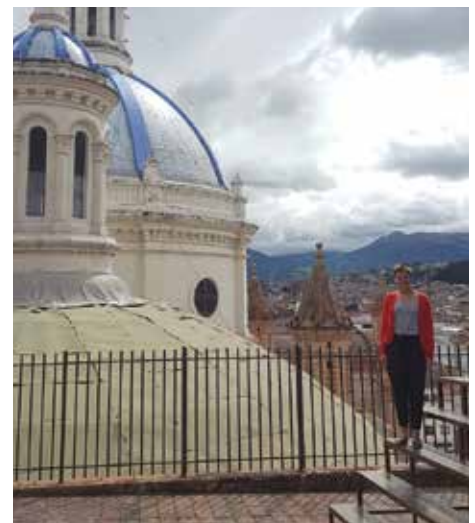
While in Ecuador, I worked with the Coordinated Approach to Childhood Health program (CATCH). CATCH is a program that focuses on physical and nutrition education to help children lead healthier lives. CATCH is based out of the United States, but it is currently being implemented in 27 schools around Cuenca. I observed, as well as taught, CATCH nutrition lessons in several schools and worked to make the CATCH program more relevant to the children. Since it is a program based out of the U.S., there were a lot of adaptations that were needed to make the program more effective in the culture and educational systems of Ecuador.

In addition to the CATCH program, I was also able to work with the Center for Interamerican Studies (CEDEI) while in Cuenca. I was based out of CEDEI School, which is a bilingual school for children from pre-K through high school. I worked with the cooks, as well as the principal to improve the menus that they had for the children and offered suggestions on how to make the meals more healthful, while still including foods that students of all ages would want to eat.

Outside of work, I was able to participate in Spanish classes at CEDEI center. I took classes each day for two hours, which really improved my Spanish language skills. Another aspect that helped my Spanish was living with a host family. I lived with a wonderful family, and I learned a lot about the culture, such as food, family structure, and traditions of Cuenca by living with them. I also enjoyed my time in traveling in Ecuador.

I was able to explore parts of the Andes, the Amazon, and the Pacific coast. Ecuador is an extraordinarily beautiful country, and I was so lucky to live there for two months.

My internship was important to me for both professional and personal reasons. Professionally, this experience taught me about nutrition extension and community nutrition programs. Personally, I learned a lot because this was my first time traveling by myself. I love experiencing new places and cultures, and my internship taught me to be more organized and independent. I am very grateful for the experience.



## GRS internship



I had the opportunity to complete my GRS internship with the Ministry of Agriculture in Kosovo and learn about their sustainable agricultural practices. During my internship, I spent about a week at the Ministry of Agriculture in Pristina, the capital of Kosovo. I met with the different departments within the Ministry of Agriculture and learned how they are working to re-establish their agricultural system and align their practices with the European Union. I also spent time with a host family on a fruit and vegetable farm. I helped on the farm and learned about the different practices for growing strawberries and peppers in open fields, as well as cucumbers and tomatoes in high tunnels. I did not have prior knowledge of greenhouse or high tunnel production so this experience provided the opportunity to learn more about fruit and vegetable production and the practices that farmers use in that region of Kosovo.

After my time on the vegetable farm, I spent time on a sheep farm. The sheep farm was up in a mountain so the sheep had adequate grass to graze. The farm was profitable from the cheese that was made from the sheep milk. I was able to learn the steps they use to make sheep cheese, of which I had no previous knowledge.

This internship allowed me to explore a newly established country and learn about their policies on developing a well-functioning agricultural sector. While on the vegetable farm, I learned about high tunnel production, as well as the common irrigation system used in that region. I learned about animal operations at a sheep farm having

little prior knowledge. I saw how they made cheese and was even able to help in process.

The best part of my internship was getting to know all of the people. I really connected with the family members on the vegetable farm!

The experience in Kosovo really allowed me to grow in my ability to communicate and travel alone. There were some stressful times but I was able to overcome them and grow as a person by being patient when the language barrier became an issue. This internship helped me to realize that I would like to focus on sustainable agriculture in graduate school and in my career.



# Undergraduate Degrees

## FALL 2015

### Global Resource Systems

Elizabeth Rae Heldt\*  
Des Moines, Iowa

Melissa Jo Larson  
Bloomington, Minnesota

Jennifer Lynn Lillo\*\*\*  
Omaha, Nebraska

Julie Anne Perreault  
Sioux City, Iowa

Erika Yasmin Mireles  
Des Moines, Iowa

### Horticulture

Brad Howard Bathey  
Adel, Iowa

Alexander Mandius Buvala  
Gurnee, Illinois

Courtney Paige Clawson  
Ackley, Iowa

Alexis Marie Cook  
Wall Lake, Iowa

Tyler James Harris  
Homer, Nebraska

Cole Dean Hopkins  
Bayard, Iowa

Nathan Victor Horne  
Minnetrista, Minnesota

Laura Elaine Irish\*\*  
Grayslake, Illinois

Katrina Jayne Knudsen\*  
Harlan, Iowa

Ricardo Leaños  
Des Moines, Iowa

Kara Dianne Orr  
Manning, Iowa

Michael Gordon Saaranen  
St. Ansgar, Iowa

Eric Lee Sellers  
Sherrard, Illinois

Jennifer Lee Walter  
Indianola, Iowa

Joshua James Wolters  
Des Moines, Iowa

## SPRING 2016

### Global Resource Systems

Sara Rose Baker  
Huxley, Iowa

Taylor Carolina Becker  
West Des Moines, Iowa

Nell P. Bender\*\*  
Valley Springs, South Dakota

Celize Ciomara Christy  
Addison, Texas

Catherine M. Dunbar  
Cedar Falls, Iowa

Hannah Marie Darr\*†  
Indianola, Iowa

Samuel B. Ennett\*\*  
Lakeville, Minnesota

Anna Catherine Fisher  
Cedar Rapids, Iowa

Danielle K. Hickman  
Pecatonica, Illinois

Elise Avery Kendall  
Roseville, Minnesota

Kerri Ellen Kistler  
West Columbia, Texas

Jesse P. Lang  
Grinnell, Iowa

Tyler Lucas Marshall  
Plainfield, Illinois

Rachel Nicole Roling  
Dubuque, Iowa

Abigail Romano\*\*\* †  
Iowa City, Iowa

Malcolm Lamont Smith  
Chicago, Illinois

### Horticulture

Ryan Dean Banwart  
West Bend, Iowa

Bay Dawn Boysen  
Columbus Junction, Iowa

Desmond Steven Decker  
Luana, Iowa

Thomas Henry Feller  
Robins, Iowa

Amanda Grace Groleau  
Westgate, Iowa

Benjamin Michael Henke  
Shawnee, Kansas

Joseph Kerner  
Ankeny, Iowa

Eric Thomas Langford  
Guthrie Center, Iowa

Ryan Charles May  
West Des Moines, Iowa

Conrad Berger Pannkuk  
Cedar Rapids, Iowa

Francis Pe Dee  
Quezon City, Philippines

Christian Clay Peterson  
Iowa Falls, Iowa

Lillian Rose Pride  
Fenton, Iowa

Mark P. Rippke  
Moville, Iowa

Angela Kay Sperfslage  
Edgewood, Iowa

Brianna Kathleen Vest  
Newton, Iowa

## SUMMER 2016

### Global Resource Systems and LAS

Haley Johanne Bjorn  
Winterset, Iowa

### Global Resource Systems and Environmental Studies

Laura Suzanne Treloar  
Solon, Iowa

### Horticulture

Merisa Jo Lengeling  
Collins, Iowa

Molly Anne Wilson  
Albion, Iowa

Emma Jean Yahn  
Clinton, Iowa

*Congratulations!*

\* Cum Laude

\*\* Magna Cum Laude

\*\*\* Summa Cum Laude

† Honors Program



# Alumni Spotlight



## Dan Bergstrom

**Title and company:** Senior Director, Major League Field Operations

**Hometown:** Ogden, Iowa

**Major and graduation date:** Horticulture/Turfgrass Management Specialty. May 1995

### Major job/position

**responsibilities:** Oversee playing surfaces for the entire Houston Astros system, including internationally.

**What you like most about your job/position:** I (usually) enjoy the challenge of maintaining turfgrass in a retractable roof stadium!

**What advice would you give to current students:** Use the great internship opportunities the ISU Horticulture Department provides each year. Make the most of those internships by having a plan for what you hope to gain through that internship in advance. Work harder than expected!



## Bryce Frost

**Title and company:** Landscape/Urban Designer for ima Design Inc. in Newport Beach, CA

Interned summer of 2013. Began Full Time January 2014 to current

**Hometown:** DeWitt, Iowa

**Major and graduation date:** Bachelors in Horticulture with an emphasis in Landscape Design and Installation from Iowa State University. Dec 2010

Masters in Landscape Architecture/Urban Design from University of Oklahoma. May 2014

### Major job/position

**responsibilities:** Currently, I am working and living in Fushun, China for a 6 month contract designing a Theme Park through our company (ima Design). My roles here have included site master planning, planting design, storyboard writing for attractions and themed lands, designing circulation and planting areas around roller coasters and other park attractions, and even conceptually designing architecture components such as bus stations and zoo exhibits for the zoo area within the park.

I will return back home to Newport Beach Nov. 1. The following are my tasks back in Newport:

1. Collaborate with fellow designers and project managers to develop construction document packages and site master plans for Irvine Company Properties in Orange County and the San Francisco Bay Area. Notable Irvine Company Design projects I have played a role in: Hotel Irvine, Verizon Wireless Campus, Portola Court Apartments, and River View Apartments (San Jose, CA), and Sony's Motiongate Theme Park in Dubai.
2. Review and comply with the City of Irvine building, park, and streetscape permit process throughout

each Design. Submit plans and fees to the city for plan check, pick up, and address comments for projects within the city of Irvine.

3. Conduct site visits to past, current, and future company project sites where I monitor installation, take photos, and develop character summaries from each site.

4. Coordinate the office's sample material library. Organize site furnishings, paving, fabrics, playground equipment, etc and serve as one of the office contacts for manufacturers and other vendors.

### What you like most about your job/position:

I like seeing the impact my design has on people's lives, whether it's city parks, theme parks, apartment courtyards, or gardens. I have been fortunate enough while working at ima to have a hand in many different projects, and see many types of projects. The central theme I enjoy in each project is working with plants, something I learned a great foundation with at Iowa State. Unfortunately, plants may not be noticed on every site, but when they are gone there is such a void left in the space, and thus we see their importance. My knowledge of Horticulture at Iowa State University gives me such an advantage within the field of Landscape Architecture as most landscape architects, crazy enough, do not know their plant material.

### What advice would you give to current students:

Enjoy your time in school and learn as much as you can in classes and labs it's time you cannot get back, and Iowa State is the perfect place to gain all the tools that will make you successful in the future. Be involved in as many clubs as you can handle and meet as many people as you can. I still stay in contact with so many colleagues



from the Iowa State Horticulture Department, and seeing and hearing about all the amazing projects they are involved with is inspiring and great if you ever are looking to change jobs. Take advantage of any opportunity you get to travel; especially within Horticulture there are many opportunities to see and learn about many different plants in each hardiness zone. I have also enjoyed learning from each culture I have been involved working with, and find that to have significant value, as well.



### Kevin Hansen

**Title and company:** Grounds Foreman at NRG Stadium in Houston, Texas. I work for SMG (Stadium Management Group).

**Hometown:** Boone, Iowa

**Major and graduation date:** I did my undergrad in Horticulture with a Turfgrass option (2013) and my masters was in Professional Agricultural (2015).

#### Major job/position

**responsibilities:** At NRG Stadium we have a crew of 9 who manage all of the playing surfaces for the Houston Texans. There is a practice facility for the Texans with three natural grass fields and an indoor facility. At the stadium we are in charge of all the field conversions from natural grass to synthetic turf for various football or soccer games. As the foreman I help direct the crew in daily tasks. A majority of our duties include painting for different events.

**What you like most about your job/position:** The most enjoyable part of the job for me is seeing the satisfaction thousands of people receive when playing or watching an event our crew has prepared.

**What advice would you give to current students:** Use internships as a means to experience as many different opportunities as you can in college. Through many of my internships I experienced different avenues that a Turf Manager could pursue. Because of this it made me more confident in what I wanted to do when I graduated. These internships also help students develop a network for job hunting.



### John Newton

**Title and company:** Golf Course Superintendent, Iowa State University

**Hometown:** Spirit Lake, Iowa

**Major and graduation date:** Horticulture 1981

#### Major job/position

**responsibilities:** Manage the Golf Course Facility for Iowa State University

**What you like most about your job/position:** Working with students of Iowa State University, Having Dr. Christians close for feedback as to difficulties.

**What advice would you give to current students:** Gain as much experience as possible during your college career, participate in the Turf Club, internships in areas of the country in which you would

like to live after graduation, develop relationships with the turf grass community, participate in Golf Course Superintendents of America testing programs, apply for all scholarship opportunities, and most of all do your best in all your classes.



### Linda Naeve

**Title and company:** Extension Program Specialist in the Value Added Agriculture Program with Iowa State University Extension and Outreach

**Hometown:** Decorah, Iowa

**Major and graduation date:** B.S. Horticulture 1977. M.S. Horticulture (vegetable crop production) 1980

#### Major job/position

**responsibilities:** As an Extension horticulture specialist in the Value Added Agriculture Program, I have the opportunity to work on several interesting projects. I am on the Iowa State University Produce Food Safety Team working to educate commercial fruit and vegetable producers on the FSMA Produce Safety Rule. I also serve as the Iowa Sustainable Agriculture Research and Education (SARE) Program Coordinator in the North Central Region. My role as state coordinator involves working with educators and leaders in all aspects of sustainable agriculture on grant and education programs, resources and professional development. I work closely with the Iowa State University Extension and Outreach Local Foods

(Continued)

## Alumni Spotlight (continued)

Team to help local producers increase their production and profitability. I continue to partner with Extension fruit and vegetable specialists in the Horticulture Department on various projects.

### What you like most about

**your job/position:** I work with outstanding, dedicated professionals who share my passion to help and educate Iowans about sustainable agriculture production and build awareness of our local food system. I am continually learning and presented with new and diverse opportunities.

### What advice would you give to

**current students:** Be willing to step outside your comfort zone; accept opportunities in life that challenge you. You will surely grow personally and professionally.



## Kelly Norris

**Title and company:** Director of Horticulture, Greater Des Moines Botanical Garden

**Hometown:** Bedford, Iowa

### Major and graduation date:

Horticulture; B.S. in December 2008 and M.S. in July 2011

### Major job/position

**responsibilities:** I direct and manage a team of horticultural professionals in all aspects of design, curation, programming, and garden

management. I am also the editorial director for the organization's award-winning member magazine Bloom and the artistic director of the Spring Garden Festival, a four-day pop-up retail plant sale and garden show. I liken myself to a conductor. I may have a baton, but an orchestra is a bigger collaboration each time it assembles.

### What you like most about

**your job/position:** I never lack for something to do and the opportunities to watch a garden evolve from schematic design to living product amounts to the pleasure of a lifetime. Even on the toughest days, it's still rewarding.

### What advice would you give to

**current students:** Dreaming is only half of the adventure. Without a plan or a scheme, a dream is just a dream. The plan can change (as it often should), but looking ahead, moving forward and hatching great schemes are what really matter most.



## Kevin Sullivan

**Title and company:** R&D General Manager, The Green Solution

**Hometown:** Cedar Rapids, Iowa

### Major and graduation date:

Horticulture: Fruits and Veggies, December 2013

## Major job/position

**responsibilities:** Breeding/trials, staffing, training, scheduling, evaluating plant health/quality, scouting, problem solving, plant work, and keeping the boat afloat through whatever sort of waters. Also my most important responsibility, keeping a smile on everyone's face.

### What you like most about

**your job/position:** Creating and evaluating new varieties, watching them make it into production and eventually into the stores, hearing positive things about the new varieties from customers, and involvement with different committees. I also like working with CBD varieties and breeding high CBD, low THC strains. One of our high CBD varieties, Desert Rubi, has won a few awards already. I helped name it!


### What advice would you give

**to current students:** Friends and family are everything. While at ISU, I would say to try and experience as much as you can within the horticulture world. Go to the research farm for starters. You are surrounded by a ton of knowledge. Follow your dreams and believe in yourself. Challenge yourself as well. Be open and adaptable as possible are great qualities. The lack of a persistent work ethic is very apparent at work with many 21ish year olds. Anyone who demonstrates good character and strong work ethic day in and day out stands out to me more than most others. Perseverance and patience are enormously helpful, even outside of work.

You want something, go get it. Period.

# Global Food and Agriculture: CHINA

by KEVIN DUERFELDT, MAGGIE SPRECHER  
and HANNAH DARR



Class hiking the Great Wall of China. Front row left to right: Chelsea Ferrie, Difei Shen (program leader), Sydney Beaurivage, Sierra Becker, and Simrita Varma. Back row left to right: Nicole Kraft, Amanda de Carvalho, Kevin Duerfeldt (program leader), Garrett Onstot, Skyler Brazel, Kate Stewart, Jace Hadish, Katelyn Fritz, and Maggie Sprecher (program leader).

The Global Resource Systems major led the inaugural GLOBE 496 study abroad course and seminar series for first- and second-year students to explore resource systems related to agriculture, food production and food processing in a cross-cultural setting. The seminar series included a pre-departure orientation, in-country travel experience, and a post-travel reflection. Kevin Duerfeldt and Margaret Sprecher led the study abroad program with Difei Shen and co-taught the courses.

In May, the 14-member team of 11 students and three ISU faculty/staff participated in a two-week experiential

learning opportunity in China. Students with limited international experience were able to travel during an intentionally designed course that complemented the Global Resource Systems curriculum. Through a partnership with Cargill, students were able to see and compare food processing and supply chains in both the U.S. and China.

The group started their adventure in Beijing by touring the Great Wall of China, the Forbidden City, and Tiananmen Square. The historical and cultural significance of these attractions exposed students to societal factors that impact food and agricultural

production in China. The scenery of the trip quickly changed as the group boarded a bullet train (speeds reaching 124mph!) that took them from the urban hub of Beijing to the countryside of Hangzhou.

Zhejiang University and the region around Hangzhou were the next stops for the students where they interacted with faculty and students, toured the West Lake District, and visited several farms in the area. The group then boarded a bus for a three-day tour of various farmers' cooperatives and farming villages. The cooperatives produced high value vegetables, table

(Continued)



Group seated for a meal. Left to right: student host from Zhejiang University, Nicole Kraft, Simrita Varma, Katelyn Fritz, Sierra Becker, Kate Stewart, Chelsea Ferrie, Sydney Beaurivage, Difei Shen (program leader), Amanda de Carvalho, Skyler Brazel, Jace Hadish, and Garrett Onstot.



Sunset view at the tea cooperative. Left to right: Dr. Guo, Difei Shen (host), Skyler Brazel, Sierra Becker, Nicole Kraft, Chelsea Ferrie, Kate Stewart, Sydney Beurivage, Garrett Onstot, Jace Hadish, Katelyn Fritz, Simrita Varma, Amanda de Carvalho, and Kevin Duerfeldt (program leader).

grapes, and tea, which are sold in nearby urban markets. Farmers and students discussed land tenure, the generational transition of farmland and how these issues compared to American practices.

A highlight of the bus tour was visiting a middle school where schoolchildren were learning English and practiced their language skills with the visiting ISU group. The two groups of students exchanged stories about growing up in their respective areas of the world, and found that they had many more similarities than differences.

The next stop on the trip was a visit to Nanjing Agriculture University located in the Jiangsu province. The ISU students joined Nanjing Agriculture University students planting paddy rice at Nanjing Research and Demonstration Farm. Planting rice was a highlight of the entire course for the ISU group – they couldn't believe how much manual labor was needed in rice production in China!

The group also had a chance to visit Cargill Animal Protein, which hosted tours and discussed topics with

students, such as eminent domain, worker welfare, environmental protection, and sustainability.

In the final days of the trip, the group traveled to Shanghai where they visited the U.S. Department of Agriculture Foreign Service and discussed how U.S. agriculture products are traded on the global market. Students were exposed “Guanxi” or the system of social networks used to conduct business in China.

Students in the post travel reflection course met regularly and developed posters to share during a poster session with the university community.

The trip to China was an incredible student learning opportunity. Students

saw first-hand examples of food and agriculture resource in China and could compare them to their experiences in food and agriculture in the United States. They were exposed to various aspects of Chinese culture and for many – this was their first trip outside of the United States. Teamwork, leadership and cross-cultural skills, developed through experiences early in their academic career and including this immersive study abroad experience, will allow them to provide leadership in their university clubs and activities. They also will be better prepared for their global internship in another country and culture that they will complete later in their Global Resource Systems curriculum.



Planting Rice at Nanjing Agricultural University. Left to right: Simrita Varma, Sydney Beurivage, Skyler Brazel, Chelsea Ferrie, Nicole Kraft, Sierra Becker, Jace Hadish, Katelyn Fritz, Kate Stewart, Nanjing Agricultural University host, and Garrett Onstot.

# Service Learning, School Garden, and School Nutrition Programs UGANDA 2016



Training class participants.

by GAIL NONNECKE, DOROTHY MASINDE, KEVIN DUERFELDT, and HANNAH DARR

## INTRODUCTION

The year, 2016 marked the 11th year of the Uganda Service Learning, School Garden Program and a remarkable milestone—over 200 university students have participated as service-learners! We are very grateful for those who supported these students and for the students' valuable work, positive attitudes, passion to help others, and willingness to learn while serving.

The Service Learning, School Garden Program had an outstanding group of students from Iowa State (ISU) and Makerere University (MAK) participating in 2016. Eight ISU and 17 MAK students assisted teachers in four primary schools and one junior-senior high school. The group completed eight bi-national team

projects to benefit the schools. Four MAK service learners from previous years returned to Kamuli to provide leadership; four Global Resource Systems (GRS) interns completed their internship with ISU-Uganda Program (ISU-UP) in Kamuli, and one post-graduate GRS student and one graduate student completed projects.



Children playing on a road in Kamuli.

## TEACHING

Bi-national teams of ISU and MAK students assisted in the teaching of 5th and 6th grades at four primary schools. Students helped with mathematics and integrated science classes, which included subjects of agriculture and health. Specific topics covered included soil formation, germinating and transplanting vegetable seedlings, constructing nursery beds, measuring, integers and fractions, resources in the environment, health and sanitation, and environmental degradation.

Students were challenged to be creative in presenting materials to engage pupils. Song and dance, handmade posters, and demonstrations in school gardens were just a few strategies used to

(Continued)



**UGANDA 2016 (Continued)**

create an interactive and engaging learning environment. Being involved in the classes served as an opportunity for ISU and MAK students to be role models and inspire primary school students to continue their education and view agriculture as a positive profession.

**SCHOOL GARDENS AND NUTRITION**

School gardens serve as outdoor learning laboratories for classes, providing hands-on learning experiences for pupils, as well as university students. Most importantly, the gardens support the school lunch program; produce is incorporated

into the lunches and high-value crops are sold to purchase additional ingredients.

Previously, schools served a light maize porridge, containing about 50 kilocalories per serving, to only some pupils on certain days of the week. The school lunch programs have moved from porridge to 'nyoyo', a mixture of corn, common beans, vegetables, iodized salt, and vegetable oil. 'Nyoyo' provides over 800 Kcals per serving and more vitamins and minerals than maize porridge, alone. Once per week at two schools, eggs from the poultry project at each school were included in the 'nyoyo' stew.

Currently, 'nyoyo' is served five days a week to every student at Namasagali Primary School, and school feeding programs are growing at the other 4 schools. The school lunch programs are improving attendance and pupils' ability to focus in the classroom, directly impacting pupils' education.

ISU and MAK students tended gardens approximately 7.5 acres in area. Crops included collard greens, onions, eggplants, amaranth, tomatoes, bananas and sweet potatoes. Students learned about sustainable production practices in a tropical climate, including using nitrogen-fixing cover crops. As they constructed nursery beds, heaped soil into sweet potato mounds, cleared plots, and harvested grain amaranth, ISU students were shocked by the amount of work required to produce a crop – especially without access to the same equipment we have in Iowa and the U.S. Primary school pupils worked in the gardens with ISU and MAK students in their free time, usually outpacing them in the creation of sweet potato mounds! Nevertheless, it was fun for all.

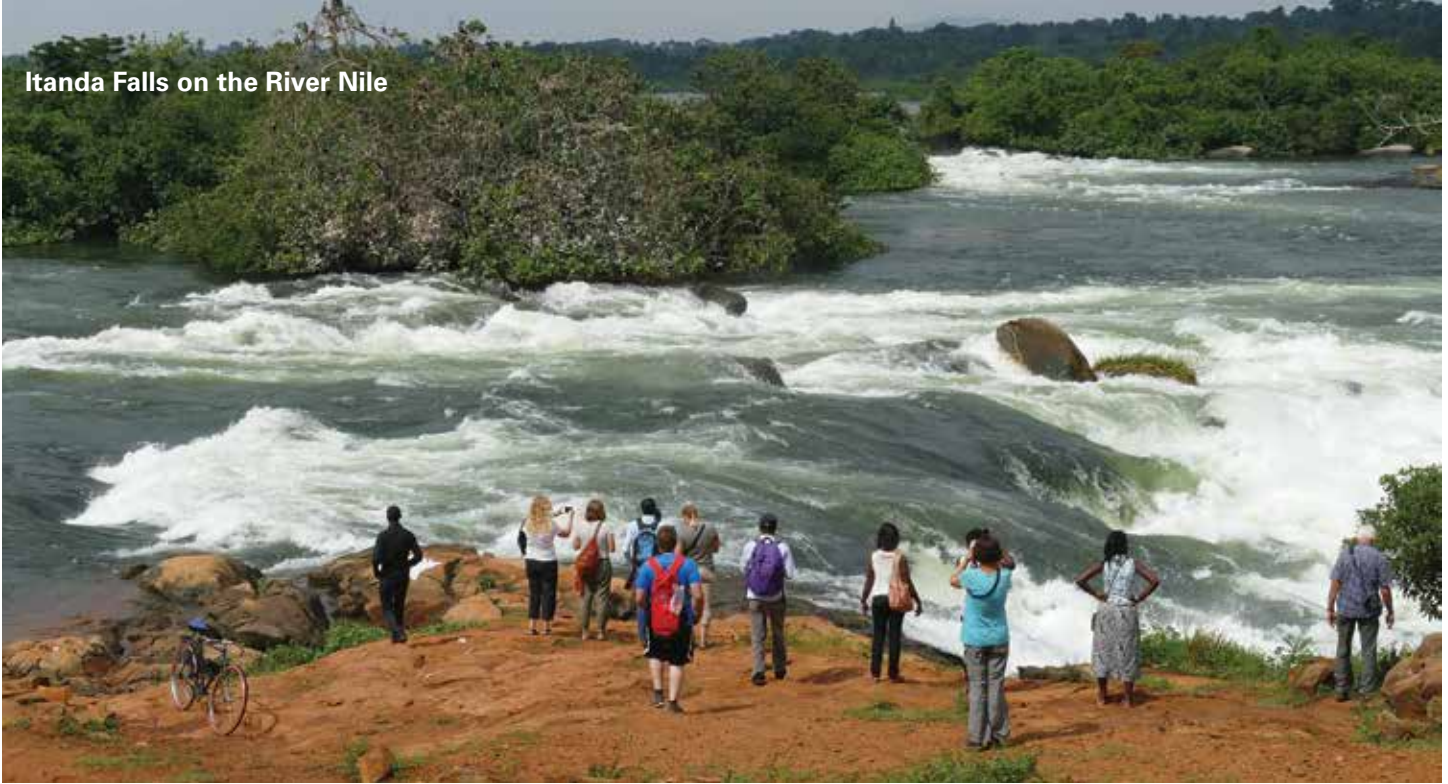


Laura Byaruhanga of the ISU-Uganda Program leads a discussion with parents and teachers about the school lunch program.



Erick Okodi and Rachael Barnes serving nyoyo at Namasagali Primary School.

## Itanda Falls on the River Nile



### BI-NATIONAL TEAM PROJECTS

Teams of ISU and MAK students developed and implemented projects in agroforestry, beekeeping, composting, grain storage, health and sanitation, irrigation, poultry, and school feeding and nutrition. These projects develop infrastructure and programs to benefit the schools and pupils in Kamuli.

To prevent losing produce to roaming livestock and/or residents from encroaching on school property, the agroforestry team constructed live fences made of barbed wire fences planted with Euphorbia or Bustani. The agroforestry team also planted woodlots to provide the primary schools with firewood in the future for cooking school meals.

The beekeeping team expanded the bee forage garden surrounding the apiary, planting 100 seedlings that will provide nectar for the bees. They also doubled the number of colonized hives and conducted two workshops with local youth to develop beekeeping skills as a profitable entrepreneurship activity



Beekeeping team working in bee suits. Left to right: John Sango and Elizabeth Garzon.

in Kamuli. They collected and bottled honey from the apiary. “College Honey” is now available in the market and will provide revenue for the Youth Entrepreneurship Club. The name reflects the beekeeping project completed at Namasagali “College”— a local junior and senior high school.

The composting team expanded a three-step pit composting process to recycle green waste from two schools and amend the school gardens’

soil. They added 11 additional pits to increase production capacity at Namasagali, Nakanyonyi, and Naluwoli Primary Schools. This will build organic matter in the school garden soils and improve soil structure.

Grain weevils are a constant postharvest threat to crops in Uganda. Even while using hermetically sealed grain bins weevils damaged 50% of the stored maize at Namasagali Primary School. To reduce weevil damage, the grain storage team is testing the use of smaller jerry cans sealed with plastic. The jerry cans contain smaller amounts of grain and can be stored for longer periods of time without opening them to retrieve grain for school lunches or deposit new grain provided by parents. The grain storage team also worked to train primary school staff on drying grain properly to reduce mold damage.

The health and sanitation team improved tip-tap hand washing stations at three schools. These hand-washing stations will improve

(Continued)

## UGANDA 2016 (Continued)

sanitation and pupil health, while improved drainage will prevent water from pooling on school grounds. The team also worked with girls to sew reusable sanitary pads for pupils, decreasing stigma and allowing them to stay in school.

Irrigation is vital to maintaining crops year-round, due to Uganda's dry seasons. To avoid theft of water from the schools' cisterns, the team installed lock boxes around spigots. They also built new gutters on the kitchen building and a cistern at Namasagali Primary School. The new cistern will provide water for cleaning and for pupils to wash their hands before eating.

The poultry team completed the poultry unit at Nakanyonyi Primary School. They brooded chicks and finished a new house to replicate the successful poultry project at Namasagali Primary School.



Chicks in brooder at Nakanyonyi Primary School.



The school feeding and nutrition team preparing the school lunch. Left to right: Dinah Nabudadiri, Heidi Kalb, Erick Okodi, Samantha Kanselaar, Namasagali Primary School chef, and Hamidu Isabirye.

The school feeding and nutrition team collaborated with school cooks at Namasagali and Nakanyonyi Primary Schools to decrease the preparation time of 'nyoyo' and maintain more accurate records of grain received and used. They also constructed sanitary dish drying racks and improved tip taps around the kitchen.

### FARM VISITS

Students had the opportunity to observe and assist with local agricultural production systems by visiting small-scale farmers in the Kamuli District. Farm visits have become an integral part of the service learning activities where students visit, work, and learn from farmers while sharing new innovations and technologies they have learned at their respective universities. This summer's farm visits included activities such as threshing beans, maintaining a lemon rootstock nursery, visiting an ISU-UP nutritional education center, and planting live fences around the new ISU-UP training center.

### TRAINING CENTER

A new training center is being constructed for the Iowa State University – Uganda Program. This new facility will be able to house



Children in the lower grades, including Primary Grade One, enjoy interacting with Iowa State and Makerere University students.

all ISU and MAK student service-learners together in one location for the summer program – something not possible in the current guest houses. The training center will have dormitories, meeting rooms, labs, and spaces available for community extension workshops and agricultural demonstrations. We are very excited for the opportunities that the new training center brings to the ISU-UP.

### INTERNSHIPS

Four Global Resource Systems majors completed global internships in the Kamuli District this past summer. Samantha Kanselaar worked with the ISU-UP Nutrition Education Centers to collect data on household consumption of the nutrient dense porridge. Ella Gehrke and Rylee McDermott completed internships in the local health center and Adam Hanson worked with agriculture outreach agents in assisting local farmers through extension activities.



Fisherman on Lake Victoria.





## YOUTH ENTREPRENEURSHIP PROGRAM

Iowa State University's education programs of the Center for Sustainable Rural Livelihoods initiated the Youth Entrepreneurship Program (YEP) in 2013 at Namasagali College (a rural high school) in Kamuli District, Uganda as a way of engaging the youth who are currently involved in informal employment activities. As of August 2016, there are 238 total participants in the various activities including microfinance, poultry, swine, crafts, and commercial crop production. In 2016, a stakeholders' workshop of 56 participants was held, which included personnel from governmental entities at the district, sub-county and parish level, other leaders who are active in organizations with youth mandates, NGOs, and school management and youth representatives.

### SACK GARDENING

Dr. Kevin Duerfeldt and Iowa State University faculty and students completed a sack gardening workshop in summer 2013. Sixth grade pupils at Namasagali Primary School attended a field day where they were instructed on how to construct and care for sack gardens. Sack gardens are a practical, economical, and sustainable method of producing

food using vertical space and for benefiting food security and livelihoods. In 2015, participants were surveyed to evaluate the long-term effectiveness of the field day and instruction. All pupils who were surveyed remembered the field day and how to build a sack garden. Eighty-six percent thought their sack garden was successful and most of them consumed and/or sold the vegetables the sack garden produced. Future programs could include working with schools to get small plots for students living in boarding dormitories to have sack gardens and how to reinvest money from selling vegetables to continue their garden activities.

To continue the sack gardening project faculty and students conducted another sack gardening workshop with pupils at Namasagali Primary School in the boarding section. Boarding pupils each received a sack garden and will maintain them as part of the sack garden club. Produce from the gardens will go toward the pupils evening meal.

### GRADUATE RESEARCH

Sharon Tusiime, a graduate student in the Department of Horticulture, conducted a survey to determine the tomato seed production, seed conditioning processes and procedures



for establishing seed quality in Uganda and Kenya. Surveys were administered to six major seed companies and preliminary results show all six companies imported and repackaged tomato seed. Most companies lacked cold rooms and equipment. The only seed quality trait that the government seed laboratory in Uganda tested was germination, while purity and seed moisture also were tested in Kenya. All respondents considered seed germination as the primary goal for seed quality, while 83% considered other factors including genetic identity, freedom from noxious weeds, disease, insects, soil, debris and chaff. Half of respondents identified inadequate government supervision, and outdated technology as major challenges. Additional challenges included weak seed policies, and low genetic purity due to seed importation. Sharon found that seed companies need better equipment and updated technology to increase the shelf life of seeds through improved quality.



# ISU Extension and Outreach Master Gardener Growing Together: Healthy Food Access Project



by Susan DeBlieck



Nashua Field Day



Planting in Ames

**H**unger in Iowa is real. One in eight of our neighbors in Iowa is food insecure. This means they do not have regular access to adequate food for a healthy diet. Many Iowans who struggle with food insecurity depend on food pantries as a regular source of groceries. When surveyed, food pantry clients in Iowa noted that the number one thing they wish they had more access to was fresh fruits and vegetables. Iowa State University SNAP-Education and Master Gardeners decided to team up to tackle this problem.

SNAP-Education provides cooking, shopping and nutrition education for families with low income. Through the program, families develop skills that make eating healthy on a budget easier. Growing Together builds on this education by working to make fresh fruits and vegetables more accessible for families who may not be able to afford them. Twenty four Master Gardener teams throughout Iowa have received mini grants to work on healthy food access in their communities. They are planting donation gardens, connecting growers with food pantries and teaching their neighbors about fruit and vegetable gardening.

For example, 2011 Alum, Laura Klavitter, Horticulture Educator and Master Gardener Coordinator for Dubuque County ISU Extension and Outreach, supports Master Gardeners who are growing food and offering demonstrations of how to grow, harvest and prepare garden produce. Master Gardener Ashley Neises applied for the SNAP-Ed mini grant and was awarded funding to help provide workshops and educational opportunities for youth and adults of all ages at the Dubuque Rescue Mission Garden in downtown Dubuque.

“This grant program has been a unique opportunity for our Master Gardeners to actively engage in food security, working on projects that are both meaningful to them as well as their communities.” says Klavitter.

The Home Demonstration Gardens on seven ISU Research Farms were planted this year as model donation gardens. These gardens show an example of donation garden design and model principles of food safety for growing, harvesting, and transportation. The crops planted for donation to food banks include: green beans, sweet potatoes, cabbage,

peppers, tomatoes, broccoli, potatoes, zucchini, beets, melons, onions, and carrots. ISU Research Farms and local Master Gardeners share in garden care responsibilities.

Horticulture graduate student Laura Irish, 2015 Hort Alum, has been traveling to each of the seven garden sites to provide food safety and harvest best practices to Master Gardener volunteers. “The partnership of farms and Master Gardeners increases the awareness of food insecurity in their communities,” said Irish, “The model gardens have created an environment where community members learn what and how to donate to local food pantries.” Because of this initiative, new relationships are being made between food pantries and the ISU Research Farms in Ames, Crawfordsville, Fruitland, Kanawha, Lewis, Nashua, and Rock Rapids. These relationships are encouraging well-being in the community by increasing access to fresh produce.

So far, Master Gardeners have harvested over 2,000 pounds of produce that have been donated to nearby food pantries to increase food security.

# LETTERS from ALUMNI



## Robert Andersen



We (Judy A and I) thank the Department of Horticulture for keeping up the tradition of an annual Department of Horticulture Alumni Newsletter. We note the invitation to participate in the 2017 Alumni Party. We're going to have to pass on that opportunity, but I want to hereby present the idea to my fellow 1960 graduates that we ought to make a point of returning to Ames in 2020 for our 60th. I volunteer to organize such an event.

Here's an update on what's going on in our lives: My retirement continues to be partial retirement. I'm the founder, owner and sole employee of One Mule Fruit Consulting. In that role I work primarily in the applied science of sweet cherry breeding for my very first graduate student, Dr. David Cain. Maybe you have seen him. He keeps showing up on Good Morning America with some of his famous table grape varieties. International Fruit Genetics is a private breeding company that he founded back in 2000. It now has his grapes in about a dozen countries and that success continues to pay for the cherry breeding work that I help him to conduct. Cherries are much slower to achieve replacements for famous varieties like Bing and Rainier. IFG now has 4 new releases of cherries that are mostly targeted for production where early, hot climate adaptation is needed -- like southern California, Chile, Australia, Republic of South Africa. I started helping Dr. Cain in 2005, the year after I retired from Cornell University. At that time, I expected to just help him train a few technical staff about cherries. Here it is 2016 and I'm still enjoying the opportunity to help him breed new fruit varieties. An added opportunity happened. Since 2012 I've also been working every year in Chile doing the same kind of consulting about cherry breeding/

genetics for a Chilean government breeding program. I just signed a second 4-year contract to consult about that research. I don't know if I'll make it in my attempt to fulfill all 4 years of that contract --which would finish in 2020. But I do know that I've put it into my iPhone's calendar to be in Ames in 2020. That's when I hope to see some of the other members of the Department of Horticulture's Class of 1960 for a sixty-year reunion. My e-mail: wannamule@gmail.com. Our home address: 7 Pinehurst Ct., Etowah, NC 28729. Regards! Bob Andersen, B.S. 1960.

## Burt Andrews



Thank you once again for giving us a chance to say hello to our classmates.

We did finally get to campus last fall—first time since 1997.

We were there not only to see the campus, but to visit with fellow classmate Al Beck and his wife Nadine. Just two weeks later, Al died. So the trip took on added meaning.

We stopped in at the Hort building, of course, on a Friday afternoon. Even though we did not make arrangements ahead of time, we were well received. Had a very thorough tour of the new (can I still call them new?) greenhouses and saw all that Pete Lawlor described in the last newsletter: bio-controls, Poinsettia production by the students, hydroponics and how the greenhouse works.

Also visited Reiman Gardens. Talked to some Hort students working along side LA students planting tulip bulbs. Don't think we Horts associated much with LA's in my day. Progress has been made.

(continued)

## Burt Andrews (continued)

Dorothy and I spent two days getting to Ames from West Chicago. Dorothy is a quilter so we visited more than a dozen quilt shops along the way.

That's about as extensive of a trip we take these days. Mostly we are at home working our ½ acre. Ample rain, heat and humidity has kept us busy this year.

Looking forward to receiving the 91st edition of the Newsletter.

## Burt S. Andrews III Hort 1957

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## Tribute to Allan R. Beck by Burt Andrews

ALLAN R BECK, May 18, 1934 – November 4, 2015

Shortly after we met, Al told me his middle name was the letter 'R' only. Really? What kind of name was that? So he pulled out his driver's license. Sure enough there it was: Allan R (only) Beck. Only person I ever knew with simply a letter for a middle name.

Al had been on the Iowa State campus all summer of 1953 before the Horticulture class of 1957 arrived. I'm sure it was he who led us guys on our first walk across campus from the Hort. Building to Friley Hall (or in my case, Hughes Hall.) Also, he was the one with wheels. We relied on him to get us to Des Moines to see Victor Borge or attend the Drake Relays.

And to take us out for pizza. When my wife, Dorothy, and I were in Story City two weeks ago, we drove down Main Street, Ames, and there was the Sportsman's—first place I ever had pizza, the place to take Al on his 21st birthday for a beer.

Once we graduated, finished our military, found jobs, we married—Al to Nadine, me to Dorothy. I was proud to be asked to participate in their wedding and to return the favor two years later. Dorothy and I, with our children when they came along, spent many a Veishea and some Homecoming weekends with the Becks. Somewhere, there is a picture of the Beck children and the Andrews children in front of the statue of Big Boy all decked out in their Big Boy bibs (hope I remember the name correctly).

Both Al and I were sorry to hear that Veishea 2015 will be the last, but certainly concur that it was time to let that tradition go. But those on campus in the fall of 1953, may recall we had our own version of a riot—after beating Missouri in the Homecoming game. I recall that event

whenever I'm in a discussion of how easy it is to get caught up in a crowd. In our case, some student leaders stepped forward after a couple of days and convinced the rioters that this was not the way to celebrate a victory or to have "No School Monday." Just to clarify, neither Al nor I were participants. Neither were we part of the solution.

Nadine and Al were marvelous hosts whenever we visited and welcomed whomever we had in tow. Once or twice those extras eventually became Iowa State students. That continued right up to our visit two weeks ago. In spite of Al's limited mobility, we were all able to spend some time at Reiman Gardens and go out to a couple of their favorite restaurants.

When we were together two weeks ago, Al told a story that I had heard previously. One night, he received a phone call from David. David said something to the effect, "I sure am glad you are our father!" Al asked for an explanation. David had been on a farm to investigate and mediate a claim. Instead he witnessed a heated argument between father and son. David realized that was not how he was treated and called his Dad to thank him.

As far as I'm concerned Al treated everyone with the same firmness and fairness that David recognized that day. That's why so many clients relied on him to mediate claims. That's why our friendship has lasted these 62 years. That's why the memories will carry us through this time without his physical presence.



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## Janet Bachman

Dear Jeff and all:

This year is my 23rd as a vendor at the Fayetteville (Arkansas) Farmers' Market. I grow specialty cut flowers, a few vegetables, and a few small fruits on about 1.5 acres of our beautiful 127-acre farm a few miles south of Fayetteville. Peonies are my best income providers for the year, with dahlias probably second. I belong to the Association of Specialty Cut Flower Growers; Judy Marriott Laushman, B.S. 1982, is the executive director. I haven't been to Ames in years, but go to my home town, Denison, about once a year for a family gathering. My "vacations" consist of walks on our county road or swims in the river that runs through our farm, always accompanied by my dog. My husband, Jim Lukens, retired in April 2014 and bought meat goats to clear the brush that had grown up in our pastures. He keeps them corralled with electric fencing, which also keeps the coyotes out. Last year, though, a black bear got inside



## John Esser

I enjoy reading the ISU Department of Horticulture Alumni Newsletter to keep up on the changes in the Horticulture Department. Areas of research and teaching such as Sustainable/Organic Horticulture, Molecular Biology of Growth and Development, Global Resource Systems were not only not in our curriculum but not even thought of when I graduated. I also enjoy reading what the Hort alumni have done with their degrees. For example, in the 2015 newsletter I read one graduate grew oranges and grapefruit after graduation, others report they are a soybean breeder, a seedless grape breeder, a landscaper, a paralegal and more. It is not the facts that we were taught at ISU that made us successful, but that we were taught to continue to learn, understand and accept change. Thank you to all those who taught me so long ago and those who continue to teach!

I graduated in July, 1965, after a heroic battle with freshman English, I still can't spell or punctuate without the help of a computer. Three months later, I was working as a volunteer for International Voluntary Services (IVS), the predecessor to the Peace Corps, in Laos. I was first assigned to work in agriculture development in Ban Nong Bok, a small village in Southern Laos, but after a year I was transferred to the provincial capital of Sanannakhet due to continuing security problems, a spillover from the Vietnam War. After those two years in Laos, I returned to the U.S. to recruit IVS volunteers from colleges across the U.S. for a school year. I then returned to Laos to work two more years in procurement for the U.S. government and later the Lao government purchasing materials to help improve Lao rice production.

I returned to the U.S. in 1970 and worked three years in a Des Moines wholesale greenhouse. I was then hired by the Fred C. Gloeckner Company, a greenhouse supply firm based in New York City. I sold plants, seeds, greenhouses and supplies to commercial greenhouses in the State of Wisconsin until I retired in 2007.

After retiring I became the Executive Secretary of the Commercial Flower Growers of Wisconsin. This is Wisconsin's greenhouse trade organization, where I write a quarterly newsletter and manage educational meetings. I also day cared for two grandchildren until they started school, volunteer for a food pantry; coordinate, prepare and serve a free to Madison's homeless each month. I serve as the chair of the advisory board for Gateway Technical College's Horticulture program; sing in our church choir

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the fence! We think he must have climbed up a tree and jumped in, but couldn't get out because the trees inside were smaller. I never saw him, but Jim saw him several times, and took photos of the tracks he made as he walked back and forth beside the fence trying to find a way out. Jim finally opened a section to let him out and we haven't seen him since. I look forward to the newsletter and news of alumni and the department.

**Janet Bachmann**

**M.S. 1982**



## Karli Christensen

In looking back at the past two years I feel excited and fortunate to be where I am today.

2015 brought me a "new" pair of eyes with Lasik surgery, my 1st house which I closed on June 1st, and a new (to me) vehicle- my first Subaru. I absolutely LOVE it and have gotten much use of with the plethora of projects I now have as a home owner.

2015 was a hard year to beat and I questioned whether all the exciting changes and additions could be surpassed.

Well, 2016 brought another exciting and uplifting event...

Following my tenth annual health check up at the University of Iowa Hospitals and Clinics, I received the AWESOME NEWS that I continued to remain CANCER FREE!

I decided this was definitely a milestone to celebrate.

On August 13th I held a '10 Year Cancer Free' celebration. I wanted not only to celebrate this triumph, but also thank everyone who supported me before, during, and after my fight. It proved to be a fun and successful day with nearly 150 family members, friends and my cancer 'support team' who all helped me through my brief face off with the disease. We enjoyed a delicious meal prepared and served by some friends of the family and were serenaded with tunes played by two of my coworkers.

It was a magical day that I will carry with me for years to come and I truly hope that more people will be as fortunate as I to have such celebrations.

**Karli Christensen**

and have taken confirmation students for five day trips into Minnesota's Boundary Waters. I frequently travel both nationally and internationally plus, when I find time, enjoy kayaking, gardening and photography.

I was married in Washington, DC, forty-eight years ago to Joann. We have lived in Madison, Wisconsin for forty-three years and have a son and daughter, both married, and five grandchildren.

I was encouraged to write this piece by reading others written by those who also attended Horticulture classes in the early 1960s. I challenge the remainder of you who took Horticulture classes at the same time to send your bio, it would be interesting to know what each of you have done with your education.

**John Esser**  
**B.S. 1965**



## Iver Jorgensen

I visited the ISU Horticulture Department in July with our daughter Sue. We were greeted by Deb Cochran and guided to the greenhouses. We also had a good visit with Dr. Jeff Iles.

There are lots of new horticulture facilities. It was exciting to see the Dr. Charles Hall greenhouses and the Reiman Gardens. My wife Lis likes butterflies. The life cycle displays and the butterfly greenhouse was a special treat.

ISU is still making a great contribution to horticulture.

**Iver Jorgensen '49**  
**135 Parkwood Dr.**  
**Burnsville, MN**  
**55337**



## Bob and Jan Kazimour



Well, it will soon be sixty years since I graduated as a Horticulture major at Iowa State College. Many changes since then. The prize-winning orchard that my parents established in Cedar Rapids, Iowa is no longer in operation. For several years after my Air Force service, my degree was important, as I was the Midwest sales manager for Standard Fruit and Steamship Co., now Dole Banana Co., which led me to establishing a nationwide truck line specializing in transporting bananas and other temperature sensitive products. After thirty-five years, I decided to retire and sold the company. My wife and I bought a winter home in Palm Springs, CA. Wouldn't you know, our property had fruit trees: oranges, lemons, grapefruit, tangerines and limes. Although we have gardeners, I couldn't resist some trimming and fertilizing. Well, the lime tree and the tangerine tree both died, I think due to old age, theirs, not mine. We still have great grapefruit, huge lemons and lots of oranges, which we share with our neighbors.

Speaking of old, Jan and I are celebrating our 60th wedding anniversary, September 1, 2016. Several of our classmates at ISC attended our wedding. Burt Andrews, Al Beck and Bobbie Glass among them. We would love to hear from them. Our address in Cedar Rapids, Iowa is 321 Nassau St. SE 52403, or our email RFKJLK@Aol.com. We are seriously thinking about attending the Horticulture Alumni Reunion on June 3, 2017. Are any of our "old" classmates going to be there? Let us know.

**Bob and Jan Kazimour**  
**Class of '57**



## Ben Matthews

Hi Everyone!

I'm excited to share that my youngest brother has chosen to go to Iowa State! He is majoring in Ag Business and is planning on graduating in 2020; ten years after I graduated. Now I have no reason not to periodically make the eight-hour drive to visit. In fact, I have just returned from a weekend visit to Ames along with my parents and my good friend (also a horticulture graduate from Iowa State), Matthew Heard and his wife, Hannah. The last time I was in Ames was for the new greenhouse dedication that was held over Labor Day Weekend, 2011. Ames has changed quite a bit since then!

I had a great time reminiscing as I walked around campus and the Hort Building. Big thanks to Barb, Dr. Illes, and Nick Flax for showing us around. It was really neat to see the hydroponic system that a class was working on and learning about. I know there were people I missed while I was visiting, so next year's visit will be more than just two days.

Partly why my visit was short was because I was out of vacation days for the year. I recently did a two week self-guided, self-supported bike tour with very little planning which made for a fun adventure. My original goal was to ride my bike around Lake Michigan. After realizing the distance around Lake Michigan is just over a thousand miles, coupled with a friend who expressed interest in riding with me, we lessened the mileage a bit. This was my vacation after all, so I wanted to be able to experience more than just riding and being exhausted. Instead, we started near Muskegon and worked our way north along the lake. Then, we came around the UP and eventually ended in Green Bay where we got a rental car and drove back home to Indianapolis.

We were ahead of schedule by time we made it to the UP, so we decided to ride up to the Pictured Rocks National Lakeshore along Lake Superior. I highly recommend visiting that area if you ever get the chance. Absolutely beautiful! We met new people every day that were interested in what we were doing. After riding, we were able to jump in a lake almost every day. We camped in anything from a state park to a city park pavilion to avoid rain. Bicycle traveling can be challenging, but it really is a fun and adventurous way to travel and have experiences you may not have when traveling by car.

As far as work, I have been at Heartland Growers for over five years now. Located just north of Indianapolis, we wholesale grow annuals, mums, poinsettias, and herbs under 25 acres of greenhouse. I am the lead propagation grower, so just about everything we grow starts in the section I oversee. We are currently expanding in order to be better meet demand for our plants, so it's an exciting time at Heartland Growers!

**Ben Matthews**  
**Class of 2010**



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## Bunny Mogilnicki

I am in my 13th year owning and operating Bunny's Bouquets, a retail florist in southeast Massachusetts. I have a workshop in my basement and have no walk in traffic. Call 508-763-0088 if you need flowers. Thank you.

**Bunny Mogilnicki**  
**Class of '63**  
**20 Bishop Rd.**  
**Rochester, MA 02770**



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## Donald R. Muller

Dear Newsletter Editor:

Things are essentially the same this year; I am just a year older, now eighty-five, and in excellent health. The only thing new in my plant collection is croton. My wife bought me a couple of them recently and I enjoy working with them. They have highly colored ornamental foliage, which is extremely variable in form and color, just beautiful! I sincerely regret not being able to attend the alumni dinner, but it just isn't possible. My very best wishes go to you all!

Sincerely,  
**Donald R. Muller**



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## Norman Pellett

Dear Iowa State Horticulture Newsletter:

Dorothy Engel Pellett (1956) and I, Norman Pellett, (1958) celebrated our 60th wedding anniversary on August 26, 2016. We were sophomores in the fall of 1953 when we met on the first day as students in a soils class taught by Professor Bruce "Bugs" Firkins. We were both Horticulture majors with Prof. Nichols as our advisor. Dorothy spent her freshman year at Coe College in Cedar Rapids, the city where she grew up. Norman grew up in Atlantic, Iowa at his parent's Pellett Gardens farm.

We both enjoyed Horticulture classes with professors Mahlstedde, Denisen, Buck, Haber, Volz and Nichols. Norman's undergraduate years were interrupted with two years in the army before resuming his studies at ISU (then Iowa State College). We were married in 1956 when Norman returned from military service in Japan. During our college life, we both worked part-time for the Horticulture Department, Dorothy with professors Buck and Haber and Norman with professor Mahlstedde. After

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college we joined Norman's parents in the start of landscape nursery operations at Pellett Gardens.

In 1961, we moved to St. Paul, Minnesota where Norman began graduate school at the University of Minnesota. Our sons, Alden and Andrew were born while living in Minnesota. Dorothy worked part-time in a florist shop in St. Paul during Norman's graduate studies. In 1964 we moved to Cobleskill, N.Y. where Norman started teaching a nursery management program at the State University of New York at Cobleskill. In 1967 we moved to Vermont where Norman accepted a position as Extension Ornamental Horticulturist at the University of Vermont. Our daughter, Kerri, was born in Vermont in 1968.

Norman was active in Extension, undergraduate and graduate teaching and in a variety of plant research projects in cold hardiness, propagation, mulch and plant nutrition studies for twenty-nine years. He retired from the University of Vermont in 1996, but continued writing for more than ten years. Dorothy, in addition to being primary care provider for our three children, started a small perennial nursery in the 1970s and continues today. In addition, she has written numerous horticulture articles for several national horticultural magazines. She continues her writing today as a freelance writer for Vermont's largest newspaper, the Burlington Free Press.

We've enjoyed a varied horticulture life that started in a soils class in the Agronomy Department at Iowa State. Thanks Iowa State! Other family members graduating in ISU Horticulture were my brother, Harold, BS, MS and PhD and my cousin, Franklin Pellett, BS, both deceased.



## Bradley Peterson

I am writing to give an update for the upcoming newsletter.

I am close to wrapping up my 16th year as one of the founders/owners of Inverness Landscaping in the south Denver, Colorado area after many years as an assistant superintendent and superintendent in the golf business. I have a wonderful wife as a partner and three great kids that keep us smiling.

Please tell Nick Christians I said hello.

**Brad Peterson**  
**'91 Horticulture**

# KEEP IN TOUCH

Department of Horticulture



[www.hort.iastate.edu](http://www.hort.iastate.edu)





# Witchhazel Walk Installation

by Kristine Neu, Brandon Miller and Katrina Knudsen

The Graduate Student Horticulture Society (GSHS) led Iowa State University's Arbor Day Planting which took place on Tuesday, April 19. This event also celebrated the first year of ISU's Tree Campus USA designation. Over 50 graduate and undergraduate students from the Department of Horticulture and Landscape Architecture planted two trees and 75 shrubs along the corridor between Horticulture Hall and Osborn Drive. This project was made possible with collaboration between GSHS, faculty in Horticulture and Landscape Architecture, and staff from ISU Facilities Planning and Management.

In fall of 2015 GSHS sought out Horticulture graduate student Katrina Knudsen to draft a design for two planting beds west of Horticulture Hall to be installed by the student group. A landscape design committee was formed to include Knudsen, along with three additional GSHS members, Brandon Miller, Kristine Neu, and Zachary Hudson. They were joined by several department of Horticulture faculty along with Rhonda Martin and Barbara Steiner from Facilities Planning and Management. With encouragement and financial support from FP&M, Knudsen was challenged to draft a design that encompassed the entire corridor from Horticulture Hall to Osborn Drive, a large expansion from the original proposal.

Plants selected for this project included several underrepresented species on the ISU campus. This reflected the requests of department faculty to include plants for teaching purposes and the overall desire to diversify the species of plants utilized

on campus. Witchhazels emerged as the central theme for the design, which lead to the name of Witchhazel Walk. Various selections of species and hybrids of Hamamelis will allow for multi-seasonal ornamental appeal, and it should be noted that many of the species bloom in the cardinal and gold color spectrum. The final design reflected the talents and abilities the Department of Horticulture's students and was well received by all faculty and staff within the department.

Installation of the entire landscape was a two phase project. Leadership and logistical support was provided from the twelve members of the Graduate Student Horticulture Society for both planting dates. On Tuesday, April 19, GSHS, the undergraduate Horticulture Club, and Dr. Julie Stevens' Landscape Architecture students worked to install all trees and shrubs for Witchhazel Walk. An official Arbor Day Planting proclamation was read by a special guest to mark this special occasion.

On Monday, April 25, the students of Dr. Denny Schrock's Home Horticulture course engaged in service learning by planting over 300 perennials to complete the installation of Witchhazel Walk. GSHS members and department faculty



and staff helped the students during this project. This was made possible thanks to generous donations from several local businesses.

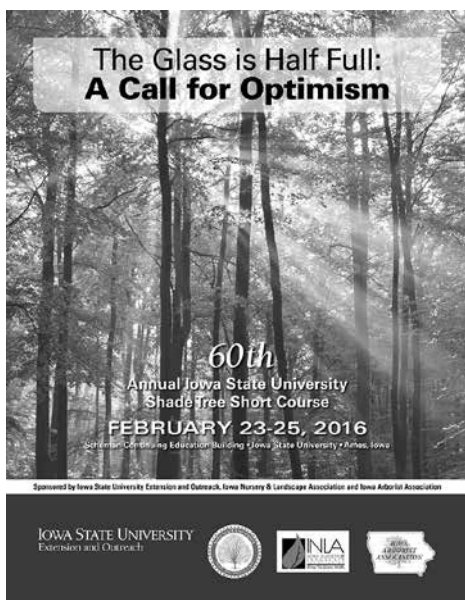
GSHS would like to thank the Departments of Horticulture and Landscape Architecture, and the staff of Facilities Planning and Management for all of their assistance in making this large scale installation possible. GSHS is proud to give students, employees, and visitors of Iowa State University the opportunity to enjoy the diversity of plants and multi-season beauty that Witchhazel Walk will provide for years to come.

# Cyclone Night at the DSM Botanical Garden

An evening of music, education, and Cyclone pride at the Greater Des Moines Botanical Garden was held July 28. Live jazz filled the garden, guests learned about the horticultural science which brings its beauty to bloom. Hands-on learning stations included a make-and-take activity and guided tours were offered. A short program featured alum, Kelly Norris, director of horticulture, who shared the story of the garden's dynamic renewal.



## 2016 Shade Tree Short Course



The 60th annual Iowa State University Shade Tree Short Course and Iowa Nursery & Landscape Association Conference and Trade Show was held February 23-25, 2016 at the Scheman Building at Iowa State University.

The theme was “The Glass Is Half Full: A Call for Optimism.” Attendees were welcomed by Donald Lewis, Iowa State University.

The first session was “The CODIT Principle” by Dr. Dirk Dujesiefken from the Institute of Arboriculture in Hamburg, Germany. “Bees, Politics, and Pesticides – Challenges and Opportunities for the Green Industry” was given by Dan Potter, Department of Entomology, University of Kentucky.

“Don’t Be That Guy/Gal” was presented by Dr. Gary Johnson from St. Paul, Minnesota and Dr. Jeff Iles, Iowa State University for the closing session.

Other sessions included:

- “Top 10 Nasty Insect Pests of Trees and Shrubs and How to Deal with Them”
- “Renovating the Unseen...An Introduction to Root-zone Excavation”
- “Managing Ancient and Historic Trees”
- “Abiotic Disorders Influence Tree Selection in the Great Plains”
- “Managing Urban Tree Stress...Start with the Soil”
- “Native Trees for the Great Plains”
- “Preserving Trees in Development Projects”

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*Greetings Alumni*

