

Horticulture  
Hall

# **Department of Horticulture** *2013 Alumni Newsletter*

IOWA STATE UNIVERSITY



## Greetings Fellow Horticulturists!

I guess it started about five years ago. At least that's when I began paying attention to articles and blog posts with the attention-grabbing headlines... *10 College Degrees That Don't Pay*. And wouldn't you know it, horticulture always seemed to grab one of those ignominious "top ten" slots! Of course, exposés announcing the uselessness of certain college degrees are backed by statistical analysis of "real" numbers, and usually written by well-heeled graduates of some elite school of journalism who surely must know more than you and me. Now there I go sounding all defensive and crabby, which only emboldens these self-important "experts" who look down their nose at those of us in the agriculture sector, but then spend \$30 on a salad at some fancy New York bistro. "Oh Pierre, what were those green and red things on my plate... did they come from some kind of plant?" Sorry folks, but I have very little patience for those who make sweeping, ill-informed proclamations about horticulture but can't tell the difference between a table grape and a table leg. Okay, I feel better now.

So why did **you** choose horticulture as your major way back in 1953, 1983, or 2013? Was the decision influenced by your earning potential after graduation? Was it because you liked working with plants... plants for ornamentation, athletic fields, food? Were you swayed by the thought of working with your hands (and your mind), putting in an honest day's labor, and the simple satisfaction that kind of lifestyle brings? Or, did the thought of working behind a desk or computer screen on a picture-perfect day in May send you running to Barb Osborn's office screaming the words... "I need to change my major... to horticulture?!"

Ours is a noble, honorable, and honest profession. It requires (demands) hard work, humility, ingenuity, and perseverance. You must be strong mentally and physically, have an insatiable desire to learn, and be eternally optimistic. You must be capable of uttering (and believing) the words... "when the rain stops we're gonna"... "when the drought ends I will"... and, "next spring we're going to do things even better." Finally, and probably most importantly, horticulturists must accept the fact that it's not about them... it's all about the plants. After all, plants put money in your pocket, food on your table, and bring a smile to the face of your customers. And the plants know it... not in a smug or self-righteous way, but in the same way your dog or cat knows that it is they who own the keys to the city. And just like our companion animals, plants don't suffer fools and they absolutely refuse to entertain excuses. Forget to water, fertilize, or prune, and you violate a trust, a common bond, an understanding and the results can be disappointing if not catastrophic. But if you employ all of the creative, scientific, and practical knowledge gleaned from your time at ISU, **and** after graduation, and enjoy success no matter how meager, then you will know the joy and satisfaction that only a horticulturist can know, and the senior editor of Clueless.com can only dream about.

Best wishes for a prosperous 2014!

*Jeff Iles, Professor and Chair*

Department of Horticulture, Iowa State University, Ames, Iowa 50011-1100, [iles@iastate.edu](mailto:iles@iastate.edu)





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## Dean's Letter, 2013

One of my favorite memories of 2013 has to be the dinner celebrating the 75th anniversary of the Iowa State University Research Foundation. ISURF is the organization that helps transfer research results from the lab to the marketplace to benefit society. The dinner recognized the creativity and innovation of ISU faculty, staff and students.

What made the evening so memorable was a fun-loving performance by a band that wrote new lyrics to familiar tunes to celebrate notable inventions. My absolute favorite was a song honoring Charles V. Hall, the former ISU horticulture professor and department chair, for his research on watermelon varieties, which continue to be licensed worldwide by ISURF. The greatest thing was that Dr. Hall and his grandson were present to hear it and be recognized. Here's a brief excerpt of the band's lyrics, sung to the tune of "Hot Stuff," the 1970s hit by Donna Summer:

*Searching all over just like Magellan  
for the finest fruit of them all.*

*Looking for a flavorful watermelon  
bred by Mr. Charles V. Hall.*

*That's why I need All Sweet when I can smell it.  
It's so delicious, and popular, too.*

*We know that All Sweets are going to keep selling.  
Thanks to Charles Hall who bred them here at ISU.*

Another wonderful 2013 memory was our April dedication of the Charles V. Hall Greenhouses. When I walk by them or go inside, I'll always think of Charlie and his wonderful contributions to the horticulture industry.

Just like the hits of the past, the department's success and service just keep on coming. I know you'll see why when you read this year's newsletter. Thank you for all your continued support as alumni and friends of the department.

Best wishes!

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





## Horticulture Faculty

**Ryan Adams**, Lecturer/Turfgrass Extension  
[rsadams@iastate.edu](mailto:rsadams@iastate.edu)

**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

**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

**Paul A. Domoto**, Professor  
[domoto@iastate.edu](mailto:domoto@iastate.edu)  
Pomology – growth and development; stock-scion relationships, mineral nutrition, trickle irrigation, stress tolerance, and pest management

**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

**Richard P. Jauron**, Extension Program Specialist II  
[rjauron@iastate.edu](mailto:rjauron@iastate.edu)  
Consumer/Home Horticulture

**Ted MacDonald**, Adjunct Assistant Professor  
Global Resource Systems  
[jtmacd@iastate.edu](mailto:jtmacd@iastate.edu)

**Dorothy Masinde**, Lecturer, Global Resource Systems  
[masinde@iastate.edu](mailto:masinde@iastate.edu)

**David D. Minner**, Professor  
[dminner@iastate.edu](mailto:dminner@iastate.edu)  
Sports turf management and construction; turf and landscape irrigation; golf course and landscape management; alternative pest management

**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)

**Barb Osborn**, Resource and Career Coordinator,  
Senior Lecturer  
[baosborn@iastate.edu](mailto:baosborn@iastate.edu)

**Denny Schrock**, Coordinator, Master Gardener Program  
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**Aaron Steil**, Lecturer  
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**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 Widrechner**, Affiliate Associate Professor  
[isumw@iastate.edu](mailto:isumw@iastate.edu)  
Plant Introduction Station Agronomy/Horticulture. Germplasm conservation, evaluation of landscape plants



## 2013 Faculty and Staff Awards and Recognitions

### **DR. PAUL DOMOTO**

Received a plaque from the Iowa Fruit and Vegetable Growers Association (IFVGA) for his outstanding service to the fruit industry in Iowa.

### **DR. CINDY HAYNES**

Awarded NACTA (North American Colleges & Teachers of Agriculture) Regional Outstanding Teacher Award for 2013.

### **DR. KATHLEEN DELATE**

Received Outstanding Achievement in Extension and Outreach Award, College of Agriculture and Life Sciences and Certificate for Leadership in Sustainability, ISU Live Green Program.



### **DR. DAVID HANNAPEL**

Received his Certificate of Membership for loyal and devoted service to Iowa State University, becoming a member of the 25 year club, March 14, 2013.

### **RICHARD JAURON**

Earned the Gamma Sigma Delta Mission Award of Merit in Extension for 2013.

### **DR. GAIL NONNECKE**

Named an inaugural Morrill Professor and Fellow of the newly established Morrill Academy for Teaching and Learning at Iowa State University and 2013 recipient of the International Service Award.



## Global Professorship

Endowed Dean of the College of Agriculture and Life Sciences, Wendy Wintersteen, hosted a special event honoring Gail Nonnecke as the inaugural recipient of Global Professorship in Global Resource Systems December 13, 2013.



# Who's New in Horticulture?

## DIANNE BROTHERSON

Hello! My name is Dianne Brotherson and I began providing part-time computer support for the Horticulture Department in Feb. 2013. I have enjoyed getting to know the faculty, staff, and students in the department and I am impressed with the friendliness and family-like atmosphere.



I graduated from Iowa State in 1984 with a Management Information Systems (MIS) degree and began working at Iowa State in the Administrative Data Processing (ADP) Center. I have seen a lot of changes in technology and computing over the last 29 years! My job duties over the years have included training, second-level desktop support, network printing, network access and security, project management, disaster recovery, and now, supporting the Hort. Dept.

I am a member of the Ames Trees Forever organization and I aspire to be a Master Gardener so this new assignment is a wonderful fit for me. My husband and I have a hosta collection and I have many hostas that I purchased from the Ascension Lutheran Hosta sale, which Dr. Gladon was involved with. In addition, I am the President of the Ames International Partner City Association and I have traveled to and hosted delegates from Koshu City, which is our sister city in the Yamanashi Prefecture. We are hoping to take the delegates that will arrive this September on a tour to the ISU Hort farm. Koshu City is known for fruit, grape, and wine production so I think they would be very interested in seeing the research that is being done at ISU.

## CHRISTOPHER CURREY

Hello Cyclones! I would like to take this opportunity to introduce myself. My name is Christopher Currey, and I am a new Assistant Professor of Horticulture in the Department focused on greenhouse and controlled environment crop production. I was born and raised in Central Minnesota (you betcha!), though I recently came from Purdue University in West Lafayette,



Indiana, where I earned my Ph.D. Before that, I earned a B.S. in Environmental Horticulture and M.S. in Applied Plant Sciences at the University of Minnesota.

As part of my role here at ISU, I have the privilege of teaching HORT 332 Greenhouse Operations and Management, HORT 434 Greenhouse Crop Production I (flowering potted plants), HORT 435 Greenhouse Crop production II (bedding plants and cut flowers), and next fall we will be offering HORT 436 Greenhouse Crop Production III (vegetable and fruits). This is one of the strongest greenhouse and controlled environment curricula amongst all the horticulture and plant science departments across the country. When you combine our greenhouse course offerings with our new greenhouse facilities, I am confident that the ISU greenhouse program is going to be growing!

In addition to teaching, I also have a research program focused on greenhouse and controlled environment crop production. While many greenhouse research programs have traditionally focused on flowering potted plants and annuals, I am researching production of both flower and food crops. Specifically, I am focusing on environmental and cultural requirements for hydroponically grown herbs and greens, as well as plant growth regulation, lighting, and fertilization of containerized flowering crops. We are currently seeing a change in the information greenhouse growers are looking for, and there is great interest in expanding production outside of flowers into food crops. I will be doing my best to address the needs for this emerging greenhouse produce market, as well as supporting the well-established and important ornamental market. Ultimately, my goal is to maintain and increase the profitability of greenhouses across Iowa and the country by increasing the efficiency and efficacy of inputs in greenhouse and controlled environment crop production.

In my spare time, there are a number of things that I enjoy doing. Outdoor activities are among my favorites, including backpacking, hunting, and fishing. However, my wife and I just bought a house in Ames so I am betting home maintenance will soon be on the "extracurricular activities" list!

I want to reiterate how excited I am to be joining the Iowa State Department of Horticulture. Please don't hesitate if you'd like to stop by my office (127 Horticulture Hall), send an email ([ccurrey@iastate.edu](mailto:ccurrey@iastate.edu)), or give me a call (515-294-1917).



## Ryan Adams

I joined the Iowa State faculty on August 19 in the position of lecturer/turfgrass extension. My primary responsibilities will be communication with the turfgrass industry in Iowa and the region. I will also administer the programs and services that were previously handled by Dr. David Minner at ISU.



I received my M.S. at the University of Florida in August 2013. My work focused on nutrient management of bermudagrass fairways surrounding environmentally sensitive areas. I received my B.S degree in 2010 from Iowa State University. During my tenure at Iowa State University, I interned at Pinehurst Resort in Pinehurst, NC, Shoal Creek Country Club in Shoal Creek, Alabama; and with the United States Golf Association Green Section. I also worked at the Iowa State University Horticulture Research Station, Ames, and Charlotte Country Club in Charlotte, NC.

My contact information is:

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## MAGGIE SPRECHER

Maggie Sprecher recently joined the Department of Horticulture as the new Academic Adviser for the Global Resource Systems program. Her responsibilities include advising undergraduate GRS students in all academic matters including curricular requirements, degree audits, policies, and procedures. She will also assist with summer and fall orientation, recruitment and retention of students, and will serve on various college committees. She is excited to have this opportunity to get to know and work with students on their academic journey.



Previously, Maggie had been working at ISU for the US Pork Center of Excellence as Program Coordinator of the online swine education programs: Swine Science Online and Professional Swine Managers Education and Certifica-

tion. She has also held positions with Kaplan University in Des Moines as a Student Adviser and at PROPIG in Worthington, MN as a Website Support Specialist.

Her educational background includes an MS in Animal Physiology from Iowa State University in 2009, a BS in Animal Science from Iowa State University in 2002, and an AS in Agriculture from Kirkwood Community College in 2000.

She resides in Ames with her husband, Chris, 10-year-old son, Ethan, and puppy, Cy. They are looking forward to an addition to the family in late February. Between preparing for the arrival of baby Sprecher, Ethan's activities, and a basement remodel, she also enjoys spending time with friends and extended family.

## Horticulture Staff

### TECHNICAL STAFF

Sung Ki Cho, Post-Doctoral Research Associate  
with Dr. Hannapel

Kenny McCabe, Research Associate  
with Dr. Graves

James Schrader, Assistant Scientist III  
with Dr. Graves

Pooja Sharma, Post-Doctoral Research Associate  
with Dr. Hannapel

### GREENHOUSE MANAGER

Peter Lawlor

### HORTICULTURE RESEARCH STATION STAFF

Nick Howell, Superintendent

Jeff Braland

Jim Kubic

Lynn Schroeder

Dan Strey

### OFFICE STAFF

Kim Gaul, Administrative Specialist

Colleen Johnson, Office Support Staff

Cathy Yang, Office Support Staff

Amanda Wilson, Student Employee

Stewart Nelson, 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



# Fond Farewell

Wow! It's hard to believe that 39 years have passed by so fast. Guess that's what happens when you enjoy what you are doing and having fun. Growing up on a vineyard in California's San Joaquin Valley, never in my wildest dreams would I have predicted that I would end up a Hort professor at ISU. When I went off to college, all I knew was that I wanted a career where I didn't sit behind a desk or work in the field all day, and getting here has had many twists:

- When I started college at Fresno State, I chose to study pomology rather than viticulture because most of the other plant science freshmen wanted to study viticulture, but I still took a few viticulture courses.
- The jobs available when I graduated didn't appeal to me so I started taking some graduate courses and a temporary UC Davis technician position opened up in the Valley. It was through that job that I got really interested in research.
- I applied and interviewed for an Extension county farm advisor position and would have been offered the position, but then Governor Ronald Reagan froze all state hiring – thank you.
- That led to going to the University of Maryland for my PhD because I would have the opportunity to see a different part of the county, and meeting my wife Marlainie in the Okefenokee Swamp.

I have had an enjoyable career at Iowa State with many fond memories. What's made it enjoyable are the people I have met along the way, how my position has evolved over time to present new challenges and places research and extension have taken me. Having taught from winter



*Dr. Paul Domoto and his wife, Marlainie*

quarter 1974 to spring 1990; serving as Hort Club advisor for the first five years with help from Marlainie; and back in the classroom the past two years, I have met many students. In more recent years, they will re-introduce themselves and many I still remember. What's frightening is when their children come up to me and introduce themselves. Through my extension activities I have met many dedicated fruit growers that I admire for their perseverance in standing up to everything Mother Nature throws at them to produce their crops and maintain a quality life. In providing assistance to them, I have learned just as much from them. I have enjoyed working with my colleagues in the horticulture and other departments across campus, our extension staff across the state, and those I have collaborated with at other institutions across the country. I can tell stories about them, but not in this newsletter, and I'm sure they could tell stories about me. Transitioning from an appointment in teaching and research to a three-way split to one in research and extension, and taking on activities in viticulture and dabbling in high tunnel bramble production in recent years have kept me refreshed.

My research and extension activities have taken me to 33 states, four Canadian provinces and two other foreign countries. Most of these, Marlainie has never seen. In retirement, we plan to stay in Ames, and hope to travel to re-visit some of these places and for me to take some fly fishing, and visit some foreign countries on our bucket list and maybe do some scuba diving.

It's been a great ride and to everyone thanks for helping make it so!

Paul Domoto



# Career Experiences

## Richard J. Gladon, Retired

Dick entered Ohio Northern at 17 years old. He worked very hard through undergraduate school, as he wanted to attend graduate school to work toward a Ph. D.

Between Dick's junior and senior year at Ohio Northern, he had an internship with Sun Oil Co. in Toledo, Ohio. After graduation with his Bachelor of Science degree in Chemistry, Dick took a job as a chemist at B. F. Goodrich Tire and Rubber Co. in Akron, Ohio from 1969 to 1972. During this time, Dick attended the University of Akron as a graduate student in the Department of Chemistry. Dick's career goal had been to become a professor, and to that end, he applied to and was accepted into the graduate program of Dr. Leo Paquette in the Department of Chemistry at Ohio State University. During the 1970-71 academic year at the University of Akron, Dick determined he still wanted to be a professor, but not of chemistry. He turned down a fellowship offer and asked that his application materials be forwarded to the Department of Horticulture at Ohio State, for entry in the fall of 1972.

Dick worked on his Master of Science degree under Dr. George Staby, and his thesis topic was opening bud-cut chrysanthemums with sucrose (table sugar) and the chemical 8-HQC. Dick graduated with his M. S. in 1974.

Immediately after receiving his M. S. degree, Dick started work toward his Ph. D. degree under the guidance of Dr. George Staby, and Dick received his Ph. D. in 1977. He applied for positions at several universities, and Iowa State University and Texas A&M University wanted his services. He made a decision to take a position with Iowa State as an Assistant Professor of Horticulture on July 23, 1978.

Dick became Iowa State's representative to the NCR-101 Committee on Controlled Environment Technology and Use. He was Iowa State's representative from 2002 until he retired in 2013. The annual meeting of NCERA-101 and associations with other members of the group were tremendous contributions to the development of Dick's professional career.

In 1984, Dick was granted tenure with promotion to Associate Professor. Dick's career at Iowa State began with him teaching and conducting research in the area of postharvest technology and physiology. Over a period of years, he moved his graduate level Postharvest Physiology course



to an undergraduate course in Postharvest Technology. In 1994, Dick and Bill Graves initiated and developed a writing/publishing course, *Publishing in Plant Science Journals*. That course became *Publishing in Biological Sciences Journals*. Dick co-taught or taught that course 20 times before he retired. J. Michael Kelly joined Bill and Dick in teaching the publishing course, until Kelly moved to Virginia Tech. The three co-instructors developed a textbook out of their teaching notes for the class, and the book, *Getting Published in the Life Sciences*, was published in 2011.

In 2001, Dick was asked to switch his appointment from 70% research – 30% teaching to 75% teaching – 25% research and assume all the courses in the greenhouse area. Dick developed three courses in the greenhouse area. They were Hort 332, Greenhouse Operation and Management, Hort 434, Greenhouse Crop Production I, and Hort 435, Greenhouse Crop Production II. Over time, Hort 434 evolved into a course covering greenhouse food-crop production, along with information on foliage plants, potted plants, and some cut flowers. Hort 435 handled spring garden plants—seeded annuals, vegetative annuals, perennials, and hanging baskets.

During Dick's career, he became a member of several honorary societies such as Sigma Xi, Gamma Sigma Delta, and Pi Alpha Xi. He also was a member of several professional societies such as the American Society for Horticultural Science, the American Society of Plant Physiologists, the American Chemical Society, and the International Society for Horticultural Science.

Over the course of Dick's career, he was the Major Professor or Co-major Professor for 31 graduate students. Twenty-two of the students were Master of Science students, and nine of them were Ph. D. students. One is the Associate Dean of the Graduate School at his home institution, and others have had very successful careers as teachers and researchers at major universities in both the United States and abroad.



# Horticulture Resource and Career Center

## Dear Alumni and Friends of Horticulture:

Greetings from 107 Hort Hall! As I look out my window on this crisp fall day, I see the sun peeking through the *Taxodium distichum*. It is my favorite tree and it stands right between my office and the wonderful new greenhouse range. Its copper fall color blends in with the amber sky. What a great place to be: Iowa State University, Department of Horticulture.

The department is home to 140 undergraduate and 16 graduate students. Fall 2013 brought 12 new freshmen and 12 transfer students to the Department of Horticulture. The 2012 Ag Career Services Data shows the placement rate at 100% of horticulture students placed within 6 months after graduation. The job market is wonderful for our graduates and we appreciate the support we have received this last year from horticulture companies around the globe. Each year over 200 agriculture companies travel to Iowa State University for the largest Agriculture Career Fair in the country. The Department of Horticulture invites company representatives to take part in a Horticulture Career Night. This year 17 companies attended the Horticulture Career Night at Reiman Gardens. Approximately 75 students enjoyed talking with the company representatives. The department hosted a dinner for the group at the end of the evening.

**Horticulture Learning Community** – Kellie Walters took on the position as the Hort LC Peer Mentor. Kellie took the students on several horticulture field trips in the Ames area including: Country Landscapes, Jack Trice Stadium, Reiman Gardens, Veenker Golf Course, and Holub's Greenhouse. The students picked the Honey Crisp student block of apples in early September and then picked the Golden Delicious apples with the Food Science and Human Nutrition learning community students in October. The students picked, graded, and packaged apples to donate to local charities.

**Hort Club** – The 2013 Mid-America Collegiate Horticultural Society (MACHS) conference and student competition was held at the University of Wisconsin-River Falls. The ISU team placed second, and brought home several



Lexie Cook, Kelsi Gensley, Kady Harris, Caitlin Hochwender, Lindsay Meylor, Derick Perkins, Christina Riessen, Jacob Thomas, and Kat Wigg attended the MACHS conference.

individual awards; Jacob Thomas received first in general knowledge and second in herbaceous identification, Kady Harris placed third in woody identification, and Christina Riessen placed first in herbaceous identification and third for overall individual score.

**Turf Club** – ISU turf students participated in the STMA student challenge competition in Daytona Beach, Florida. The Turf Bowl was held on February 7, 2013, in San Diego, California. Kevin Hansen was chosen by the Toro Company to participate in the 2013 Toro Super Bowl Student Training Program. Kevin spent seven days in New Orleans helping prepare the game and practice fields for the Super Bowl XLVII that was held on Sunday, February 3, 2013.

**Landscape Club** – Ten students from the Iowa State University Department of Horticulture competed at the national Professional Landcare (PLANET) Student Career Days at Auburn University on March 7-9, 2013. Students placing in various competitions were: Jason Mangrich, 2nd in Construction Cost Estimating; Will Ries 16th, and Brock Hunt 32nd in Maintenance Cost Estimating; Andrew Foy, 23rd in Leadership Skills; and Kady Harris 29th in Turf and Weed Identification.

I wish to extend an invitation to all of our alumni and friends to visit often and keep in touch! Bring your family and friends to take a tour of the greenhouses and visit our Sticks art display of 100 years of horticulture depicted on the walls in the atrium of Horticulture Hall. Wishes for a safe and wonderful year!

# Graduate Student Horticulture Society



Officers from left to right: Bruce Black, Jennifer Tillman, Bryn Takle, Brandon Carpenter, Sharon Tusiime, Frank Balestri, and Ray Kruse.

## Graduate Degrees and Students

### 2013 GRADUATE DEGREES

Nickolas John Dunlap  
MA Major: Professional Agriculture

Zachary Adam Simons  
MA Major: Professional Agriculture

### CURRENT GRADUATE STUDENTS

Frank Balestri

Bruce Black

Brandon Carpenter

Kevin Duerfeldt

Ying Feng

Jingjie Hao

Dana Jokela

Ray Kruse

Tian Lin

Isaac Mertz

Kyungwon Min

Jake Northup

Bryan Peterson

Leah Riesselman

Dylan Rolfes

Daniel Strey

Bryn Takle

Jennifer Tillman

Sharon Tusiime

Randall Vos

*Congratulations!*

The Graduate Student Horticulture Society (GSHS) has been busy this fall semester. We have updated our constitution to hold elections during the fall semester, so elections can include students in their first semester of graduate school. The position of the co-president has also been changed. Presidents now serve a term of two years, with one of the presidents being elected every fall. This change was made to improve continuity from one year to the next. We also held our first ever fall elections this semester. Our new officers are as follows: co-presidents Brandon Carpenter and Bryn Takle, treasurer Ray Kruse, historian Jennifer Tillman, Graduate and Professional Student Senate representative Sharon Tusiime, and the Social Chair responsibilities will be shared by Bruce Black and Frank Balestri. Ajay Nair will continue to be the GSHS faculty liaison.

The GSHS is planning to hold an ornamental grass sale during VEISHA this year. Funds from the sale will pay for club events and provide travel grants for members who are traveling to conferences and professional meetings. We have increased opportunities for members to participate in club activities by holding monthly meetings and by having more social events. Participation has also increased as the number of graduate students in the department has increased.





Insect predators and Watchdogs are some of the newest additions to the greenhouse. The watchdogs record environmental data and the predators help keep that poinsettia plant pest free.

Our greenhouses are very dynamic. Several bays are complete with fog cooling. The removable plastic benches make this bay versatile for both teaching and research.

## *New Greenhouses Update*

By Pete Lawlor

We began our third fall semester in our nearly new, state of the art greenhouses that opened to students and faculty in May of 2011, after one year of detailed construction. They were dedicated to and appropriately named after Dr. Charles V. Hall, former department head, in April 2013. They were constructed by A. J. Lauer Greenhouse Company of Minnesota. We are the envy of greenhouse clientele across campus and quite likely Iowa. We have approximately 5,200 square feet of high quality bench space to utilize for classes and research. In August, sixty, 1000-watt high pressure sodium grow lights were added to the range. Dr. Chris Currey was able to fund the purchase of forty-five for his future research purposes. In addition, he has equipped one research bay with an array of nutrient film trays, nutrient solution storage tanks, recirculation pumps and water heater/chillers to complete a functional and impressive plant growing system display. A second bay will also be outfitted with additional hydroponic equipment. He also began multiple research projects that are quickly filling a good portion of the range. This is fantastic to see at this time of year. We have the makings of a great showplace. As word gets out, many tours have been taking place ranging from garden groups, students of all ages, consulting engineers and others involved in agriculture, in a big way. The students currently involved in Horticulture are, as you may have guessed, some of the best young people around! As many of them would espouse, "we are in a good place." I would concur.

Please feel free to stop by for a visit if you are coming to Ames.

# ISU Horticulture Research Station



## 2013 UPDATE

Despite an incredibly wet spring followed by a very dry summer the Horticulture Station had a productive and successful season. 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

In an effort to expand student academic experiences beyond ISU, the Horticulture Station and Global Agriculture Programs developed a new internship opportunity geared to international students wanting to come to the United States to study horticulture. Promoted through the student organization, International Association of Students in Agriculture and Related Sciences (IAAS), Jasper Depotter, the first intern in this program, came from Belgium in July to work at the station. Over a five week period he worked a rotation of four horticultural disciplines including turfgrass, ornamentals, and fruit and vegetable production. In this process, Jasper was exposed to horticulture research and also had the opportunity to learn about life at ISU and Iowa. Also, the station student employees benefited from the opportunity of working with a fellow student from another culture.

This year six additional internship opportunities were offered to ISU horticulture students. Adam Grimm, senior, worked on the beginning process of a prairie/oak savanna restoration. Jesse Worth, senior, worked on blackberry training systems. Brad Bathey, junior, worked with high tunnel management. Jacob Graber, junior, worked with vineyard management techniques. Cory Rigler, junior, assisted with honeybee research. Taylor Goetzinger, horticulture/landscape architecture double major senior, managed the Home Demonstration Garden. These students

did an exceptional job and the Horticulture Station staff is proud of them and their accomplishments. It is our hope they will have continued success in their college careers.

## RESEARCH

The Horticulture Station's main function continues to be research. With more than 90 projects and 26 faculty members involved, the range of projects is quite diverse. Apples, strawberries, grapes, tomatoes, peppers, cucumbers, sweet potatoes, and melons were grown for research. Ornamental crops, such as turfgrass, shade trees, flowering crabs, roses, and hydrangea were used for research purposes also. In addition to the horticultural crops, projects using prairie plants and soybeans were conducted as well. Projects involving turtles, tree swallows, and mosquitoes added more research diversity.

## LANDSCAPE AND INFRASTRUCTURE

The landscape of the station has seen again dramatic improvements in 2013. All areas below Horticulture Lake dam south to old farmstead were cleared of non-native brush. This 15-acre site has a remnant oak savanna, which contains a native Bur Oak that predates the American Revolution. The "TREE," as it is affectionately known by station staff, will become a feature specimen in a restored prairie/oak savanna to be installed over the next several years. The new prairie and savanna will be a teaching tool for ISU students and provide research opportunities for horticulture projects looking at the effects of beneficial insects on horticulture crops.



"The Tree"



Improvements in the farm irrigation system continued in 2013. With two seasons of significant drought, lake water management has become a crucial component of the farm's irrigation practices. The installation of a computer-operated central control system for the in-ground irrigation system at turf research has reduced their water consumption by 25%. This equates to a savings of nearly one million gallons of water.

Improvements were also made on the farm coolers in 2013. Four of the eight coolers received new mechanical systems making them more dependable and efficient to operate. One of these coolers also has the ability to heat. This was done to provide the ability to cure crops like sweet potatoes and winter squash for long-term storage. Work on the remaining coolers will continue in 2014.

Significant remodeling of the farm residence also occurred in 2013. This project included a new bathroom and kitchen and all interior paint. With the work complete, a permanent farm staff member has moved in and the station now has a weekend manager to handle issues that occur after regular farm hours.

### **INDUSTRY AND THE PUBLIC**

The public had a strong presence at the station again in 2013. The research station hosted six field days for people interested in cover crops, vegetable production, turfgrass, and general home gardening. One field day of special note was geared to high school freshmen. This event, called Ag Leadership Day, gave 200 high school freshmen from all over Iowa the opportunity to learn about landscape design, tree pruning, turf management, and fruit and vegetable production. Students interested in agronomy learned about soil and forage judging and students interested in biology learned about turtles and bees. In addition to the field days, the farm hosted 25 tours and 8 other events and meetings for the public. At the end of the season, over 1,500 people had visited the station.

With the student activities, extensive research projects, farm improvements, industry and public functions, the Horticulture Research Station was extremely busy in 2013. It is anticipated that it will continue to be important and useful to students, faculty, and staff at Iowa State University and the people of Iowa.



## *Fruit and Vegetable* **Field Day**

### **2013**

The Department of Horticulture in partnership with Iowa Fruit and Vegetable Growers Association (IFVGA) and the Leopold Center for Sustainable Agriculture organized the 2013 Fruit and Vegetable Field Day at the Horticulture Research Station near Ames on August 12, 2013. The event was coordinated by Dr. Ajay Nair, Assistant Professor in the Department of Horticulture. Other researchers who participated included Drs. Jeff Iles (Dept. Chair), Paul Domoto, Gail Nonnecke, Mark Gleason, and Amy Toth. This education and outreach event was designed specifically for fruit and vegetable growers and featured research-based information on a variety of topics including biochar application in vegetable production, honey bee health and behavior, peach and pear cultivar trials, summer cover crops, high tunnel fruit and vegetable production, and apple root stocks and training systems.

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## Fruit and Vegetable Field Day (continued)



The event started at 2:00 p.m. with an award ceremony for Dr. Paul Domoto, who is retiring on December 31, 2013. The ceremony was attended by Dr. John Lawrence (Associate Dean for Extension and Outreach), Mr. Darrell Geisler (President, IFVGA), Dr. Jeff Iles (Chair, Horticulture Department), and Mr. Nick Howell (Farm Superintendent). The award ceremony was sponsored by IFVGA. Dr. Domoto was awarded a plaque of recognition for his outstanding research and extension program in the area of fruit crops. Gerald Deal, owner of Deal's Orchard and a former President of IFVGA, thanked Dr. Domoto for his valuable work in the area of apple rootstock/scion and grape production in Iowa. He stated that Dr. Domoto's research had a huge impact on the apple and grape industry in Iowa and was instrumental in introducing new techniques and cultural practices in those production systems.

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. Growers visited various research plots and interacted with researchers. The new Bee Research Facility brought growers face to face with honeybee colonies placed in glass hives. Research on summer cover crops for vegetable production attracted a lot of interest, especially with growers interested in exploring cover crops as a tool for crop rotation and building soil organic matter. Dr. Nair's research on cover crops provided growers information on crop rotation strategies and potential benefits of short-duration cover crops for high tunnel tomato production.



Dr. Patrick O'Malley, Horticulture Field Specialist, showed growers the ongoing peach and pear cultivar trial designed to identify cultivars that are suitable for Iowa growing conditions. The working of the mechanical row cover laying equipment, used for insect control, was well received by growers. A number of them expressed interest in learning more about the equipment and its possible integration in their farming systems. The equipment has the potential to significantly cut labor costs and help growers scale-up their farming operations. Dr. Domoto showcased the apple cultivar and rootstock trial and emphasized the importance of selecting appropriate cultivars that can grow well in Iowa and produce higher yields. Graduate students from the Department of Horticulture (Hafizi Rosli, Brandon Carpenter, Leah Riesselman, Dylan Rolfes, and Ray Kruse) actively participated in the event by engaging growers in their research projects and answering questions. The afternoon session of the Field Day was followed by dinner, which was organized in partnership with Mr. Mike Penick, owner of Penick's Sweet Corn, Carlisle, Iowa. Mr. Penick sponsored grilling of burgers and vegetables for the dinner. After the dinner growers mingled with farm staff, researchers and graduate students and had discussions on needs and challenges for the fruit and vegetable industry in Iowa.





Jim Schrader (left) and Kenneth McCabe are part of the research team.

## Greening the Green Industry with Bioplastics

A multidisciplinary research program based in the Department of Horticulture is working to improve sustainability of container crops through the development and implementation of bioplastic containers.

The Bioplastic Container Cropping Systems program began in the fall of 2011 and is funded in part by a \$1.94 million grant from the USDA Specialty Crops Research Initiative. Led by Professor William Graves, the team of researchers includes James Schrader (Assistant Scientist), Chris Currey (Assistant Professor), and Kenneth McCabe (Research Associate and Grad Student) in the Department of Horticulture, as well as researchers from the departments of Agricultural & Biosystems Engineering and Materials Science & Engineering at Iowa State. The multi-institutional team also includes an ag economist from the University of Illinois and extension specialists from the University of Nevada and The Ohio State University.

“The effectiveness of petroleum-plastic containers is rarely questioned, but their impact on the environment is becoming difficult to justify,” said James Schrader, one of the co-principal investigators on the project. “The widespread use of petroleum plastics in horticulture is one of the most

significant obstacles to sustainability in the industry. Approximately 800,000 tons of plastic is used each year for single-use containers, and nearly all of it ends up in the landfill. Recycling of used petroleum-plastic containers is problematic because of contaminants remaining after plant production, and it is cost prohibitive for growers to clean and sterilize containers so they can be re-used.”

The basic goal of the Bioplastic Container program is to develop and evaluate new bioplastic materials for use in plant containers that will fulfill all of the functions of petroleum-based plastic containers, without the drawbacks. The bioplastics being evaluated by the team are produced from all biorenewable feedstocks, and many are biodegradable.

“Our ultimate target is to create a bioplastic container that will function as well as, or better than, petroleum-based plastic containers during plant production and sale, but then can be removed by the consumer, broken to smaller pieces, and installed with the plant in the landscape so it can provide a fertilizer or soil-conditioning effect as the bioplastic biodegrades,” said Schrader. “This scenario will be suitable for crops with production cycles up to 10 or

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McCabe inspects the plants in the containers.

12 weeks, but crops with long production cycles, such as nursery crops, will require bioplastic containers that are more durable and therefore less biodegradable. We have evaluated biorenewable materials that fulfill both of these scenarios. The durable bioplastic nursery containers can be composted or recycled, and recycling of these bioplastics is not hampered by contaminants the way that it is with petroleum plastics.”

The project is now in its third year and the team has evaluated prototype containers made of 47 biorenewable polymers and composites (mixtures of bioplastic and natural fillers). Evaluations in the first two years examined several factors, including: the processability of materials; the performance of prototype containers of each material during greenhouse production; the biodegradation of the materials in soil; and the effect of the degrading materials on garden transplants when the container is removed, crushed by hand, and buried near the plant roots.

Results have been very promising, and the team has identified several bioplastics and biocomposites that perform as well as petroleum plastic and a few that perform better.

“We have evaluated two general types of biorenewable containers, those made of injection-molded bioplastic materials, and fiber containers that we coated with bioplastics,” said Kenny McCabe, the researcher performing the greenhouse portion of the project. “Some of the containers of both types performed as well as petroleum containers in the greenhouse, and injection-molded containers made from composite materials of soy-protein polymer and PLA (polylactic acid) performed better than petroleum containers overall. The soy-PLA containers release plant-available nutrients during greenhouse production, and plants grown in these containers are larger and healthier than those grown in conventional pots. The soy-PLA containers also greatly-reduced the occurrence of root circling in our trials, a problem that was evident with plants grown in petroleum-plastic containers.”

The fertilizer effect and the capacity to reduce root circling are added functions of soy-PLA containers that benefit plants during both greenhouse production and transplant. “The improved plant quality and the residual nutrients released from pieces of the container degrading near the plant roots leads to strong establishment of the plants when they’re installed in the landscape,” said Schrader.

The next phase of the project will focus on selecting the best five or six materials to be included in manufacturing collaborations with industry stakeholders. The industry collaborators will produce the bioplastic containers on standard plastics-processing equipment, and the containers will be distributed to greenhouse and nursery growers in several states to evaluate the performance of the bioplastics technology in real-world conditions. Selection of these best five or six materials will be based on several factors including: cost, availability, processability, performance (function), environmental impact, and industry and commercial appeal.

The team believes that bioplastics technology will not only provide a strong improvement in sustainability for the container-crop industries, but that bioplastic containers could also perform better and provide added functions beyond that of petroleum plastics.

Approximately 800,000 tons of plastic is used each year for single-use containers, and nearly all of it ends up in the landfill.





## Sweet Potatoes in Iowa

When you think about Iowa crops, corn, soybeans, and maybe apples or pumpkins will come to mind. But Dr. Ajay Nair and his team are working to bring a southern crop up north.

Sweet potatoes are what Nair is working with at the ISU College of Agriculture's Horticulture research station in Ames. "We are appropriating sweet potato cultivars that can be grown here in Iowa," Nair says. He has grown sweet potatoes all summer and it is harvest time.



The first step is clearing the vines and plastic covering, the plots used to keep the soil warm. Nair and his graduate and undergraduate students begin by cutting the plastic, then pulling it off.

Next, a harvesting device called an undercutter is pulled by tractor. Nair describes it as, "A U-Shaped blade that goes behind the tractor, and the blade digs into the soil. And as the tractor pulls, it just gently pushes the sweet potato up to the surface."

Nair and his team are working on this project to ensure that growers in Iowa can have open options. He says his inspiration for the project started with a grower telling him success stories of selling sweet potatoes. Nair says, "This could be a good opportunity for a grower to find a niche in the market."

Nair says the sweet potato yields in his experiments are performing near the national average of 16,000 to 18,000 pounds per acre, hovering around the 14,000 to 15,000 range.

The final step in the process is curing, which ideally takes two weeks. During that time the potatoes are stored at 85° F, with humidity at a constant 85%. After that, sweet potatoes can keep for up to eight months, if kept at 55° F.

# Field Day Brings Turfgrass Specialists to Iowa State University Horticulture Research Station



Nick Christians presenting research results.



Nick Howell and Isaac Mertz by the painted logo.

## **AUGUST 1, 2013**

Turfgrass specialists who work with golf courses, athletic fields and lawn care services met August 1 for an annual field day at the Iowa State University Horticulture Research Station. Faculty and staff from Iowa State departments of Horticulture, Agronomy, Entomology, and Natural Resource Ecology and Management presented informational sessions along with speakers from the Iowa Department of Agriculture and Land Stewardship and Indian Hills Community College. Topics included pond management, pesticide application, weed management, and turfgrass insect, weed, and disease identification. The field day featured a Pesticide Applicator Training session to meet requirements for applying pesticides. Suppliers of turfgrass products exhibited at the field day.

Iowa State sponsors the field day with the Iowa Turfgrass Institute, the Iowa Golf Course Superintendents Association, Iowa Sports Turf Managers Association, and the Iowa Professional Lawn Care Association.



Group photo with Field Day logo.



# 2013 Online Course

## HORT 193F

### Green Roof Design, Installation, and Management

By Jennifer Boussetot

As horticulturists we all are drawn places that are leafy and verdant. Most of the time that involves plants in soil as well as on the ground; however, a new online course from the Horticulture Department features plants living on rooftops. HORT 193F Green Roof Design, Installation, and Management is an eight-week course delivered at a distance and launched in fall of 2013. The course focused on all of the steps required in planning, designing, installing, and maintaining a green roof. Additionally, we discussed the historical perspective of living roofs, the quantification of benefits, and even how policy plays a role in green roofing. In fact, it is the emerging policy initiatives that are demonstrating how green roofs will likely increase in North America in the near future following a decades-earlier trend that occurred in Europe.

Since green roofs are a fairly specialized subject related to horticulture and many other disciplines, we expected that the first time the course was offered we would have modest sign-up. That was not the case as 35 Iowa State University students from four different colleges within the university enrolled. Additionally, 15 non-credit participants from all over the United States—literally coast to coast—joined the course. There were even two participants from down under; one from New Zealand and one from Australia. According to one participant, Holly from Virginia, the course met its goal, “I am writing to let you know how much I’ve enjoyed your class on green roofs. I now feel like I can talk intelligently about them!” With enthusiasm like that, we will clearly be offering the course again in the future.



Horticulture Hall green roof installation on May 6, 2011, a major impetus for the idea of a green roof course.



The roof one year later.





Iowa  
Naturally  
Sculpture

## Reiman Gardens

In 2013 Reiman Gardens continued in a positive direction starting the second phase of a three part planning process. The first stage, an assessment of our history and current station, was completed in January of 2013. The assessment highlighted key areas where improvements could be made. The second phase, the strategic plan, began in September 2013. The strategic plan revisited the Gardens' mission and vision, addressed staffing, operating, and programming needs, and identified and/or expanded collaborative opportunities with the University, community and other stakeholders. The plan will also position the Gardens to move forward with the physical and financial components of a 10-20 year master plan.

The 2013 theme, "More than Meets the Iowa," allowed the Gardens to increase its stakeholder diversity by branching out to the Main Street Iowa program and many mid-Iowa arts organizations as well as Iowa sculptors. The main exhibit, called, "Iowa Naturally," featured thirteen nature inspired sculptures created by Iowa artists. The sculptures were located throughout the entire garden. Other notable displays included: The Landscapes of Grant Wood in the Campanile Garden, Save our Seeds in the Home Production Garden, a focus on hot air balloons in the Conservatory, and a State Fair themed Children's Garden.

Reiman Gardens would like to thank all of our members, visitors, and stakeholders for their support in 2013.



Lake Helen



Dunlap Court Yard



# Study Abroad



## SCHOOL GARDEN and SERVICE-LEARNING ON ST. JOHN, U.S. VIRGIN ISLANDS

Since 2010 Iowa State University (ISU) has partnered with Giff Hill School (GHS) on St. John, U.S. Virgin Islands, to provide a school gardening/service-learning program known as the EARTH Program (Education and Resiliency Through Horticulture). The goals of the program are to

- Design, install, and manage attractive landscapes at the school that relate to sustainable food production and landscape design
- Establish an integrated hands-on curriculum that includes horticulture and place-based environmental science
- Provide healthy, locally grown food to the GHS community
- Provide usable outdoor space for students to learn and work
- Create a positive perception of horticulture with GHS students
- Integrated ISU and GHS students in classroom and elective activities



Each semester fall, spring, and summer students from ISU spend 8-12 weeks on St. John as service learning students. They have the opportunity to integrate and apply everything they have learned while at ISU to teach horticulture, environmental science, and culinary arts classes to K-12 classes. Students also build facilities that will benefit the school for years to come, work with local experts to learn more about tropical horticulture and plant ecology, and assist with community development projects on the island.

During the fall of 2012, Kenneth Paul Beamer, senior horticulture, worked to better utilize in ground planting areas and maintain composting efforts. Paul also worked to strengthen relationships with the University of the Virgin Islands and is now working as a research assistant for Dr. Stuart Weiss at the University's Virgin Islands research and extension service.



Khyle Cox and Brett Cranston sowing seeds with students at GHS.

Courtney Clawson, sophomore agriculture education and horticulture, and Peter Carr, senior horticulture, spent 12 weeks on St. John during the spring semester 2013. While there Peter designed a new outdoor classroom and garden area for the 4th and 5th grades at the elementary school. Courtney worked with the ag-business high school elective to design and build the programs first chicken tractor and order the inaugural batch of chicks, which were shipped from Iowa to St. John. Courtney and Peter also assisted Dr. Dave Minner with clearing out and planting a new banana plantation, which will be intercropped with papaya, heliconia, and other tropical plants in the future. Courtney and Peter also worked with a group of students to raise funds for a trip to Iowa by hosting a farm to table, slow food dinner. They helped with the start of the very first CSA on St. John by helping coordinator Sarah Haynes organize a delivery point at GHS for the Ridge to Reef CSA on St. Croix and Coral Bay Organic Garden.

After taking Courtney and Peter to St. John, Dr. Cindy Haynes, Associate Professor Horticulture and EARTH Program Director, and Kevin Duerfeldt, PhD Candidate and EARTH Program assistant, traveled to Puerto Rico to establish connections with the University of Puerto Rico at Mayaguez, farms, and nurseries.

Students from GHS traveled to Iowa in late April as part of their weeklong intensive unit called minimester. Students worked with the EARTH Program, local producers, and local chef, Mathayom Vacharat to plan and prepare a meal featuring local produce as a fundraiser to visit Iowa. While



Giffthill School students and teachers at Reiman Gardens during their minimester in Iowa.

here students learned about different types of agriculture in the Midwest including visiting the ISU research and teaching farms, Reiman Gardens, Monsanto's research facility in Ankeny, and the world food prize Lauriat Hall in Des Moines. Students also toured campus, watched the VEISHEA parade, visited the Strategic Air Command Museum, and Henry Doorley Zoo in Omaha, Nebraska, and attended the Omaha Storm Chasers and Iowa Cubs baseball game. The trip included many firsts for students including the baseball game and ice-skating. The only disappointment was that they desperately wanted to see snow, which didn't come until the day after they left.

Shortly after the GHS visit to Iowa ISU students Brett Cranston, senior in agronomy and agriculture education, and Khyle Cox, senior in horticulture, went to St. John for 8 weeks. Brett designed another chicken tractor to increase the number of chickens and eggs the program could produce. The new chicken tractor integrates the compost pile so that the chickens would help stir the compost pile and the compost would provide vegetation and insects for the chickens to eat. Khyle redesigned a patio that has been used for container production of seedlings and vegetables so that it would have better flow, functionality, and aesthetics. Khyle also plumed large air conditioning units on the side of the school so that condensate from the condensers could be collected and used as irrigation water instead of being lost.

Cindy Haynes and Kevin Duerfeldt developed and administered a survey to ISU students who had participated in the EARTH Program. The survey asked students questions about the impact the program had on their professional and interpersonal skills and their perceptions of sustainability. Students responded that they developed self-confidence while working through challenges and that they are more conscious of wasteful uses of resources as a result of their time on St. John.



Sarah Haynes harvesting bananas.



Paul Beamer meeting with Agriculture Station Manager Raymond Thomas.

August brought major changes to the program as on site coordinator Sarah Haynes took maternity leave and Dr. Dave Minner, ISU professor in turf grass extension, prepared to fill the position of onsite coordinator. It also marks the first semester of the culinary arts program as we welcome chef La'Shanda Francis to GHS. Now GHS students will learn about food from seed to plate.

Fall service learning students are Angelica Flores, junior in Spanish, youth and adult development, and horticulture, and Victor Theng, junior in global resource systems and nutritional science. They have been on the island two short weeks and are already diving into teaching and gardening projects while they develop their individual projects. To keep up to date on them and new developments in the EARTH Program, visit our blog at <http://isuearth.wordpress.com/> or website [http://www.giffthillschool.org/earth\\_about.html](http://www.giffthillschool.org/earth_about.html).







# COSTA RICA

## Study Abroad

### Spring Break Trip to Costa Rica

#### Ent/Hort/PIP 511 Integrated Management of Tropical Crops

HORT 511 is taught in Spring Semester every other year by Mark Gleason, Donald Lewis and Barb Osborn. We study a broad cross-section of tropical agriculture in-class prior to the study abroad trip to Costa Rica during Spring Break. This year 17 students took the course with travel from March 13-22, 2013. This study abroad exchange has been an on-going program with the University of Costa Rica (UCR) for 10 years. Iowa State will host the University of Costa Rica students during the month of July in 2014.

**March 14, 2013** – Alvaro Castro, organic fruit and vegetable producer in Cartago, was the first stop. Alvaro grows amazing fruits and vegetables, and his wife and family prepared a meal for all of our students from their produce (left). Dr. Felipe Arauz, agronomy professor at UCR, gave an informative overview of Costa Rican Agriculture.



**March 15, 2013** – While visiting the coffee plantation, our group ran into the Agronomy Costa Rica Study Abroad group with Dr. Lee Burras and Dr. Randy Killorn.

The students also toured a vermiculture farm. Also growing there was aralia for cut foliage production.

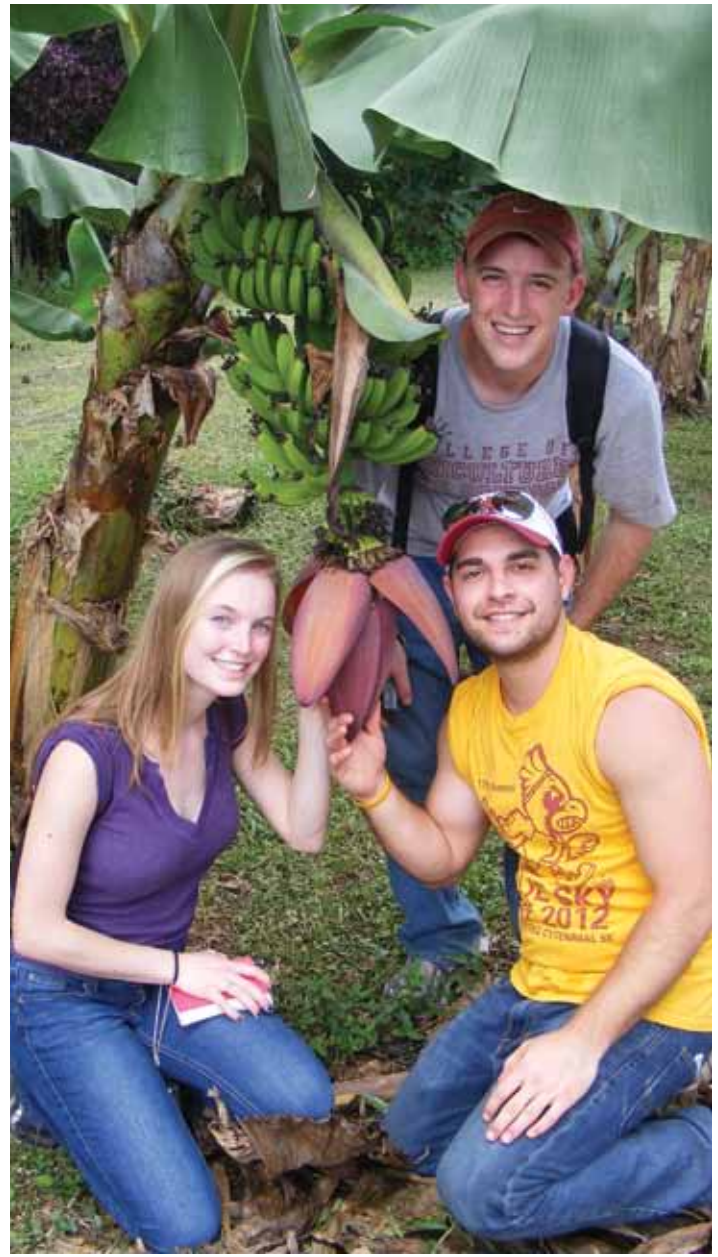
**March 16, 2013** – The morning started with a beautiful breakfast at the home of a UCR student, Dennis Matamoros. Then it was off to the papaya farm.

**March 17, 2013** – Students and faculty enjoyed Don Juan Educativa. The staff took the group on an educational tour of the fruits, vegetables, and livestock of the country. We stayed in their beautiful facility and ate like kings and queens. The students had an enjoyable afternoon swimming in the Pacific Ocean.

The ocean was a favorite of all the attendees.







**March 18, 2013** – The first stop of the day was at Exporpack, a melon farm and processing plant. A fascinating trip to the mango plantation followed.

**March 19, 2013** – A walk through, Caminata Braulio Carrillo, a cloud forest was a peaceful start to the day. A Holler Monkey, showed his face during our walk. From there the group went to Corbana, a banana research and germplasm facility. We toured the plantation and then

went to the processing plant. To end the day, we had a walk in a pineapple field.

**March 20, 2013** – The group was introduced to Rafi, who called himself the “crazy agronomist.” We walked through the tropical forest looking at natural plants that can be used for various purposes. Everyone was able to relax in the afternoon at Cahuita, a beach in the Caribbean.

**March 21, 2013** – A tour of Catie, a research and commercial area for coffee, sugar cane, ornamental plants, and livestock, was very informational. The last stop of the day was a Leatherleaf Fern farm and production facility.

**March 22, 2013** – Our time in Costa Rica had to come to an end. The University of Costa Rica professors and students made our trip a most enjoyable one.



# VEISHEA 2013

**Kellie Walters,  
Horticulture Club President**



The horticulture club had a very successful VEISHEA. The plant sale was held in our beautiful greenhouses. Customers were able to enjoy browsing plants in a nice controlled environment. Club members grew many exciting cultivars of annuals and perennials for our sale. This year, Swifts Greenhouses donated all of the perennial plugs and Ball Seed donated most of the seed used to grow the annuals. We also added vegetables and herbs to the plant palate this year and it was a huge success!

We also hosted activities in our beautiful atrium. An experiment was set up to show children how a seed germinates and the parts of a plant. Everyone was encouraged to take some seeds and start their own plant to learn how plants grow. Face painting was also a hit. Many children and people of all ages stopped by to have a member paint on their face.

The VEISHEA parade was a fun event for everyone. The horticulture club teamed up with the landscape club and the turf club to bring all of the clubs in the horticulture department together. We had a great time collaborating to bring everyone's area of interest into a float. A week or so before the parade members went to Barb's house to work on the float. We had fun grilling, playing with Barb's animals, and of course actually building the float. Members accompanied the float, handed out candy, and promoted the horticulture club's plant sale.

Over all, VEISHEA was an amazing success. Club members, as well as everyone attending, had a great time purchasing plants, getting their face painted, learning about how plants grow, and watching the parade.

## ISU LANDSCAPE CLUB

By Andrew Foy

Although still relatively small in numbers, the ISU Landscape Club has been able to accomplish a lot over the past year and has made considerable strides in giving its members valuable, out-of-the-classroom opportunities to get involved with hands-on projects, network with industry professionals, and participate in extracurricular trips and competitions.

Between last spring and this fall, Landscape Club has been involved with a couple of different projects. These projects have ranged from completing a fall cleanup at a private residence to designing and installing foundation plantings for a couple's home in Slater, Iowa, to working for our largest and most consistent client throughout the year – Biocentury Research Farm (BCRF) in Boone, Iowa. The BCRF is an Iowa State-affiliated, alternative fuels research



Kady Harris works on spreading mulch.



Beds by front entrance after maintenance.



Michael Mladenoff and Nathan Robinson staking a newly planted maple tree.

facility, and as the sole landscaping provider for the facility's main office grounds, Landscape Club has completed mostly maintenance work – pruning, mulching, weeding, etc. – but also some plant installation projects for the farm.

In addition to spring and fall projects, the Landscape Club has also tried to implement a new “Speaker Series” into our bi-weekly meetings. Essentially, we invite

professionals in the landscaping industry to come in and share their experiences and advice with the club. Thus far in the speaker series, Shari Dalziel – recruiter for the Chicago-based landscaping company, James Martin Associates, Inc. – and Dan Van Weelden – senior landscape designer at Country Landscapes in Ames – have both been able to come in and speak to the club. Our experience with the speakers thus far has been very positive and proven to be a great way to enhance our members’ knowledge of, and networking connections in, the landscaping industry.



Brock Hunt concentrating hard on finishing the hardscape installation event at the PLANET competition.

The Landscape Club was also able to get involved with the annual Student Career Days competition organized by PLANET (Professional Landcare Network). Last March, eleven members of the Landscape Club journeyed down to Auburn University in Alabama and participated in the 37th annual PLANET competition, which featured over 65 schools and 75 prominent landscaping businesses from around the country. The trip entailed many hours of planning, studying, and preparing for events; however, it was a great experience for everyone involved. Highlights from the competitive events included senior Jason Mangrich, who placed 2nd out of 81 participants in the “Construction Cost Estimating” event, senior Will Ries, who placed 16th out of 84 participants in “Maintenance Cost Estimating” event, and senior Kady Harris, who placed 17th out of 36 students in the “Interior Landscape Design” event. Overall, the Iowa State team placed 36th out of 63 schools and competed well for our small size relative to the massive, fifty-plus member teams brought by some schools. Motivated and excited for the upcoming spring’s PLANET competition, Landscape Club has already begun planning for the 38th annual Student Career Days hosted by Colorado State University in Fort Collins.





George Toma and Kevin Hansen out on the center of the field.

# Super Bowl 47

## KEVIN HANSEN, SUMMER INTERN 2013

At the beginning of this year I was fortunate enough to win an internship contest sponsored by the Toro Company, which put me on the sidelines at the Super Bowl. It has always been a dream of mine to attend a Super Bowl, but the thought of working and watching from the sidelines was something I thought would never happen. Every year Toro puts out an application for one student across the country to work alongside the Super Bowl crew. This was an amazing opportunity for me and when I heard that I had won I really couldn't believe it. Working on the biggest stage in football and getting to meet George Toma was an opportunity of a life time.

Leading up to this, I have interned at many different places, so I could set myself up for opportunities like this and future job prospects. I owe a lot of this success to the people that I have worked with and taught me the tricks of the trade. Some of my internships have included: Iowa Cubs minor league baseball and outsourcing, Coralville Parks and Rec, Jack Trice stadium, and Green Bay Packers. All of these places have given me the tools to land an opportunity like the Super Bowl. I would really encourage other college students to get out and do as many different internships as they can. I know for me, it has allowed me to go places and do things that I thought I would never do, such as working on Lambeau's sacred field; being part of

the crew that helped to win field of the year at Jack Trice Stadium; or helping I-Cubs outsourcing construct fields for High Schools around the state. All of these experiences have helped me to lead up to my Super Bowl experience

This year the Super Bowl 47 was held in New Orleans, Louisiana. I worked alongside 21 other turfgrass managers around the country. Some of these sports turf managers were there a month in advance to start getting ready for the game. I was sent down for the week leading up to the game and got to help prepare the field and practice field for the game. I know you might be saying "don't the Saints have an artificial field"? The answer is yes they do and the amount of prep it took for even an artificial field was a new concept for me. It was interesting to see what all went into a field like this because I have always been around natural



One of the bristle brush drags we used on the field.



grass fields. It was a change of pace for me and a valuable learning experience. In our industry, artificial fields are all around us and we need to know how to manage these as well. There was a lot of dragging of the field to get it just right for the players and the cameras. The Saints field had a really shiny look to it on television so we did everything we could to reduce that glare. One of my favorite days was when we painted all of the logos. It took around 15 hours to go over all of the logos again. The precision and attention to detail was on a level that I had never seen before and I learned so many new techniques for logo painting. We also spent a lot of time at the two practice facilities for the teams. One was at Tulane University, where we actually put a football field in the outfield of their baseball field. The other was at the Saints practice facility. As a crew, we spent a lot of time making sure these places were at their highest level for the teams.

Not only did I learn a lot of new skills I could bring home, I met and networked with some great people in my industry. This crew had people from all over the world. There were managers from the NFL, MLB, and collegiate sports arenas. We even had two people from Japan, who were very good at what they do. I was honored to get to work with George Toma. For those who don't know that name, George Toma, he is known as the godfather of the turf industry. He has worked at every Super Bowl and has made a huge impact in the turfgrass industry and the establishment of the STMA (Sports Turf Managers



Grounds crew after the Super Bowl.

Association). I have learned over the years that it really is all about who you know and the network you develop as you work at different places! This crew was a very fun and energetic group to work with. There were all different personalities and working styles, coming from all aspects of the sports turf industry.

On the last day of my internship, it was finally game day. One of the biggest perks of being field caretakers is that we were given sideline passes. Experiencing the players and reporters up close was an awesome experience. When all of our hard work culminates and the players run out on the field with the music blasting, this is when all the work pays off. I have a great amount of pride when the adrenalin is flowing and thousands of people are enjoying the field we all worked so hard on. That feeling is priceless and why I love my job and the sports turf industry. I am thankful to Toro for making this "once in a lifetime experience" happen. Not only for me, but for all the other interns that have had this opportunity over the years and those to come in the future. I hope that I can someday be on the Super Bowl crew as a sports turf manager.

I am currently pursuing my Masters of Agriculture Degree after completing my Bachelor of Science Degree in Horticulture spring, 2013. I received an assistantship through athletics to work at Jack Trice Stadium, conduct research, and help manage all of Iowa State University's sports fields. I decided to continue my education so I can be a leader in the industry and put myself in the best position in my professional life. The Department of Horticulture at Iowa State University has given me more opportunities than I could have asked for. I wish it wouldn't have gone so fast, but I plan to finish strong and can't wait to start my own path in the sports turf industry that I truly love and have a passion for.



Holding a flexible board up to paint a crisp edge for one of the Baltimore Ravens logos.





## Milwaukee Brewers

### **MICHAEL MLADENOFF, GROUNDS CREW INTERN**

This past summer, I had the great opportunity to work as an intern for the professional baseball club, Milwaukee Brewers, as part of their Landscape Grounds Crew Team. On a daily basis, the Grounds Crew maintains and establishes a 260-acre landscape that surrounds the stadium. Being a part of this team was an amazing experience, both working with the Grounds Crew team, as well as working for a professional organization.

This was my first experience working away from home during the summer months, as in the past I worked for a local landscape company throughout my college career. I wanted to get some experience elsewhere either by doing some design work for another company, or regular landscaping. I was lucky enough to receive a chance to interview for the Brewers and landed the job.

Throughout the summer, we maintained the landscape on a daily basis. This included mowing, mulching, pruning/replacing trees, installing new designs, cutting new bed edges, applying chemical sprays and fertilizer, as well as laying down new sod. Besides maintaining the landscape,

I was also able to help on the baseball field whenever they needed extra help when laying down new sod. The stadium has a little league field, Helfaer Field, as well, in front of the stadium, which has a professional atmosphere to it. We would also help lay new sod in the little league field throughout the summer.

This past summer, replacing trees was a big area of work. Most of the trees within the landscape have been in the ground since the stadium was built; however, a lot of them were originally planted too deep and were struggling from girdling roots and stress from the summer drought. We planted new trees of different species such as Oak, Hickory, Prunus, and Catalpa.

As part of the Grounds Crew team, we received the opportunity to travel to Wisconsin Rapids to be a part of the "Miller High Life Lawn-Makeover" giveaway. We stayed in Wisconsin Rapids for two days working on a family's yard. We redesigned two existing plant beds around the front and side of the house, transplanted and divided a few plants, repositioned rocks that acted as a border around the plant beds, and also painted the Brewers logo in the front yard. This was a fun and cool experience because the owners of the house lived on a cranberry farm that supplied produce for the company Ocean Spray.





I also had the opportunity to design three new landscape beds for the stadium over the summer. The main one I designed was the shuttle turnaround that is located in front of the stadium. The existing bed was a teardrop shaped raised bed that was filled with grass. We decided to make it a new planting because it was not efficient to mow it all the time. I designed a new plan using a large variety of plants that included Ninebark, Spirea, Little Bluestem, Dianthus, Coreopsis, Coneflower, Liatris, Switchgrass, Iris, Lady's Mantle, Sedum, Aster, and Penstemon.



Working for the Brewers was one of the best experiences I have ever had and one that I will never forget. It was an honor being able to work for them as part of the Grounds Crew team. This experience was very valuable for me as it was my first time living on my own in a new city and working within a large organization. My boss, Joe Gaudreau, who is the Landscape Manager, was great to work with and made the experience a lot of fun for me. He gave me a lot of opportunities to try new things and taught me a lot of new ideas and methods.



One of the three new landscape beds I designed for the stadium.



We received the opportunity to travel to Wisconsin Rapids to be a part of the "Miller High Life Lawn-Makeover" giveaway.

# INTERN





## Undergraduate Degrees

### FALL 2012

#### Global Resource Systems

Briana Faye McNeal  
Austin, Texas

KaitlinJo Robertson  
Glenwood, Iowa

Allison Marie Riley\*  
Des Moines, Iowa

#### Horticulture

Winston Thomas Beck  
Omaha, Nebraska

Peter Brooks Carr  
Rochester, Minnesota

Taylor Robert Crampton  
Denison, Iowa

Tabitha Rae Fontinel  
Marengo, Iowa

Alexandria Rose Franzen  
Lawler, Iowa

Isaac Thomas Mertz  
Panora, Iowa

Alex Joseph Perrizo  
Odebolt, Iowa

Zachary F. Sargent\*\*\*  
Wauconda, Illinois

Joshua Robert Tatman  
Arnolds Park, Iowa

Tyler Cole Tunning  
Cumming, Iowa

Derek James White Heckman  
McClave, Colorado

\* Cum Laude

\*\* Magna Cum Laude

\*\*\* Summa Cum Laude

† Honors Program

### SPRING 2013

#### Global Resource Systems

Moriah Bilenky  
Elkins Park, Pennsylvania

Carl David Cotter  
Columbus, Wisconsin

Gretchen Ruth Hanson  
Monona, Iowa

Ian Herrman\*  
Ames, Iowa

Rachel Kazmiera Owen\*†  
Polk City, Iowa

Angela Danielle Upah  
Garwin, Iowa

Hannah Angenette Wallace  
Chico, California

Laura Kaelia Weieneth\*\*\*†  
Cedar Rapids, Iowa

#### Horticulture

Moriah Bilenky  
Elkins Park, Pennsylvania

Bruce Joseph Black  
Cedar Rapids, Iowa

Amanda L. Dorff\*

Caleb Joseph Dvorak\*  
Clutier, Iowa

Ethan John Dykstra  
Emmetsburg, Iowa

Matthew Wayne Eischen  
Eldora, Iowa

Carrington Rose Flatness  
Mazon, Illinois

Bryan Ernest Golay  
Coon Rapids, Iowa

Kevin N. Hansen  
Ames, Iowa

Cailey A. Hinz  
Glenview, Illinois

Amy Patricia Horras  
Ollie, Iowa

Kirk Jeffrey Hudson  
Pleasant Hill, Iowa

Melissa D. Irizarry  
Spirit Lake, Iowa

Paul William Karus  
Brookfield, Wisconsin

Kurt Wesley Koeppen  
Cedar Rapids, Iowa

Kathleen Anne McCann  
Marshalltown, Iowa

Joshua Daniel Meyn  
Ames, Iowa

Kathleen Michelle Miller  
Manilla, Iowa

Vincent Thomas Newville  
Saint Joseph, Missouri

Joseph Michael Parker  
Indianola, Iowa

Erica F. Polson\*\*  
New Prague, Minnesota

Casey Patrick Sheehy  
Perry, Iowa

Lindsey Kaye Smith  
Ankeny, Iowa

Scott Richard Solar\*  
Marion, Iowa

Miles Andrew Thompson  
Hiawatha, Iowa

Ronald E. Tigner  
Lehigh, Iowa

Laura Kaelia Weieneth\*\*\*†  
Cedar Rapids, Iowa

Congratulations!

*The key  
to success  
and  
opportunities  
starts  
with you.*

# Scholarships

**Sterling Ainsworth  
Mary E. Amos  
Bauske Scholarship  
Jerry Benning  
Mildred D. Bradbury  
Nick and Marla Christians  
Bob Clark Memorial  
Derek Harmon Memorial  
Robert M. Clark Memorial  
Erwin Memorial  
Federated Garden Club  
Charles Hall  
Hort Club  
Department of Horticulture  
Isabelle M. Isley  
Kemper A. Kirkpatrick  
Elmer Ludberg  
Nau Memorial  
Pickett-Volz-Nichls  
Edward R. Robinson  
Arvil and Elva Stark  
Hattie Meyer Traviss  
Ralph Williams  
Zimmerman Memorial  
West Pottawattamie  
William Hughes**

**Awards were given to 50 students.**



*Thank you to everyone that has helped the Horticulture Club. It has been a great year to learn and experience horticulture.*



Members enjoyed a day at Lauritzen Gardens on their Labor Day trip to Omaha.

## Hort Club

We joke that everyone in horticulture loves food. I think it is true though. It is right up there with our love of plants. This is one of the reasons the Horticulture Club started off the year with the annual back to school barbeque attracting many new members from a variety of majors.

Our first major activity was a trip to Omaha Labor Day weekend. Members were able to experience the Henry Doorly Zoo, Lauritzen Gardens, downtown Omaha, and Mulhalls. They say you can judge horticulturists by their plants, and let's just say we left Ames with extra room in the van, but returned with the van packed with plants!



These two men represented the Horticulture Club in the Mr. CALS competition.

This year was the first year of the Mr. CALS competition. We had two lovely men, Cory Rigler and Jacob Thomas, representing the club. Though they did not win, it was a very entertaining event! We also started taking care of a succulent collection in Hoover. We are planning to have a propagation workshop at our next meeting so our members can expand their own succulent collections.

Giving back to the community is an important part of the Horticulture Club. We are currently offering yard cleanup services to the United Way silent auction. Some of our members will promote horticulture at Bacon Fest as well as a STEM festival for students in Waterloo and Sawyer Elementary School's science night.

After a year off due to a lack of apples, Horticulture Club hosted a Fall Festival at the Horticulture Research Station on Saturday, September 28. Prior to the event, members experienced apple sorting so that we had apples bagged and ready to go on sale for Fall Fest. We also sold local apple cider and pumpkins this year. Other activities at the farm included tours of the research station, kids' activities (face painting, pumpkin toss, pumpkin painting), and food fresh from the grill. Unfortunately the weather was not in our favor and it turned out to be a rainy, windy day, which deterred some potential customers. However, we are happy to have had people come out and are excited to continue hosting fall festivals in the future!



The fall festival was a fun event for all!

Our poinsettia crop is currently growing in the greenhouse. We are excited to say that we have a few new cultivars, and they all look great. We are looking forward to having a great sale this year! Rose sale 2013 was a huge success! This year we decided to order four different colors of roses as well as carnations. We sold dozens, half-dozens, and singles of a variety of combinations, including the red and yellow carnation combo we deemed the "Cyclone bouquet." A pleasant surprise for the day was that, although we were scheduled to sell from 9 a.m. to 4 p.m., we actually were sold out by 11:30 a.m.!



We are looking forward to the poinsettia sale this year!

# PLANET

## Student Career Days

**MARCH 7-9, 2013**

This year ten students from the Iowa State University Department of Horticulture competed at the national Professional Landcare (PLANET) Student Career Days at Auburn University. Students were accompanied by ISU horticulture faculty, and PLANET Student Chapter advisor, Ann Marie VanDerZanden.

National and regional landscape industry companies sponsor this annual event, and this year it brought together nearly 800 students from 71 colleges and universities. The event provides students the opportunity to test their horticulture and landscape skills against their peers and to network with industry leaders through the large career fair and numerous workshop sessions. Industry representatives attend this event in an effort to recruit some of the best horticulture students in the nation.

Of the 28 different competitions, Iowa State students participated in 18 events including:

EVENT	PARTICIPANTS
Annual and perennial plant identification	Andrew Foy
Business management	Cailey Hinz
Compact excavator operation	Miles Thompson
Construction cost estimating	Jason Mangrich
Exterior landscape design	Cailey Hinz
Interior landscape design	Kady Harris
Interior plant ID	Amanda Groleau and Cailey Hinz
Irrigation assembly	Jason Mangrich and Miles Thompson
Landscape plant installation	Kellie Walters, Will Ries, and Vince Newville
Leadership skills	Andrew Foy
Maintenance cost estimating	Will Ries and Brock Hunt
Paver installation	Brock Hunt and Vince Newville
Personnel management	Amanda Groleau and Andrew Foy
Skid steer operation	Jason Mangrich
Truck and trailer operation	Brock Hunt and Jason Mangrich
Turf and weed identification	Kady Harris
Wood construction	Vince Newville and Brock Hunt
Woody plant identification	Kellie Walters



Of the nine students, several students took home individual awards and the team placed second!

## 41st MACHS

Hort Club members attended the Mid-America Collegiate Horticultural Society annual conference and competition, hosted this year by University of Wisconsin-River Falls. The Horticulture Club sent nine students to represent Iowa State this year. The member's diligent studying was rewarded with an overall place of second. We also brought home several individual awards: Jacob Thomas received first in general knowledge and second in herbaceous identification, Kady Harris placed third in woody identification, and Christina Riessen placed first in herbaceous identification and third for overall individual score. After completing the general knowledge exam, herbaceous identification, woody identification, and judging for the competition, attendees enjoyed tours of Bailey's Nurseries, Gerten's Garden Center and Nursery, St Croux Valley Tree LLC tree farm, A Future Farm aquaponics, The Orchard, and Wouterina de Raad's Garden. We also had a bit of fun on Friday night going ice-skating at UWRF's ice arena. MACHS ended with a keynote presentation by Mike Yanny of JN Plant Selections, LLC, the business meeting, and the awards ceremony. Next year we will be travelling to North Dakota State University, and in 2015 we will be seeing everyone at Iowa State University!





Iowa State University PLANET Student Team after the final event.



Jason and Miles competing in irrigation assembly.



Brock and Vince after their Hardscape Installation event.



The team watching Brock and Vince in the wood construction event.

Most events had 60 to 80 competitors. Iowa State's top finishers included:

- Jason Mangrich, 2nd in Construction Cost Estimating
- Will Ries, 16th and Brock Hunt 32nd in Maintenance Cost Estimating
- Andrew Foy, 23rd in Leadership Skills
- Kady Harris, 29th in Turf and Weed Identification

Our participation in Student Career Days was made possible by the generous support of our 2013 sponsors:

- David J. Frank Landscape Contracting, Inc.
- Hunter Industries
- ISU College of Agriculture and Life Sciences
- ISU Student Travel Fund
- James Martin Associates, Inc.
- Roof Top Sedums
- Vermeer Charitable Foundation



Will, Kellie and Vince (l to r) competing in the landscape installation event.

This was Iowa State's seventh year to compete in the event. We are looking forward to next year's event, which will be hosted by Colorado State University.

# Turf Club

Year in and year out the ISU Turf Club has had an excellent reputation both locally and nationally, 2013 has been no different. Members participated in fundraising efforts, national conferences, competitions, and held some of the best internships the country has to offer. Meetings continue to be held every other week with a great variety of internship reports, guest speakers, and educational outings. The Club continues to be a symbol of pride for students, faculty, and alumni.



2013 STMA Student Challenge Competitors.

## STMA- Sports Turf Managers Association

The year gets started rapidly with the STMA conference and Student Challenge taking place in January. This year fourteen members of the Turf Club traveled to Daytona Beach, Florida to participate in the conference and Student Challenge. While we continue to place well at this competition, victory eludes us still. However, this serves as great motivation for the students competing this year as they renovate the study materials before the next conference in San Antonio, Texas.

## GCSAA- Golf Course Superintendents Association of America

The success of the ISU Turf Club at the annual GCSAA Turf Bowl student competition has garnered twelve championships in fourteen years. The Turf Bowl is a four-hour written test covering everything from turfgrass identification to business management. Seventy teams from across the U.S. and Canada come to compete with the goal of beating Iowa State; this year they succeeded. Taking home fifth place honors is still a fantastic accomplishment and something we should all be proud of but



2013 GCSAA Turf Bowl fifth place team

given our history this was a bittersweet placing. Fueled by a “loss,” we have decided that we must adapt if we are to remain on top. Study sessions have commenced much sooner than normal and students are more motivated than ever to put ISU back on top of the podium at the 2014 conference in Orlando, Florida.

## Order of the Knoll

The Order of the Knoll is Iowa State’s most prestigious donor recognition society. Members believe in creating opportunities to transform lives at Iowa State; their gifts are essential to the future of the university.



Reception at the Order of the Knoll.

It was a tremendous honor then that the ISU Turf Club was chosen to represent the entire College of Agriculture and Life Sciences at the first ever Order of the Knoll reception that took place at Hilton Coliseum. Five members of the Club talked with donors about internships, STMA, GCSAA, and the many innovations that are happening in the industry and at Iowa State. Being one of eight groups invited to participate in the reception was fantastic for the club and a great opportunity for members to meet some extremely influential people.

## Internships

One of the most integral pieces of education in our profession has always been a great internship. This year members of the Turf Club were spread across the country from New York to California learning from the best turfgrass managers in the industry. Our members worked PGA



# Shade Tree Short Course

**2013**

The 57th annual Iowa State University Shade Tree Short Course and Iowa Nursery & Landscape Association Conference and Trade Show was held February 26-28, 2013 at the Scheman Building at Iowa State University. Donald Lewis, Iowa State University, welcomed the attendees. Guy Sternberg filled in for featured speaker, Kim Coder (University of Georgia) who was grounded in Atlanta due to WEATHER-related travel difficulties. Talk about a climate of extremes! Mark Gleason, Donald Lewis, and Jeff Iles, ISU's "veteran" trio of plant health care impresarios ended the conference discussing "The Great Landscape Plant Challenge – Part III."



Interns learn from the best in the turfgrass industry.

Tour events, maintained some of the top athletic fields in the country, and kept the country's lawns looking great through yet another drought stricken year. A very special thank you is in order for those individuals who take our students under their wings and share their knowledge, skills, and tricks of the trade.

## **Fundraising**

The Turf Club continues to maintain the turf areas at Reiman Gardens. This is a great opportunity for our members to learn some basic maintenance practices with regards to fertilization and pesticide application. Last year the club renovated a large area around the pond, and it came in very well requiring no follow up seeding. This fundraising opportunity makes traveling to STMA and GCSAA conferences possible.

The Turf Club is looking forward to another fantastic year of education and success. Without the great members and alumni of the club we would not be who we are or as successful as we have been.

Thank you for your continued support.

Spencer Nelson, President



# Graduate Student Focus



## Isaac Mertz

**Advisor:** Dr. Nick Christians, Dr. Shuizhang Fei

**Degree Seeking:** Masters of Science

**Major:** Horticulture

**Current Research:** Currently I am evaluating several important turfgrass species for their ability to produce biological nitrification inhibition (BNI) compounds through their roots. These exudates produced through the roots have the potential to greatly suppress the number of ammonium-oxidizing bacteria, nitrification, and nitrous oxide emissions. The immediate goals of this research are to be able to recommend turfgrass species and cultivars that will have an impact on improving nitrogen use efficiency as well as improving overall water quality. The long-term goal for this project is to determine the genetic basis for BNI activity and to develop germplasm that possess strong BNI activity through conventional breeding or molecular techniques.

**Hometown:** Perry, Iowa

**Hobbies:** In my free time I enjoy golfing, fishing, listening to music, making friends, and spending time with my family.

**Career Goals:** After my studies I plan on pursuing a career in the research and development part of the turfgrass industry.



## Dylan Rolfes

**Advisor:** Gail Nonnecke

**Degree Seeking:** Masters of Science

**Major:** Horticulture

**Current Research:** My research involves canopy management strategies for northern-hardy wine grape cultivars. The project is a portion of the USDA Northern Grapes Project. Recent advances in grape breeding have led to the introduction of cold-hardy grape cultivars, which are able to survive through our cold winters. However, due to breeding requirements, these grapes produce wine with a “herbaceous” or “earthy” flavor. The thesis behind my work is that canopy management can be used to increase light penetration onto the grapes, and thereby increase metabolism within the grapes and improve their wine quality indices.

**Hometown:** Granger, Iowa

**Hobbies:** Cooking with my fiancé Lauren, camping, mushroom hunting, listening to music, and running.

**Career Goals:** Research and/or extension work in fruit and vegetable production followed by an early “retirement” to open a fruit and vegetable farm and bakery with Lauren.



# Alumni Spotlight

## Dianna Liu

Ph.D. Horticulture (1993)

Research Scientist in the Department of Agriculture, Fisheries and Forestry of Queensland State Government in Australia

Upon finishing her BS degree in Taiwan, Dianna Liu came to the United States to pursue her graduate degrees. She received her Masters Degree in Food Science in 1988 at Iowa State University (ISU). Her Master of Science thesis research was on chemical, physical, and sensory evaluations of the effects of sodium addition to green beans. That was a collaborative project between the Departments of Horticulture and Food Science and Human Nutrition and funded by Del Monte company. She spent one year working on a nutrition project in the Department of Home Economics Education before entering a Ph.D. program in the Horticulture Department working with Dr. Nick Christians on a corn gluten meal project. Her dissertation research involved isolation and identification of the natu-

rally occurring compounds with herbicidal activity in corn gluten meal. She developed bioassays, and isolated and identified five bioactive peptides during her program of study and received her Ph.D. degree in 1993 with a major in Horticulture and a minor in Biochemistry.

As a postdoctoral researcher at ISU, she continued the identification of active compounds from corn gluten meal, and also conducted field trials at the Horticulture Research Farm for the development of marketable products. She also passed her research results through publications and presentations at professional meetings. Service-related activities were also an important part of her professional experiences at ISU including serving as a project advisor on the Honors Project of the Agriculture College (name at the time), and as an interpreter for a Delegation of Chinese Agriculture and Fruit Tree Scientists from Beijing.

During October 1996, she had to leave ISU for Australia to attend to family needs. Shortly after she arrived in Brisbane, she joined a biological control research team at The University of Queensland (UQ). As a Research Officer, she coordinated a biopesticides project for an Integrated Pest Management program, and managed the Artificial Diet and HPLC/GC Laboratories in the Department of Entomology. Subsequently, she was the recipient of UQ Postdoctoral Research Fellowship for two years and conducted a genetic diversity study of neem tree using RAPD molecular markers. With her neem research project, she collaboratively worked with plant breeders, molecular biologists, entomologists, and field botanists. She also undertook another project and developed four keys to the species of turfgrasses, turfweeds, vegetables, and medicinal plants using interactive software developed at UQ. In May of 1999, she went to China as one of four delegates on a Biopesticide Mission that was part of an Australia-China Agricultural Cooperation Agreement.

In January 2000, she accepted an offer from the University of Illinois at Urbana-Champaign (UIUC) and worked with a team composed of entomologists, weed scientists, and plant biochemists on a USDA funded project. They studied glucosinolate and cropping system impacts on weed and insect populations in crucifers. She was responsible to manage resources, train and supervise technicians, and coordinate the collaborators from multi-disciplines and inter-research groups.



At the completion of the spring season study at UIUC, she joined the team of Vegetable and Fruit Improvement Center (VFIC) at Texas A&M in August 2000. As an Associate Research Scientist, she worked collaboratively with plant breeders, plant pathologists, chemists, physiologists, and molecular biologists on the project of "Food for Health" funded by USDA. Being responsible for the analysis of phytochemicals to develop more nutritious and health-beneficial crops, she designed and implemented research experiments. She also initiated several projects to develop postharvest methods for retaining nutrition values and improving the shelf life of different crops. Besides assisting the Director of VFIC, Dr. Leonard Pike, with supervising and training of graduate students in their research programs, she participated in the VFIC Kids Program by teaching young visitors the basic sciences in the laboratory.

When her mother became disabled and terminally ill in 2002, she decided to move to Australia to be a full-time caregiver. After her mother passed away, she re-entered the scientific research workforce. Dianna has been employed as a Research Scientist in the Department of Agriculture, Fisheries and Forestry of Queensland State Government in Australia since 2009. Her current responsibilities include developing and coordinating domestic and international collaborative research projects on value adding horticultural crops. She also participates in various funded projects making contributions by preparing proposals, literature reviews, progress reports, presentation, and posters.

Her professional research has been centered on the maximal use of natural resources for sustainable agriculture and food supply chains, discovery of naturally occurring bioactive compounds, and production of high quality, healthy and safe value-added horticultural crops for consumers. Other than her professional qualifications and experience, she has performed translation and interpretation from/to English, Mandarin, and Taiwanese throughout her professional career. In September 2013, Dianna chose to spend her vacation time in Iowa to revisit friends in Ames. She was amazed to see the changes and improvement in the Horticulture Department as well as on campus since she departed in 1996. She truly enjoyed her 2-week stay in Ames.



Namasagali Primary School, located along the Nile River, has ~ 300 acres of land available for school garden projects.

## Service Learning, School Garden, and School Nutrition Programs, Kamuli District Uganda

by **SHARON TUSIIME, DOROTHY MASINDE, and GAIL NONNECKE**

### INTRODUCTION

In 2006, ISU started a service learning and school gardening program in Kamuli District, Uganda. This program was implemented under the partnership of Iowa State University's (ISU) College of Agriculture and Life Sciences, Makerere University (MAK), and a non-governmental organization, Volunteer Efforts for Development Concerns (VEDCO). The goal of the program is to help improve the pupils' agricultural knowledge and attitudes towards agriculture. The school garden provides produce from the garden to supplement the school feeding program and ensures that children have access to planting materials to take home. The program exposes students from ISU and MAK to real-world issues like food security, soil fertility, access to water, health and sanitation practices, and also to learn about another culture in the developing world.

In 2013, the program had 45 participants including 29 undergraduates (17 MAK students and 12 ISU students), 4 ISU faculty, 1 MAK faculty, 3 ISU student leaders and 8 MAK assistants (MAK service learning students in former years). The bi-national teams, comprised of both MAK and ISU students, worked with 4 primary schools and 1 junior high and high school. The schools and their populations of pupils included: Namasagali (507 children), Nakanyonyi (670), Namasagali College Staff's Children's (680) and Naluwoli (823) primary schools and a junior high and high school – Namasagali College School (736). By adding a junior high and high school in 2013, these pupils can





Children's choir performing at Nakanyonyi Primary School.



Dean Wendy Wintersteen (center) visited the program in 2013 and is with Juliet, a Makerere University student (left) and Laura, a community nutritionist (right).

practice agricultural enterprises while being students, important lessons since many will remain in the community after graduation as farmers.

### TEACHING

ISU and MAK students continued to help teach subjects in two of the five schools. They assisted teachers in the classrooms and in the gardens, which also serve as an outdoor learning laboratory. Children learn agricultural-related theories in class before they apply them in the gardens. University students assisted in subjects that are part of the national curriculum and within integrated science, including agriculture, nutrition, health and sanitation. They also helped with mathematics classes. The topics taught in 5th grade included: growing vegetable seedlings, living farm fences, weed control, components of the environment, crop growing, and poultry keeping, and also the math subjects of integers, fractions, decimals. Sixth grade children were taught vegetable growing, raising tree seedlings, soil formation, resources in the environment, sanitation, communicable diseases, integers, measurements, buying and selling, and fractions. University students utilized various



Tree seedling nursery.



Disinfecting bath to sanitize shoes at poultry unit – demonstrated by Liz, a Makerere University student.

teaching techniques, including active learning strategies of solving problems and games.

### SCHOOL GARDENS

School gardens act as outdoor learning laboratories for the pupils, teachers, parents, and the entire community. In 2013, nursery beds of collards (greens), tomatoes, eggplants, and onions were established. Gardens of direct-



Children in the Kamuli District.

seeded carrots, grain amaranth, and maize were planted, and orange-fleshed sweet potatoes and bananas were transplanted by using cuttings and suckers, respectively. High-value crops of grain amaranth, tomatoes, eggplants and collards were sold to purchase ingredients for the school lunch and scholastic supplies. Care was taken to ensure that all recommended agricultural practices were demonstrated in the gardens and that the pupils learned these practices. Part of the produce from the garden was given to the children to take home and share with their families. In order to strengthen knowledge transfer of agricultural practices among the community, children also were given planting materials to take home and plant in their own gardens.

### **BI-NATIONAL TEAM PROJECTS**

Each bi-national team project is comprised of at least one MAK student and one ISU student. These projects included: agroforestry including fruit trees, living fences and fuel wood production; beekeeping; irrigation of the gardens; school feeding/nutrition; poultry; grain storage; and health and sanitation.

The agroforestry project team rebuilt a tree seedling nursery and constructed a walk-in shade house, constructed and replaced missing parts of living fences surrounding the gardens, established a fruit orchard and wood lot, and shared agroforestry skills and knowledge with the pupils.

The beekeeping project team constructed three additional traditional hives and a fence, established a new apiary at Namasagali College with an aim of creating agribusiness opportunities for Namasagali pupils. The project plans to sell the honey for profit as well as use it in the school lunches.

The overall goal of the irrigation project was to reduce time and labor required for students to water the school gardens and also promote year-round crop production.



Dividing bee colonies.

This year, the team constructed a cistern at Nakanyonyi Primary School to help with the run off and also engaged and educated community members about irrigation practices and cistern construction. The treadle pump continues to be useful for getting the water through hoses from the cistern to the gardens.

The nutrition/school feeding project aimed at increasing the number of pupils receiving a nutritional meal by providing one every school day. This was sustained with the help of the school gardens from which 90% of the school lunch's ingredients are obtained. Continuous record keeping was also introduced. Children at Nakanyonyi and Namasagali primary schools now are receiving a lunch comprised of a mixture of beans, white corn (maize), eggplants, collard greens, vegetable oil and iodized salt. Each child receives 250 gm of the meal, which is equivalent to 852 kcal, providing about 43% of energy needs for a 2000 kcal RDA. At Namasagali, the pupils eat the lunch every day of the week while at Nakanyonyi they have it twice a week. The goal is to offer the lunch 5 days a week to avoid the normal thin maize porridge of 250ml, equivalent of 50 kcal. An ISU student has initiated a "beads for beans" project to raise money so that the children at Nakanyonyi Primary School can have the improved lunch throughout the week. Nakanyonyi art and craft classes created paper beads, which are used in modest jewelry necklaces and bracelets and sold in the ISU community.

The poultry project contributes to the nutrition and school-feeding program by providing eggs for animal-source protein, once a week. This year, the project expanded its capacity by repairing a rundown classroom and preparing it for rearing birds for continuous egg production. To prevent disease contamination in the poultry house a permanent footbath was constructed to allow for disinfection prior to entering the poultry house. A broiler project was also initiated at the Namasagali College, with the students raising and selling two batches,





Building a cistern for run-off from the school's deep well.



Treadle pump used to remove water from cistern at a school's bore hole (deep well).

totaling 300 birds. A third batch is being reared for sale during the holiday season in December. These projects provided educational opportunities for children to learn improved poultry keeping techniques and business and record-keeping skills.

The main goal of the grain storage project this year was to find a sustainable method that can be used to store grain so as to eliminate losses to weevils and/or rodents. In 2013, two hermetic storage trials were set up. One used plastic containers and the other used metallic containers. The goal was to cut off the oxygen supply to the weevils, thereby killing the weevils and protecting the maize. Both containers proved to be effective, although the metal container required plastic liners and closures to make it airtight. A system of record keeping was introduced to keep track of grain contributed by parents and also usage in the lunch. The grain storage rooms were renovated, cleaned, and organized. In order to ensure sustainability of this project, the team worked with staff to develop techniques in proper storing, handling, and recording.

The health and sanitation team built sustainable “tip taps” using brick pillars instead of wooden stakes, which will not be destroyed by termites. The former design included smaller 3-5 liter containers that required more frequent refilling. The Ministry of Education was so impressed by the new stable design that can hold several 20 liter-containers and withstand termite damage, that the inspector suggested all schools should construct this type of hand-and-plate washing station. The tip taps will go a long way in maintaining the hygiene of the pupils at the school by encouraging hand washing. The team also constructed several rubbish pits, fixed drainage problems at the latrines, and taught pupils on proper latrine use and cleaning. New murals were painted on the schools' latrines, which show the children how to keep them clean. The team continued to train the pupils on how to make reusable cloth sanitary pads for young girls, including redesigning the pads by replacing the fastening hooks with Velcro to improve the comfort.

### **NUTRITION EDUCATION CENTER**

In 2011, a Nutrition Education Center was started in Naluwoli Parish, Kamuli District Uganda. This program was established by ISU participants in the service learning and school gardening program and is funded through “Establish and Grow,” a fund initiated and maintained through service learning projects completed at ISU. The main goal for the center is to provide nutrition education, especially proper child nutrition and health, to young mothers and children aged 0 to 5 years. Also, the center is able to rehabilitate malnourished children and help them recover completely. This year, two new satellite centers were opened making it a total of three centers. The ISU and MAK students were able to provide service at the center where they conducted trainings, how to monitor a child's growth, and home visits to promote use of hygiene and sanitation facilities. They also assisted the mothers to set up primary gardens and kitchen gardens where they can grow fruits and vegetables to promote consumption of important micronutrients, like vitamin A, which are limiting in their diets.

### **SACK GARDENS**



Sack gardens along a house's wall.



Brick tip tap.



Mothers at the Nutrition Education Center.

Sack gardens provide opportunities to children or farmers who have no access to land to cultivate vegetables. Used maize bags (100 kg) are the sacks which are used to grow vegetables and the sacks can be placed anywhere around the house, including places like along a wall, in a courtyard, or an open verandah area. A sack garden program aimed at enhancing vegetable production and consumption by Namasagali Primary School pupils was carried out by horticulture major, Trisha Nielsen, with 65 6th grade pupils. The overall objective was to evaluate if sack gardens grown by children attending a primary school with a school garden program benefit the pupil, especially those without access to land for their own personal gardens. In addition, horticultural practices of sack gardens that work well for the pupils and those practices that are challenges for the pupils were determined. Preliminary results showed that 88% of the students that participated in this study built their sack gardens. The remaining 12% who didn't build a sack garden, listed obstacles such as their very young siblings pulled out the plants, they dropped their plants on the way home, and they were ill on the day the sack garden plants were distributed.

### FIELD VISITS

Farm visits were first integrated into the service learning program in 2010. These are important because students were able to learn, first-hand from the farmers, how the indigenous methods have shaped and influenced the life and society of the farmers in Kamuli District, Uganda. The students are able to actually see and experience the typical life of an African farmer and these experiences transform their perspectives about development. In 2013, some of the farm families who students visited included Azuba, Mbira, Mpoya, Jaliat, and Ediisa. At the farms, ISU and MAK

students participated in activities such as soil pulverization; sowing, planting and weeding vegetables including tomatoes and onions; raising planting beds; castration, dehorning and spraying of livestock; and construction of sanitation facilities in their homes including dish racks. The visits and work were beneficial to both the farmers and the students because it provided them with unique knowledge as they were able to learn from each other and the students provided a service to the farmers.

### TEACHERS HOUSE

The lack of teachers' housing in primary schools is a barrier to sustainability of any garden projects that may exist in a particular school. Providing housing for teachers at a school attracts better-qualified and motivated teachers to work in such schools. Nakanyonyi Primary School requested assistance with construction of teacher housing each year since 2007, and in 2013, construction of a teachers' house was started. Service learning students were able to help with excavating and construction of the foundation. Construction work will continue for the next year, and hopefully the house will be ready for occupation by 2014-2015. Once completed, teachers residing in the house will provide security for established garden projects and poultry may be added to the projects, allowing children to learn poultry husbandry and have eggs in their school lunch.

The Uganda Service Learning, School Garden program provided learning opportunities for university students and assisted in improving food security of rural Uganda. We look forward to continued projects with the children of Kamuli District, who will be the future farmers of Uganda.





# Letters from Alumni

Thank you and the Department for continuing the Annual Newsletter and for the tremendous education you all provided me. I would not be where I am today without the Department and the wonderful faculty.

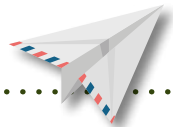
Respectfully,  
**Doug Struyk, JD, Class of 92**



2013 marks the tenth anniversary of our returning to live in Ames and fifty-one years since a delayed graduation in Horticulture. Much has changed in just the time since we moved back. New greenhouses, another new building to the east, hemming in Horticulture, where once the rose gardens were. All of the old Profs are long gone as are some streets. Now there are bicycles everywhere, progress has eaten up so much of the open space, which once surrounded central campus. If you haven't visited recently bring your walking shoes and enjoy a long walk around campus.

I returned to Kenosha, Wisconsin for my 60th High School reunion last month, there were only 13 graduates plus some spouses present and 4 who were unable to attend because of health related problems. I think the calendar is trying to tell us something.

**Jerry Peltier '62**



Upon graduation from ISU, I immediately began working for the University of the Virgin Islands in conjunction with Stuart Weiss of the Agronomy Program. The Agriculture Experiment Station (AES) is much like our own Horticultural Experiment Station. We have projects ranging from variety trials, to pesticide and herbicide performance, aquaponic production, and sustainable agriculture production. I am excited to be here, and have been for the last 9 months.

Our current research is very diverse, and we work with Low External Input (LEI) methods. Using cover crops as our foundation, we are looking at bio-fuel potentials, bee and sheep foraging potentials, and sustainable production of jalapenos. I am hoping to continue here for another year and eventually make my way back to ISU to pursue a masters in sustainable agriculture working with Dr. Nair, or potentially with Department of Entomology or Department of Natural Resources.

I dearly miss the top quality professors in our department, and know that I would not have a strong foundation of horticultural science without them. Beyond the knowledge of their expertise, I greatly miss the personal communication with them. Any professor that took the time to speak to me outside of class always gave much more insight into life's challenges, as well as how to handle situations in a professional, and realistic manner.

Dr. Iles,

It is a great to hear from you and I hope all is going well in the department. I still keep in touch with Dr. Christians and occasionally see some of my fellow horticulture graduates. I had the privilege of speaking at the Iowa Turfgrass Conference this winter and I was able to catch up with many friends in the industry.

My family business has another Iowa State Horticulture graduate working for us, Mike Miers, and I hope you hear from him this year. In addition, we have a graduate from Northwest Missouri State University and two graduates from the Iowa Western Community College's turfgrass program. Dad and I are convinced that the continued success of our company is the result of having college-trained individuals working closely with customers.

I thought it was time to send an update as I have had several changes in my life over the past three years. In the spring of 2010, I retired after serving eight years in the Iowa House of Representatives. As I had been working in the family lawn care business the entire time I was serving and I returned home to Struyk Turf. However, I also returned to practicing law hanging my shingle with a local attorney in Council Bluffs. In November 2010, my city Councilman Matt Schultz was elected Iowa Secretary of State. Two days after the election he contacted me and asked if I would like to come to Des Moines and serve as his chief legal counsel. After much discussion with the family, Jill, Liz, and I decided to move to Des Moines. After two legislative sessions in the Secretary of State's office, I was asked to serve as chief of staff to the Iowa speaker of the House and I accepted. I served in this position until June of this year when I joined a law firm in downtown Des Moines. I am now at Carney & Appleby, PLC., where I practice legislative, administrative, and corporate law. In addition to this, I continue to be actively engaged in the family lawn care business. Struyk, Ltd., has continued to prosper during the economic downturn and we look forward to another 43 years of success.

On October 28th Jill and I will celebrate our 18th wedding anniversary. Our only child Elizabeth celebrated her 15th birthday last August and is now driving back and forth to school on a school permit so keep your eyes open when you drive to Des Moines. My mother and father are both doing well and dad continues to work at the family business as hard as he ever has.

To Dr. Arora, Dr. Gladon, Dr. Haynes, Dr. Minner, Dr. Nair, Barb Osborn, Pete, all staff not mentioned, and even a couple of professors that are no longer with the Department of Horticulture, I cannot thank you enough for the personal guidance and wisdom you have imparted to me.

**Kenneth Paul Beamer**



Oregon nursery - June 2013

I graduated from Iowa State University with a BS in Horticulture in the spring of 1977. After an excellent experience at ISU, I earned a Master's Degree in Horticulture from the University of Illinois at Urbana-Champaign in the spring of 1980.

My first job out of graduate school was managing the Greenhouses for the Department of Plant Biology at the University of Illinois. I began working in an 1898-era Lord and Burnham greenhouse with a curved-glass conservatory. In 1989 we moved into a new, larger computer-controlled greenhouse. With the transition to the new facility, my job responsibilities were increased to include managing the combined greenhouses operations for the College of Liberal Arts and Sciences and the College of Agriculture. I managed greenhouse research and teaching activities, plant collections, and people. Among my favorite opportunities at the University of Illinois was teaching my extramural class, "Greenhouse and Indoor Gardening."

One of my professional accomplishments along the way was the founding, in 1985, of the Association of Education and Research Greenhouse Curators (AERGC). From its Midwestern roots, the AERGC has grown into a very active international resource. This organization supports the activities of greenhouse and plant growth facility managers, supervisors, and staff involved with the operation of college, university and other institutional facilities used to grow plant materials for research, class use, or plant collections. I served as the first Chairperson for the AERGC, and now serve as the Copy Editor for the AERGC Newsletter.

Although my time at the University of Illinois was very good for me, in July 2000, I moved to California to work in the greenhouse industry. I am currently employed by Delta T Solutions where we design and manufacture greenhouse heating, cooling, and irrigation systems for clients across North America. My main duties here involve programming, CAD and administrative work. I assist with sales and customer support.

My wife Laurel and I have a daughter, Leea, who is doing great in high school. We live in Temecula and enjoy the great weather and all the activities southern California has to offer.

**Jim Kramer, Class of 1977**

Hello!

Wow, so much has happened since I graduated in 2011! After graduation, I returned to my hometown in Cedarburg, WI and accepted a job with a local landscaping company called La Rosa Landscaping. I started as a technician on the landscape maintenance crew, and then became foreman of that crew my first summer. I absolutely love being outside maintaining customer's properties. This year, I accepted my second promotion to become the supervisor of the maintenance department. So far so good! In my "free time" I started my own landscape company doing everything from design, to installation, to maintenance. Basically I eat, sleep and breathe horticulture. I love it! This past summer I traveled to Mukono, Uganda, in Africa to do some mission work. I spent two weeks there helping the local people and touring their area. My favorite part was planting a forest of eucalyptus trees, which they will use for the oil. We also went on a 3-day safari and gorilla trek. Such an experience! This past December, I bought my first home. It has been a lot of fun having my own space and yard to play in! I look forward to returning to Iowa State to see everyone! Go Cyclones!

**Kara Simon**

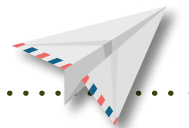


Dear Dr. Iles,

I graduated in 1954, but in the years following graduation I pursued more than one occupation, some by design and some by accident. At the time I graduated I went into the florist business (working for someone else). It didn't last long and then I became a university librarian. After that I went into school teaching. When I tired of that I returned to the Horticulture field by working until age 70, as a grounds Supt. on a wealthy man's estate. Because I worked until age 70 I wound up with a good S.S income. I'm now 82 and don't do much horticulturally but I do take an active interest with my houseplants. I was married in 1961 at age 30, have two wonderful children, and now grandchildren. It is a joy to watch them growing up.

Best Wishes!

**Donald (Don) R. Muller**



Hey there!

How have you been? I ran into Nick Howell the other day and was listening to him talk about all of the great things going on at the Hort. farm. Sounds like I need to check it out.

I am still here in Des Moines selling real estate for my Dad's company through Remax, but this year I completed the Ironman triathlon in Madison, WI. The Ironman is a 2.4 mile swim, 112 mile bike, and a 26.3 mile marathon run. It was an



unbelievable experience and I am incredibly proud to have set pout and accomplished this goal.

Hopefully I see you at one of the games this year and good luck with the newsletter!

**Tony Schubert**



I visited Iowa in July for the 175th anniversary of the Bonnifield log cabin in Fairfield. It was a special reunion (my mother was a Bonnifield) My three sons went and we had a wonderful time with relatives in Des Moines and Ottumwa. Iowa looks beautifully green and woodsy from the air. Best wishes to all.

**Virginia Hooper '49**



A letter to the editor!  
Lakeville, OH 44638

Informal as this may be, it may be a happy departure from the current news headlines and refresh the memory of at least a few who have passed through the doors of old Hort.

Early this month (October) I unexpectedly found myself in Des Moines with the opportunity for only a few hours on the Iowa State campus. Since Reiman Gardens has been a significant development since leaving (BS Hort. '60) that, of course, claimed my attention and central campus was neglected until another rare opportunity. The Gardens are certainly deserving of their reputation and I'll not add to that here. However...

The experience prompted memories of our major efforts to showcase Horticulture with more modest success in the late 50's. For one annual Horticulture Show, we envisioned a central cornucopia of produce and flowers as a focal point. Mckay Hall was our venue with its beautiful hardwood floors and paneling. But, in developing our theme, we discovered a vintage '30s wooden farm wagon, well-used and loaded with animal feed in one of the campus barns. It had always been sheltered and the original paint was intact. It was available for the effort to unload it and roll it to the hall.

Then, the problem of entry up the exterior stone steps and through two sets of doors without damage to the precious hardwood. We dismantled the wagon, carried the components (high wooden wheels, grain box, tongue, reach and undercarriage) and reassembled the wagon in position on protective carpeting. We filled it to overflow with bounty from the old Horticulture Farm. We were pleased with ourselves and with the results. I hope others were, too.

A fond recollection of ISU!  
**Philip (Phil) Balderston**

If I'm not too late with this, thanks for putting a better face on it and thank you for your continued efforts. I call this old typewriter, "P-Mail."



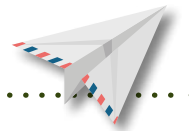
Dear Hort. Friends,

Janice and I turn 67 this fall, so we can begin to enjoy retirement, although managing our 100 acre bluegrass sod farm, our 50 tree orchard, our large vegetable garden, and planting hundreds of trees on our estate hardly seems like retirement some days!

I have two ISU Hort. related items to share this year: (1) I have produced my first walnuts on my Paul Domoto northern-hardy English walnut type introduction. (2) Using Brandon Carpenter's (Hort. '11?) idea from a previous alumni newsletter, I produced a few Connell Red apples with my grandchildren's initials on. Needless to say, they were pretty jazzed and hold their old grandpa in even higher regard.



A Good Hort. Year to You All!  
**Rob Meyer, Hort '68**



It's always a pleasure to get the mail and see the letter from Dr. Iles, and it always surprises me to find out it's been another year. And when I stop to think about it, I'm amazed at all that happens in one year's time.

This one has been a big one for the Dalen family. In May I graduated with my Masters of Divinity Degree from Luther Seminary in St Paul, MN. Needless to say, entering the ministry is about as far away from Horticulture Hall and Turf Grass Management as I could end up, but here I am. I was ordained and ELCA (Lutheran) pastor on Father's Day back in June and in early July, my family and I relocated from the Twin Cities to a small town in south west Iowa called Underwood, just a couple miles up 180 from Council Bluffs where I am now the solo pastor of a small Lutheran congregation. I don't do much mowing of the greens anymore, but I do manage to get out and play around here and there.

**Rev. Scott Dalen, Class of 2001**



I know live in a retirement home in Pomona, CA known as Mt. San Antonio Gardens, have a small but pleasant patio surrounded by plants.

My daughter, Cherie, and I enjoyed participating in the greenhouse naming ceremony earlier this year. Thanks for that opportunity. Also, for the privilege of meeting some of your staff.

### Darl Snyder



.....  
Hello!

We enjoyed Denmark for 17 days in June. We were in Copenhagen most of the time. My wife, Lis, is from Denmark. I got a Danish to go (its 61 years now). The first eight days of our vacation was with our son Hans and his family. Then Lis and I walked the streets, shopped, and visited friends one, a class mate of Lis' is Jewish and in October 1943 she escaped to Sweden along with some 6000 other Jews. This was the time Hitler had decided to take Danes of Jewish background and send them to concentration camps. The Copenhagen Botanical Garden was very good even though spring had been late this year.

Lis and I had a three day trip to Bornholm, a small Danish island in the Baltic – old world – a picture book place – a must see if you are in the area.

The “Newsletter” has great information about the Hort. Dept. Thanks.

### Iver Jorgenson '49



#### Experiences from Peace Corps Ecuador

##### *A brief introduction*

The Peace Corps is an agency of the federal government devoted to world peace and friendship. It was started by President John F. Kennedy in 1961. The Peace Corps' mission has three simple goals:

1. Helping the people of interested countries in meeting their need for trained men and women.
2. Helping promote a better understanding of Americans on the part of the peoples served.
3. Helping promote a better understanding of other peoples on the part of Americans.

##### *My experience*

I knew I wanted to be a Peace Corps volunteer since high school when I first found out about the Peace Corps. I have always had an interest in helping people and learning about

other cultures and ways of life. So naturally it appealed to me to join the Peace Corps.



I started the application process for Peace Corps during my junior year of college. It is a rigorous process of applications, interviews, and medical exams. After I was accepted they told me I would be a volunteer in the Sustainable Agriculture program in the field of applied agricultural sciences in Ecuador, South America. So on that blistering cold February morning of 2011 I said good-bye to my family and loved ones and traded in my comfortable Iowa life for the unknowns and adventures of tropical Ecuador.

Upon arrival you get your first sense of culture shock. The sights, sounds, smells, people and language are like nothing you have ever seen before. I was very quiet and just took it all in, trying to figure out what was going on and where I really was. When you first get to your host country you start off with Training. Training is a 3 month process where the new trainees get practice in the local language, medical information, safety and security classes, technical skills in your program, and get to know their fellow trainees and the Peace Corps staff. Once one has successfully completed training you officially become a Peace Corps Volunteer and get sent off to your site. It can be a daunting and scary process to leave the company of the other Americans and go off to a site where no one speaks English, and you barely speak Spanish, but I looked at it as an adventure and the reason why I came down here.

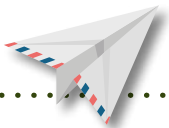
My site was a very small, rural site in the coastal region of the country. It was like nothing I had seen before. The houses are very modest, made mostly of wood or bamboo, with some made out of concrete. All with tin roofs and bars covering the open windows. There were none of the comforts of America, such as running water, constant electricity, restaurants, paved roads, stores, air-conditioning, or even another blonde person. But what there was, were friendly people excited to meet me and learn why I was there. My site wasn't such a rural area that they had never seen a white person before, but they had never really talked to one, let alone lived with one in their community. I lived with a host family for the first 8 months of my service. It was one of the most enjoyable experiences I have had in the Peace Corps. It is truly the best way to integrate into a community and learn about other people and their ways of live. My host family taught me the language, how to cook, wash my clothes on a rock, play soccer, meet other people in the village, and how to keep a clean house like a good Ecuadorian woman; in short they taught me everything I needed to know.

After I had lived in the community for a while and started making friends and gained trust with everyone through playing soccer and being invited to people's houses for coffee or



dinner I started my work as an agriculture volunteer. First I started off working in the local elementary school teaching gardening and English classes. Working with the children is one of the best ways to integrate into the community. They are so energetic and willing to work with you and try new things. From there I started working more with the farmers helping them to increase their cacao production by making organic fertilizers. We also worked together to make family gardens and I taught nutrition classes for reasons of Food Security. I lived in my community for 2 years as a volunteer and thought I would be teaching them so much and change their ways of life, but as it turned out they taught me so much more than I could have ever taught them, and changed my life. I am forever grateful to my people in the small coastal town of San Lorenzo, Los Rios and will always carry them in my heart.

**Morgan Wright**



Dear Co-Horts,

It can't be but it is 45 years since five youngsters sat in Dr. Denison's office for orientation as the freshman Horticulture majors of fall 1968. Looking back, I was an awkward kid on my first great adventure away from home.

Back home, the first of my high school class was already dead in Vietnam. Tuition at Iowa State was \$75 a quarter and I lived off campus in the upstairs of an older couple for \$25 a month (no telephone or cooking privileges). Curfew was 10 PM when the owner looked the door. No beer, no wacky tobacco and NO girls allowed.



I understand that times have changed... however, some things are the same the Horticulture Department continues to prosper and the Iowa State Marching Band has never lost a football game.

The most important thing that college taught me was a love of learning. That attitude has served me well both personally and professionally. Work eventually took me

away from Horticulture but love of learning sent me to places I never dreamt of being.

Shortly after graduation I got the chance to teach vocational horticulture at Kirkwood Community College for six weeks. I saw it as a steppingstone towards working in a commercial nursery in the East. Thirty-four years and 13 positions later I found myself retiring. As I prepared to leave one of the vice presidents summarized my years there as he said, "If I wanted

to know what would be important to the College 2 to 3 years in the future – I'd find out what you were working on."

I still love to grow things. I got elected to my local city council and raised cane. For the last three years I've been preparing the seedbed for an authentic Civil War Band. The task of finding 150- year-old instruments, getting them repaired, making cases for them, finding music and, most all, finding musicians keeps me busy every day. Rehearsals for the "Liberty Band of Iowa" start next month. Wish us luck.

I am a househusband as my wife, Sue, is still working. We share a love of history and growing things. A Native of Wyoming, Sue has her personal garden and is thrilled by what she can grow here.

With greatest respect for all my known and unknown friends of ISU Horticulture.

**Steve Sprague, Class of 1972**



Dr. Iles,

It is so hard to believe that I have been working full time for almost 1 year! How the time flies!

I got your letter and figured I should update the Hort. Department! I am still working for Martin Associates in Vernon Hills, IL. and I recently transitioned from "yard supervisor" to working with the head landscape architect. Getting myself into the design/build segment of the company.

I also recently got married! I wanted to share about the horticulture aspects that I very proudly added! I have attached a word document with two pictures.

The first is of my wife and I planting a tree instead of doing a unity candle or the sand-mixing thing. The second picture is of our wedding favors and seating assignments. We purchased little watering cans, sedum plugs, and planted them up. Everyone loved them! Did I mention that we also had bonsai trees as centerpieces!



During our wedding ceremony we did a tree planting ceremony. We planted a Bur Oak to symbolize rooting our lives together and growing strong and old...the soil is a mix of soil from her childhood home and mine.

Hope all is well with the Hort. Department! I often see silly plant mistakes and think "I should take a picture and send it to Dr. Iles! Maybe I can make it into one of his famous power points!"



Our wedding favors and seating assignments were little watering cans with an assortment of sedum in them.

Best Wishes

**Zack Sargent**



Dear Co-Horts,

It's hard to believe that it has been 41 years since I graduated from Iowa State. I remember when...

I am 63, but I am not planning to retire soon. With three kids still living at home, with the youngest now 9, I will not be retiring anytime soon. All three were adopted from China and Vietnam.

After forty years of working in nurseries, last year I switched to working for a landscape maintenance company as a commercial pesticide applicator. But my favorite job is teaching a gardening class for Portland Community College since 1993, and maintaining my gardening website: [rodsgarden.50megs.com](http://rodsgarden.50megs.com).

**Rod Smith**  
**B.S. 1972**



Greetings from Oregon

Have just completed our third book on tropical landscape plants, "The Watersmart Garden", through the University of Hawaii Press, an introduction to tropical Xeriscape plants. We are enjoying retirement here in the Portland, Oregon area with travel and gardening activities.

Fred D. Rauch, PhD, 1967  
1574 SE River Ridge DR.  
Portland, Oregon 97222  
[fdrauch@comcast.net](mailto:fdrauch@comcast.net)

**Fred D. Rauch**



Dear Professor Iles,

Your letter has only arrived in the last few days and it is likely that any contribution I may make will be too late for inclusion. However thank you for inviting me to contribute.

In the event that there may be a spot to squeeze in something I will share some memories.

How could I forget my first day on ISU (then ISC) campus, the first day or so December 1958? Temperatures were very well below anything I might have experienced here in Ireland where average winter temperatures rarely go much below freezing point. To show you how ill prepared I was for Iowa winter temperatures I remember walking across the campus from Lyon Hall (my home while in ISU) to the Hort. Building, dressed only in my two piece suit, no head gear, no gloves! I survived! The very first item I purchased was a parka and oh what comfort! I acclimatized fairly quickly, no doubt helped by a very understanding staff, fellow graduate students, and a motherly House Mother in Lyon Hall, (her name just escapes me).

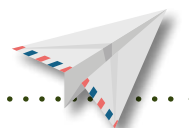
Then the year was divided up into quarters and so I started with the winter quarter and registered for an MS program, with Dr. Peirce as my director. I owe so much to him, and if he gets this Newsletter I send him greetings of much appreciation for his guidance, patience, and encouragement. Having directed graduate students since when I was on the staff of the University College Dublin (UCD) I came to appreciate more and more how much I learnt from Dr. Peirce and indeed from other staff members too. As I look back on my relationship with the staff I am so pleased to have tape recordings of interviews I have with them. I wonder who is left.

As for the graduate students there were only six plus myself, Michael Holle (Peru), Bill Fletcher (Louisiana), Don Whyte, Lyn Sanford, and Joe Toy (who I know to be dead). If any of the rest read this perhaps they will make contact. Years ago I had hoped to meet Holle at an International Horticultural Congress where he was scheduled to present a paper but he didn't attend. I was disappointed. Back in 1995 when I retired from UCD my wife and I did an extended trip around the states and visited the Hort. Dept. and also Don Whyte in Minneapolis. I haven't been back since.

When I left ISU in 1960 I did so with a heavy heart because I had settled in and made a lot of friends both on campus and in the wider community. Foreign students then were so well received and hosted by rural families and community groups. I think the Rotary Club was involved as were several Church communities. I hope that pertains to this day. The spinoff it had for me was that I was quite caring of foreign students at UCD.

There is so much more I could share. Hopefully this may trigger off a response from some of my graduate colleagues.

With every good wish,  
**Dr. Peter Tiernan**





# In Loving Memory and Respect, Michael Poll



Michael Poll, 28, passed away Friday, October 25, 2013.

Funeral services were held Tuesday, October 29 at 2:00 p.m. at The Bridge, 10025 NW 62nd Avenue in Johnston, Iowa. Visitation was on Monday evening, October 28, at Hamilton's on Westtown Parkway, 3601 Westtown Parkway

in West Des Moines, Iowa and burial at Glendale Cemetery in Des Moines.

Michael was born on December 26, 1984 in Hamilton, Michigan to Randy and Tami Poll. He graduated from Hamilton High School and later from Iowa State University, on December 15, 2007, with a Bachelor of Science Degree in Horticulture. While a student at Iowa State, Mike worked at Jack Trice and assisted with the management and upkeep of other sports turf facilities on campus. In 2008 Mike married Kim DeJong and started work with the grounds crew at the Iowa Cubs. Shortly after, he was diagnosed with Lou Gehrig's (ALS). Together, they had a daughter Ruby Grace. Michael had a devoted love for his wife and daughter. He was a member of Meredith Drive Reformed Church. Michael enjoyed basketball, golf, and the University of Michigan sports. He took great pride in his lawn and had a passion for his work. Those who knew Mike best understood his unshakable love for Kim and Ruby and his relentless desire to be a witness for Christ.

Pre-ALS Mike enjoyed playing basketball, golf, and 'til his final days, watching any University of Michigan sports. Mike made sure that his little girl knew to yell, "Go Blue!" whenever blue and maize were to be seen. He also took great pride in his lawn and had a strong passion for his work with the Iowa Cubs, on and off the field. As a close friend stated, "The turf will be greener in heaven; the blades of grass at Principal Park and Jack Trice wave goodbye for now."

The time has come for his departure. Mike fought the good fight, Mike finished the race and Mike kept the faith. Well done Mike!

He is survived by his wife, Kim; daughter, Ruby Grace; his parents, Randy and Tami Poll; siblings, Matt (Lynnette) Poll, Mitch (Kristin) Poll, Melissa (Ian) O'Connor, grandparents, Jack Poll, Ivan (Connie) Top, his in-laws, Rod and Vi DeJong; siblings, Amy (Tim) Wilken, Gina (Mike) Dorr, Ryan (Amanda) DeJong, Jon (Karis) DeJong, grandparents; Lois DeJong; and many nieces and nephews.



## **GOLDEN CLEAT AWARD GIVEN**

October 15, 2013, Mike Poll received a surprise visit from some of the Iowa Chapter Sports Turf Managers Association members. Not only did they come to chat and visit, but present Mike with one of their distinguished awards, The Golden Cleat Award. The Golden Cleat Award is recognition for outstanding professional contribution to the sports turf industry. We all know that if Mike had continued his career with the Iowa Cubs he would be standing right alongside all of these gentlemen, but ALS cut that dream short. They recognize, that as well and felt, that Mike should be the one recognized this year for his previous contributions and what he could have been, had ALS not thrown him a curveball. So proud of him! Mike tends to leave a mark wherever he goes and this just proved it yet once again.

# Dr. Hall Greenhouse Naming Dedication

April 12, 2013



Dr. Hall in the Horticulture hall atrium.



Dr. Jeff Iles welcoming attendees.



Dr. Wendy Wintersteen presenting Dr. Hall with a plaque.



**GIFT/PLEDGE FORM**

This gift should be credited to my spouse/partner and to me.

Please provide your contact information below.

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Employer name \_\_\_\_\_  
Bus. title \_\_\_\_\_  
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Home address \_\_\_\_\_  
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- I/We wish to make an outright gift of \$\_\_\_\_\_ payable to "ISU Foundation" (check enclosed).
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(Please specify your pledge for a period of five years or less.)
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- I/We do not wish to receive reminders.

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- My/My spouse/partner's company offers a match for charitable contributions. Employer Name(s) \_\_\_\_\_
- My/My spouse/partner's matching gift forms are enclosed.

**GIFT DESIGNATION**

- I/We wish my/our gift to be designated to:  Greater University Fund for Excellence (2701000)
- other: \_\_\_\_\_

Please send information about the following:  joining Order of the Knoll  making a gift and receiving a lifetime income  making a gift with stock  including Iowa State in my will  named scholarships and other named endowment opportunities

- Please note, I have included Iowa State in my will.  Please note, I would like my gift to be confidential.

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# IOWA STATE UNIVERSITY

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*Greetings Alumni*