

VOLUME 27 | NO. 1 | SUMMER 2011

Impact[®]

The Institute of Food and Agricultural Sciences magazine

RESEARCH How IFAS licenses new cultivars. *pg 12*

CALS Symposium is teaching teachers. *pg 7*

PROFILE Predicting future water needs. *pg 28*



Meet Jack Payne

IFAS' new leader outlines his vision and explains why he chose the motto, "the state is my office."



JACK PAYNE

*Senior Vice President
Agriculture and Natural Resources*

It's late May and as I write this first installment of "Perspective," I have just about completed a year as UF's senior vice president for agriculture and natural resources. As I am the product of a land-grant university and a veteran of four land-grants, I was well acquainted with IFAS before accepting the position. I recognized that IFAS characterized what is best in the land-grant system and within the tripartite mission of integrating teaching, research and extension. In short, I expected great things and I haven't been disappointed.

But even within this best of places, there are the worst of times. I have come to IFAS when the necessity for additional funding is increasing more rapidly than growth in traditional sources of funding, and during the greatest fiscal drought the country has seen in several decades for institutions of higher education. It is also a time when reliable research and information are more important than ever.

That's why I have made it a priority to "make the state my office." By that I mean traveling to meet with and, more importantly, listen to producers, commodity groups, legislators, donors and others who are stakeholders in what IFAS does and represents.

I have visited with peanut growers in Live Oak, sugarcane growers in Belle Glade, tomato producers in Balm, commercial foresters in the Panhandle, nursery growers in Apopka, avocado growers in Homestead and cattlemen from around the state, to name a few.

Essentially, I have begun my tenure with IFAS asking lots of questions, and amid those questions, it really boils down to these three:

1. Are we addressing important stakeholder-identified needs?
2. Are we successful in the development of research that leads to marketable innovation?
3. Are we planning for just the foreseeable future or are we planning for long-term, global potential?

The 30,000-foot views of Florida illustrate that it is the fourth largest state in the U.S. and the 20th largest economy in the world, so our vision will be expanded to include becoming a global research and innovation leader appropriate with its ranking.

To that end, to further address these questions and to meet our stakeholders' needs, we will renew and re-focus a long-term vision for the future of food, agricultural science and the environment. Our expanded vision will be global and focus on fostering healthy people, healthy environments and healthy economies.

We will assume a greater innovation role within the global economy by expanding our research to fuel innovation-driven growth, and we will augment local economic development through stepping up our research to include global entrepreneurship. In order to get results, we may need to break with tradition and pursue the nontraditional (as land-grants have always done), but we will always remain committed to our hallmarks: accessibility, research and discovery in the public interest, and engagement with our stakeholders.

I anticipate that there will be better times ahead for Florida and assure that you can continue to expect great things from IFAS.

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On the Cover

Why is Jack Payne's desk in a Cedar Key salt marsh, or this citrus grove? To illustrate his motto, "the state is my office." Jack wants to help all of Florida's agribusiness industries thrive. You'll learn more about Jack and his plans for IFAS on [Page 8](#).

PEOPLE, PLACES AND THINGS

- 5** In Memoriam - E.T. York.
- 6** Organizations - Alpha Zeta
- 7** CALS - CALS Teaching Enhancement Symposium
- 15** How It Works - Plant Breeding
- 19** Extension - Prison Gardens
- 20** Extension Profile - Doug Mayo
- 21** Job Profile - Julia Vaill Gatlin
- 22** Spotlight
- 24** Students, Alumni and Friends
- 28** CALS Profile - Julie Padowski
- 30** IFAS Development News

FEATURES

- 8** Meet Jack Payne
Our new senior VP brings new ideas and an old-fashioned work ethic to his job.
- 12** Florida Foundation Seed Producers
Innovative licensing helps IFAS plant breeders bring in revenues, aid producers.
- 16** Oil Spill Task Force
IFAS faculty members lead a campus-wide effort to address oil spill disasters.

NEWS UPDATES

- 26** News Briefs



We hope you'll enjoy this issue of IMPACT®, the showcase magazine for the University of Florida's Institute of Food and Agricultural Sciences.

This is a milestone issue for our staff in several regards:

Sadly, as we prepared this issue, we learned that IFAS founder E.T. York had died. As many of you know, Dr. York was a pivotal figure in the history of Florida agriculture and the University of Florida. He will be missed. We've put together a brief memorial on Page 5, and we'll include a more detailed tribute in our next issue.

If you're a longtime IMPACT® reader, you'll notice that this issue sports a completely new look. It was redesigned by a team that included Jim Harrison, UF Creative Services director; Kate Finkel, UF

Foundation graphic designer; and Tracy Bryant, IMPACT® graphic designer. Special thanks to Jim and Kate for their help, and thanks also to Dan Williams and Jack Payne for their input and guidance.

Regardless of how many issues of IMPACT® you've seen before, we'd really like to know how you like this one.

So we've included a reader survey in this issue, which you'll find between Pages 2 and 3. The form is self-addressed and postage-paid — all you need to do is check some items, jot down a few comments, seal it and put it in the mailbox. You can also take the survey online at <http://tinyurl.com/3q97uet>.

That won't be your only chance to tell us what you think about IMPACT®, either.

Starting next issue, we'll be running a "letters to the editor" page where we'll publish your comments, criticisms, anecdotes — just about anything that might be of interest to our readership.

So don't be shy — you can write to us at IMPACT®, P.O. Box 110810, Gainesville, FL 32611-0810, or e-mail tnordlie@ufl.edu.

Finally, if you have story ideas, questions or other comments that aren't intended for publication, we want to hear from you as well, and we'll do our best to reply to you directly. You can reach us at the same addresses mentioned above. Just please indicate in your message that it's "not for publication" and we'll take it from there.

Thanks for reading IMPACT®, and we'll see you again this fall!

TOM NORDLIE, EDITOR

Send your alumni news to Tom Nordlie at tnordlie@ufl.edu or University of Florida
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Submissions may be edited for clarity and length.

E.T. York – The Man Who Founded IFAS

July 4, 1922 – April 15, 2011

E.T. York will be remembered

for many things – his philanthropy, his integrity, his accomplishments as chancellor of Florida’s State University System and interim University of Florida president, his efforts to establish UF’s College of Veterinary Medicine, his successes improving peanut production and his interest in ending world hunger.

In the next issue of IMPACT®, we’ll present a more detailed, wider-ranging look at York’s life and legacy.

But for now, we’d like to make this simple tribute: E.T. York founded UF’s Institute of Food and Agricultural Sciences. And here’s how he did it, adapted from York’s own account in the Winter 2003 issue of IMPACT®.

In 1963, York arrived at UF as the newly hired provost of agriculture. This was the top administrative position in UF’s land-grant enterprise, which had already existed for almost 60 years in Gainesville and another 20 years before that in Lake City.

York found there was little coordination between the agricultural teaching, research and extension programs at UF. Each was funded separately by the state legislature and operated independently.

York believed UF could better serve the state. He wanted everyone working in a coordinated fashion toward important, common goals. But as provost he did not control any funding sources, so he had to rely on persuasion to win converts to his cause.

That’s how York convinced administrators and faculty there should be a unified administrative structure for the entire land-grant enterprise. Teaching, research and extension would each be headed by a dean, with the deans reporting to the provost. York wrote up a plan, and dubbed his concept the Institute of Food and Agricultural Sciences.

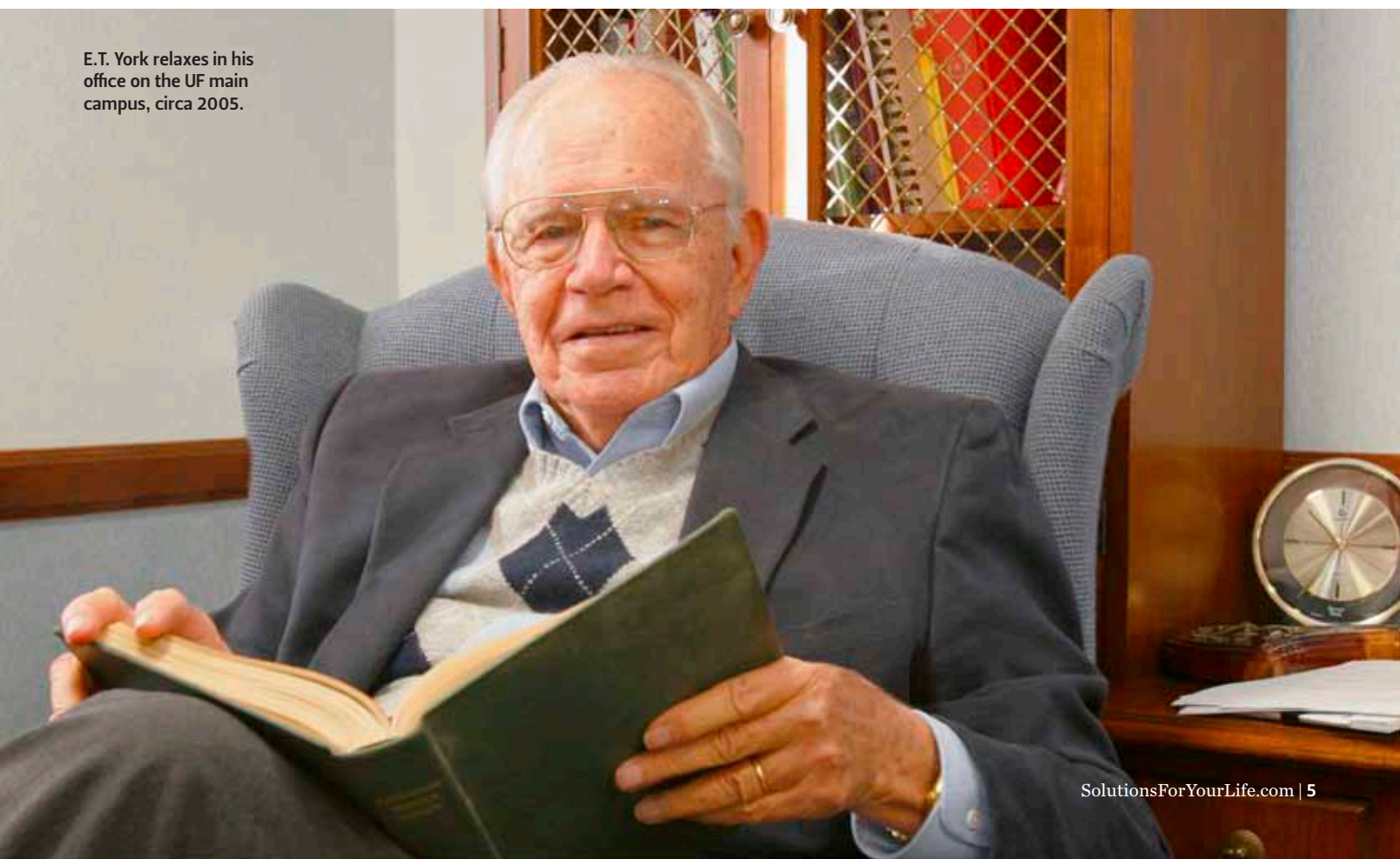
The governing board for the state’s public universities approved the plan, and the legislature followed. IFAS was born.

Many other changes were involved, including greater responsibility for department chairs, consolidation of duplicative programs, establishment of extension and teaching programs at agricultural experiment stations (what are now known as research and education centers), and a request that the Florida legislature fund IFAS as a single entity rather than separate programs.

“There seemed to be genuine enthusiasm for the IFAS concept among most university faculty and staff,” York wrote in the 2003 IMPACT® article.

“This enthusiasm appeared to radiate out to the people throughout the state. Because of this, making these adjustments was not nearly as difficult as many thought it might be. I think that most people realized there was a significant need for change and supported efforts to implement it. IFAS soon became recognized throughout the state and nation for its effective organizational structure.”

E.T. York relaxes in his office on the UF main campus, circa 2005.





Road clean-up in northwest Gainesville.

2010 AWARDS AND DISTINCTIONS

Kelin Maciejewski – *Censor of the Year*
 Mark Marcojos – *Adviser of the Year*
 Sara Molloy – *Treasurer of the Year*
 Margaret Paxson – *Scribe of the Year*
 Jean Saunders – *Member-at-Large of the Year*
 Erika Schwarz – *G.W. Roach scholarship*
 Ashleigh Woodruff – *Centennial scholarship*

2009 AWARDS AND DISTINCTIONS

University of Florida – *Chapter of the Year*
 Stacey Halse – *Chancellor of the Year*
 Mark Marcojos – *Alumnus of the Year*
 Bobbi Jo Sampson – *Member-at-Large of the Year*
 Timothy Thomas – *Chronicler of the Year*

UF Alpha Zeta chapter making its mark

Alpha Zeta has been around for a very long time, but the UF chapter is one of its latest success stories.

Founded in 1897, Alpha Zeta is the oldest honorary society for college students majoring in agricultural disciplines. Nationwide, there are more than 70 chapters, including a UF chapter started in 1922.

For the past two years, UF has received about one-third of the major national awards and distinctions presented at the society's annual meeting.

But Alpha Zeta is about more than titles and trophies; the society promotes leadership, scholarship and public service. The UF chapter has flourished by emphasizing all three, says Kelin Maciejewski, the chapter's chancellor.

"If a student wants to get the most from CALS, the opportunity is there with Alpha Zeta," she said. "It gives that person a chance to have different experiences and figure out what they want to do on their own path."

Those paths can be surprisingly varied. Maciejewski plans to become a veterinarian and work with wildlife. The chapter's censor, Ashleigh Woodruff, wants to create health education programs for young people. Publicity chairman Chris deBorde would like to be a biomedical engineer and design artificial joints.

Membership has climbed from 15 or 20 a few years ago to more than 50, said adviser Mark Marcojos, an alumnus of the UF chapter. Students ranking in the top 40 percent of the College of Agricultural and Life Sciences are eligible to pledge, a process that takes a full semester.

The chapter spends much of its time on service projects, including road cleanup, volunteering at Ronald McDonald House and taking part in Haitian earthquake relief efforts.

In December 2010, they tackled their biggest challenge yet — organizing Alpha Zeta's annual national service project. This one involved traveling to freshly harvested farm fields to glean produce left behind due to minor cosmetic defects. Volunteers

collected the food, then took it to soup kitchens where they prepared and served it, said organizer Erika Schwarz.

The project meant three days of hard work, sweat and sleeping on floors — all following final exam week.

"The students who are involved in Alpha Zeta, I'd say they're Type A personalities," chuckles adviser George

Hochmuth, a professor with UF's soil and water science department. "In 20 years, you're going to see them as leaders in their professions."



New ideas take center stage at CALS Teaching Enhancement Symposium

The huge, laminated research poster is a mainstay of scientific meetings, but none were found at the College of Agricultural and Life Sciences' 2010 Teaching Enhancement Symposium.

Instead, almost 300 attendees at the UF Hilton Hotel and Conference Center got a glimpse into the future: electronic research posters from laptop computers. The machines offered interactive presentations, some of them beamed onto nearby walls.

One example was an electronic poster that included several tutorials on basic forestry topics plus an interactive program for practicing field techniques, the Virtual Learning Forest. With a computer mouse, agricultural and biological engineering doctoral student Yunchul Jung guided a computer-animated student through the forest, taking measurements in a stand of realistic-looking pine trees.

The tutorials and the Virtual Learning Forest were the brainchildren of Michael

Bannister, distance-education director for the School of Forest Resources and Conservation. The Virtual Learning Forest, supported by a USDA Higher Education Challenge Grant, was designed by Jung.

Debuting the electronic posters was a logical move, because this time around the annual event emphasized distance education, said Elaine Turner, CALS associate dean and one of the symposium organizers. "Distance delivery is a key issue on campus, and we're poised to enhance what we're doing with it," Turner said.

Indeed, the Aug. 18 symposium's keynote address, delivered by Matt Baker of Texas Tech University, focused on distance education. Several of the event's 14 sessions covered distance ed and related topics, including social media and Sakai, UF's new online course-management program.

Embracing new teaching technologies and approaches has been the symposium's hallmark since it was first held in 2000. But the event has something for everyone,

from graduate teaching assistants to full professors to administrators, Turner said.

Sessions this year covered everything from engaging larger classes and advising first-generation college students to dealing with plagiarism and handling disruptions.

Because most of the presentations can be applied to any curriculum, the symposium attracts attendees from other parts of UF, said organizer Grady Roberts, director of CALS' Teaching Resource Center and an associate professor with the agricultural education and communication department.

There's even a proposal under consideration to have CALS establish a campus-wide version of the event, Roberts said.

.....
For more information on the CALS Teaching Resource Center, visit http://cals.ufl.edu/faculty_staff/teaching_resources.shtml

The 2011 symposium will be held on Aug. 16 at the UF Hilton Hotel and Conference Center.



Small-group discussion is a lively component of many symposium sessions.



Cattle graze at IFAS' Boston Farm-Santa Fe River Ranch Beef Unit. Beef is one of Florida's top commodities.

By ICS NEWS STAFF

JACK PAYNE

The **state** is his office



Early in his career, while working as a wildlife extension specialist, Jack Payne happily crawled into dens with hibernating bears and jumped out of helicopters to radio-collar big game.

He's never been one to shy away from a challenge. And as the University of Florida's senior vice president for agriculture and natural resources, Payne has plenty of them — everything from citrus greening to the Gulf oil spill to community and economic development.

The way Jack Payne sees it, Florida's agribusiness challenges are IFAS' business.

"The state is my office," he said. "I like to use that phrase because it sums things up. IFAS is a statewide campus for the University of Florida's land-grant mission. All Florida residents benefit from the land-grant mission and so do almost 50,000 farms and thousands of other businesses."

So it's not surprising that Payne was on the road almost constantly upon his arrival at UF in June 2010. He crisscrossed the state meeting with producers, local and state officials, IFAS faculty and supporters, listening to their concerns and ideas.

FOCUSING IFAS EFFORTS

In these discussions, Payne found that he kept asking three fundamental questions:

Are we addressing important stakeholder-identified needs?

Are we successful in the development of research that leads to marketable innovation?

Are we planning for just the foreseeable future, or are we planning for long-term, global potential?

"Different people give different answers, of course, but this helps me get an overall grasp of what the critical needs are, and where they are," he said. "I also have to ask myself those questions, and ask them of IFAS personnel, as we move forward."

Moving forward means pursuing a long-term vision for the future of food, agricultural science, our communities and the environment, he said. Payne's committed to strengthening all three elements of IFAS' land-grant mission — teaching, research and extension — and gauging progress with a pragmatic eye.

"Sometimes I say that we're in the healthy people, healthy environments and healthy economies business," he said. "Those are the bottom-line results I want to make happen here."

One of the biggest challenges Payne faces is raising public awareness of the benefits provided by Florida's agricultural and natural resources industries at local, state and national levels. Part of that should be an insistence that legislators create policies that show commitment to agricultural producers, he said. And more must be done to teach schoolchildren where their food comes from.

"We must dispel the notion that food just *happens*," he said.

He learned quickly that as an institution, IFAS is a big job to manage. Its facilities literally cover the state, with extension offices

in each of Florida's 67 counties. There are also 13 research and education centers, each with its own focus and constituencies. With more than 2,000 faculty and staff members, and an annual budget of nearly \$300 million, it's vast.

And the network of Floridians who rely on IFAS for their livelihood is equally so.

Florida has more than 200 commodity groups that represent producers, processors and distributors of everything from peanuts to poinsettias, strawberries to shellfish, and tomatoes to timber. Oh, and there's that industry the Sunshine State is known for: citrus.

JACK'S JOURNEY

Payne says the IFAS job is bigger than any he's had since leaving the nonprofit conservation group Ducks Unlimited Inc. in 2001, when his territory included both North and South America.

He left the group that year to accept a job as vice president for university extension with Utah State University. In 2006, he took on the job of vice president for extension and outreach at Iowa State University in Ames. Each was an enormous step up to more responsibility, with larger faculties and larger budgets. Earlier in his career he served on the faculties of Penn State and Texas A&M universities.

But the IFAS job, he says, is the granddaddy of land-grant university jobs.

Florida's status as a specialty crop state, combined with the constant threat of emerging diseases and the state's mix of humid subtropical and tropical climates means there is a huge dependence on IFAS by agriculture and natural resource groups.

Payne says he's struck by the diversity of the state's geography from north to south and the challenges it presents to IFAS agricultural researchers and extension personnel.

"The economy has been rough and will likely remain that way for several years," he said. "Although these are tough times — actually, especially in these tough times — we must become more responsive, rather than reactive," Payne said.

Providing help is partly dependent on funding, of course. Payne has had a unique vantage point from which to look at funding for land-grant universities nationwide. He served as 2008-2010 chairman of the Policy Board of Directors of the Board on Agriculture Assembly for the Association of Public and Land-grant Universities and represents the land-grant system in the annual federal appropriations process.

His APLU responsibilities include developing the land-grant system's appropriations requests for the U.S. farm bill. He also is a key adviser to the U.S. Department of Agriculture on land-grant policy issues.

"With all land-grants, the recession has really hammered state appropriations," he said. "Florida is no exception to that, but I think Florida has a great future because of the diversity of the state,



When he's not working, Jack enjoys spending time at his home west of Gainesville. He and wife Renee own four dogs.

"We're in the healthy people, healthy environments and healthy economies business. Those are the bottom-line results I want to make happen here."

- JACK PAYNE

the wealth of its natural resources, tourism — although it's being impacted right now, people want to come here."

Payne believes there should be a new, integrated national strategy that would provide higher education with a more reliable funding

stream to help educate students in agricultural and life sciences and expand research through the 21st century.

GLOBAL VISION

Noting Florida's status as the nation's fourth-largest state and the 20th largest economy in the world, Payne wants

IFAS to become a global force in research and innovation.

"When you look at the research we are doing, the topics are global topics, they're important to the whole world," he said. "I really believe a land-grant university is not a great university unless it's meeting the needs of the people in the state as well as taking its knowledge and expertise to the world. We're doing that and I want to grow that."

One way he hopes to grow the IFAS enterprise is by forging partnerships with universities, state and federal agencies and private enterprise.

“More is achieved, more efficiently and to greater effect, when we work together,” he said. “In a world of increasing demand and more limited resources, partnerships don’t just make the system more efficient; they make it better.”

All of those ideas, from expanding partnerships to encouraging IFAS to be more responsive to problems on the horizon, will be key, as challenges to agriculture from disease and weather never stop.

Payne said perhaps it’s no surprise given his background in wild-life ecology, but he’d like IFAS’ natural resources programs to grow in stature.

“We have a wonderful opportunity with the Ordway-Swisher Biological Station and NEON (National Ecological Observatory Network), that’s very exciting. And we have opportunities to work with landowners who are important ag producers who also see the advantage in maintaining the diversity of our habitat and wildlife,” he said.

“We have a lot of pockets of expertise here that I think we need to grow,” he continued. “For example, we have more plant breeders

here at the University of Florida than any other land-grant university. Again, I think that speaks to the diversity of our agriculture. We have so many plant breeders with so much expertise, there’s no reason we can’t become the center for plant breeding in the country.”

While he stresses that his list is in no way all-inclusive, Payne says some of his top priorities for IFAS include plant and animal production, a safe and secure food supply, energy independence, global climate change, sustainability and the quality and quantity of water supplies.

“Our vision will be comprehensive, global, inclusive, long-range, sweeping and thorough. We will also take a leadership role within the global innovation economy by expanding our research to fuel innovation-driven growth. This will require being well-positioned to take advantage of the shifting global landscape. We will augment local economic development through stepping up our research to include global entrepreneurship,” he said.

“Through all that, we will always remain committed to our hallmarks: accessibility, research and discovery in the public interest, and engagement with our stakeholders.”



At a new faculty orientation, Jack addresses the audience.



John Beuttenmuller has worked for Florida Foundation Seed Producers Inc. since 2005; in July 2010 he became its executive director.

PLANTING

(and Producing and Licensing)

THE SEEDS OF SUCCESS

Anyone who follows University of Florida research knows that IFAS plant breeders have been busy in recent years, not to mention successful.

IFAS cultivars launched the state's blueberry industry, increasing its farm gate value from less than \$500,000 annually in the 1980s to more than \$65 million in 2009. The Tasti-Lee® tomato and Sugar Belle® citrus set new flavor standards. And UF-Riata bahiagrass helps ranchers save money by producing bahiagrass forage in colder weather than was previously possible.

Licensing revenues from IFAS-developed crop cultivars have increased sixfold in the past decade, from \$617,000 in fiscal year 2000-01 to \$3.78 million in 2009-10.

Those facts are even more impressive considering that nowadays many land-grant universities are cutting back on traditional plant breeding. Federal funding for breeding research has dwindled and scientists have turned to genome-mapping and gene splicing to develop improved crops and attract grants.

How IFAS Succeeds

So, how do the IFAS breeding programs keep surging forward? Mark McLellan, IFAS dean for research and director of the Florida Agricultural Experiment Station, says it's because IFAS ensures that outstanding cultivars reach the marketplace and then rewards research teams with an unusually large portion — 70 percent — of the revenues they generate.

At the heart of this system is Florida Foundation Seed Producers Inc. This UF direct-support organization is responsible for marketing and licensing new cultivars, filing for patents, producing seed stock and collecting royalties.

To breeders, FFSP is a doorway to the marketplace. To seed companies, nurseries and other growers, it's a reliable source of crops selected for consumer appeal and the ability to thrive under Florida conditions.

John Beuttenmuller, FFSP's executive director, says he expects plant breeding to become even more important at UF.

"These research programs have tremendous potential for Florida's agriculture and economy," he said. "As such, there's a great opportunity for FFSP to fulfill its mission and purpose, and we're bullish on it for the future."

He says there's no magic to UF's approach, just common sense: listen to growers, develop cultivars to meet their needs, and reinvest in breeding programs.

Breeders cite the reinvestment policy as particularly important. Barry Tillman, leader of UF's peanut breeding team, said his program would be very different without it.

"Most plant breeding programs are quite labor-intensive," Tillman said. "Because of the royalty structure here, we can hire seven full-time employees. We couldn't afford the personnel and equipment we use, otherwise."

Beuttenmuller agrees, explaining that it's hard to obtain grants for plant breeding. The 70 percent royalty arrangement, in place since the early 1990s, has offered many programs a way to bridge the gap caused by a lack of grant funding.

FFSP's Role

Developing a new crop variety may take 10 years (see "How It Works," Page 15). When the director of the Florida Agricultural Experiment Station approves it for release, FFSP's job begins.



Leader of UF's peanut breeding team, Barry Tillman.

Most IFAS-developed cultivars are patented, and FFSP handles the application process, with help from patent attorneys. As the process moves forward, FFSP personnel create promotional materials announcing that the crop is ready to license.

Licensing is accomplished in one of two ways:

If the cultivar is expected to generate modest commercial interest, it's usually offered via non-exclusive licenses. FFSP evaluates applicants and works out terms such as royalty rates with applicants who are selected.

If the cultivar is expected to draw great commercial interest, FFSP may offer exclusive licensing through a public process called an invitation to negotiate, or ITN. Here, FFSP invites all interested parties to submit proposals. A review team recommends one to the Florida Agricultural Experiment Station director, and the director approves or declines the recommendation.

After negotiations are finalized and both parties sign the licensing agreement, FFSP still has other tasks to perform.

If the crop is grown from seed, FFSP will generate large quantities of seed at its 750-acre farm in Jackson County, adjacent to the IFAS North Florida Research and Education Center in Marianna. If it's grown from cuttings or seedlings, FFSP often contracts with a third party nursery or propagator to make the variety available to Florida growers.

"In order to have commercial interest, you have to have commercial quantities of plant material," Beuttenmuller said. "FFSP's role in the increase of plant material is vital to delivering new varieties to market."

As companies produce and sell the cultivar, FFSP personnel collect royalties and solicit feedback about its performance. They also keep a watchful eye on the market for infringement, counterfeit seed, unauthorized seed sales and similar activities that create unfair competition for licensees and undercut FFSP and UF's breeding programs.

International Markets

While Beuttenmuller's main focus is on Florida and Florida growers, he has a goal to expand international markets.

"Florida is one of the best selecting environments in the world, due to intense disease pressure, humidity and diverse soil types," he said. "So if a plant can survive in Florida, it has an excellent chance of performing very well in similar climate regions. UF breeders develop tough plants."

For example, Florida's most popular strawberry cultivar, Strawberry Festival, is grown in about 40 countries, including Spain, Australia, Egypt, Turkey, Ukraine and Morocco, said Vance Whitaker, lead strawberry breeder at the Gulf Coast Research and Education Center in Balm. The fruit is typically sold where it's produced, so these other countries pose no competition for Florida growers, who supply the eastern United States and southern Canada.

"We breed for Florida climate and Florida growers," Whitaker said. "If we have a successful variety, we're interested in FFSP licensing it overseas, as its international success generates royalties to fund the Florida breeding program. We're definitely concerned with Florida first."

For more information, go to <http://ffsp.net>.

Some of FFSP's biggest successes



Florida Shrunken 2 sweet corn: Named for a gene that enhances the crop's sweetness, this cultivar revolutionized the industry in the late 1960s and early 1970s.

Florunner peanut: Introduced in 1969, this cultivar dominated Southeast peanut production for two decades.



Solar Set tomato: Heat tolerant and disease resistant, this tomato yields plenty of medium-sized fruit. Released in 1989.

Florida Sweetheart caladium: A pink lance-leaf caladium, this variety was released in 1991 and accounts for about one-quarter of all Florida lance-leaf caladium production.



Sweet Charlie strawberry: When released in 1992, it was the only strawberry adapted to Central Florida that was resistant to anthracnose fruit rot.

Silver Bay aglaonema: A tropical foliage plant, Silver Bay was introduced in 1992 and remains a popular cultivar due to its hardiness in commercial installations.



SunOleic 95R peanut: The world's first peanut cultivar with high oleic acid content, SunOleic 95R won accolades as a heart-healthy snack on its debut in 1995.

CP 89-2143 sugarcane: Developed jointly by IFAS, the USDA and the Florida Sugar Cane League Inc. and released in 1996, it's now the most widely grown variety in Florida.



Emerald, Jewel and Star blueberries: These early-ripening southern highbush cultivars are among the most popular on Florida farms; they were released from 1995 to 2000.

Jumbo annual ryegrass: High yielding and resistant to crown rust disease, Jumbo quickly became one of the most important southeastern forages upon its release in 1998.



UFSun peach: This firm-fleshed, low-chill variety, released in 2004, has quickly become a grower favorite in Central and South Florida's burgeoning peach industry.

Osceola white clover: This winter forage cultivar was released in 1977 and remains the best-selling white clover in the U.S.

Learn more about plant breeding at <http://ufbreeding.ifas.ufl.edu>.

Traditional Plant Breeding

Traditional plant breeding relies on a combination of previously gathered data, instinct, observation and knowledge about growers' needs.

It also demands relentless evaluation to rule out all but the best new plants, a process that UF's peanut breeder, Barry Tillman, compares to a giant funnel.

Step 1



The breeder decides what traits are needed in a new cultivar. This involves speaking with growers and manufacturers and reviewing popular cultivars to develop a list of desired traits — a blueprint to work from. The traits could include time until maturity, seed size, yield, disease resistance, drought tolerance and flavor.

Step 2



With blueprint in hand, the breeder evaluates available lines of germplasm and current cultivars. Germplasm is a term for plant varieties that haven't been commercially released, but are carefully cataloged and stored for future use. These plants may be naturally occurring varieties or the results of deliberate breeding.

Step 3

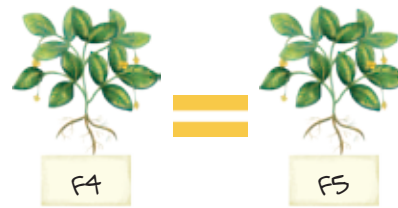
The breeder selects plants to be crossbred — these are called parental lines. The breeder may use several dozen parental lines and breed them in all possible combinations, or select only certain combinations. To accomplish cross-fertilization, researchers manually transfer pollen from male to female plants.

Step 4



The first generation of new plants is produced; it's called the F1 or first filial generation. All F1 plants from two parental lines are the same, but the seeds they produce from self-pollination are not. Plants grown from these seeds are the second filial generation, or F2. They're all different and must be evaluated plant by plant. Many will fall short of the ideal and be culled. The few with real promise are advanced for further evaluation.

Step 5



Several hundred of the best F2 plants are harvested and their seeds planted the next season for another round of evaluation. This process of selection and testing continues until the fifth or sixth filial generation is reached. By this time, plants arising from individual seeds from a single plant will be nearly identical to the plant that produced them — these are called pure lines. The pure lines are ready for systematic testing.

Step 6



The pure lines are field-tested for traits such as disease resistance, drought tolerance and yield over several years. This step requires extensive labor.

Step 7

Pure lines that perform best are submitted for release by UF's Cultivar Release Committee. On average, only one line is submitted each year. The committee is made up of faculty members and administrators knowledgeable about plant breeding and crop production. If the committee approves a pure line and the FAES director approves its release, it's assigned to Florida Foundation Seed Producers Inc. for seed production, marketing and licensing to growers.



Oysters are one of Florida's best-known seafood products. The Gulf oil spill threatened the health of oyster reefs all along the state's West Coast, and was a particular concern in Apalachicola Bay, an estuary off Franklin County famous for its oysters.



IFAS faculty leading campus-wide

OIL SPILL TASK FORCE

It was a terrible irony.

April 22, 2010, was Earth Day, an observance promoting ecological awareness. That day also marked the beginning of the worst offshore oil spill in U.S. history.

For three months, a well associated with the Deepwater Horizon offshore rig discharged crude oil into the Gulf. Though eventually the well was capped and the spill stopped, the disaster has had lasting effects for Gulf ecosystems and fishermen, businesspeople and residents of the Gulf Coast states.

Shortly after the crisis began, University of Florida President Bernie Machen asked incoming Senior Vice President for Agriculture and Natural Resources Jack Payne to assemble a team of faculty members already working on issues relevant to the disaster, the UF Oil Spill Task Force. Their mission: to assess the situation, educate stakeholders, find ways to mitigate damage and work with other institutions and agencies throughout the region.

“Because of the size, scope and diversity of the expertise of University of Florida scientists and extension specialists, a university-wide task force made sense,” Payne said. “The challenges we were facing ranged from engineering problems to legal questions to damage of marine and coastal ecosystems, to human impacts involving businesses, families and communities.”

Today, the task force is in full swing, conducting research and outreach statewide. Its three dozen members meet regularly to discuss their progress. In December 2011, task force representatives and other Florida academic researchers will make formal presentations of their efforts and findings at the State of the Gulf of Mexico Summit, a five-day event in Houston, Texas.

Two IFAS faculty members lead the task force. Tom Frazer, a professor of marine ecology with the School of Forest Resources and Conservation, or SFRC, is its chairman; Karl Havens, director of Florida Sea Grant and a professor with SFRC, is co-chairman.

To provide a range of viewpoints and skills, Frazer and Havens recruited faculty from most of UF’s colleges. All of them are now involved in focus groups devoted to specific topics — movement and degradation of the oil, ecological impacts, human health impacts, socioeconomic impacts, law and policy issues, and information resources.



UF/IFAS File Photo

Shrimp boats, like the one seen in the background here, are one of the most visible emblems of Florida's seafood industry.

Task force members will form their own conclusions about how best to address the oil spill situation, Frazer said. Unfortunately, despite the importance of this work, research funding hasn't been as abundant as one might expect.

Technically, the task force is considered a nonfunded service committee, put together to meet UF's obligations to the public. The BP oil company has pledged \$500 million for Gulf research, with some money already distributed for "rapid response" research and the remainder to be distributed by the Gulf of Mexico Alliance, a consortium of Gulf state governments and state and federal agencies, Havens said. UF and other land-grant universities became formal participants in the alliance in March 2011, with IFAS taking the lead for UF.

When BP funding becomes available, task force members are likely to submit grant proposals, Havens said. In the meantime, they're making do with whatever funds are available.

To help UF faculty connect with like-minded colleagues, the task force is using UF's VIVO system, an online database that enables users to find campus personnel with relevant expertise within seconds, Havens said.

So far, the task force's most visible project has been a "seafood sniffing" program, developed to help fishermen and processors evaluate catches for wholesomeness. Taught to hundreds of people, it's known by the formal title Harvest from Open Waters, or HOW. The program was developed by IFAS seafood safety experts Steve Otwell, a food science and human nutrition professor, and research coordinator Victor Garrido. It combines previously mandated safety programs with seafood inspection training that teaches participants to detect the odor of tainted seafood.

As Havens explains, HOW training does not replace sophisticated chemical testing; instead, it provides a fast, cost-effective preliminary step to identify seafood samples that are obviously

contaminated and must be discarded outright. Samples that pass the "sniff test" are subject to chemical testing afterward, as a second layer of protection.

Another current project is a study of oyster reef health in Florida's Big Bend area, led by Peter Frederick and Bill Pine, IFAS faculty members in the wildlife ecology and conservation department. Then there are surveys of Cedar Key fishermen, clam farmers and consumers to determine how public perception has impacted seafood sales, organized by sociologist Brian Mayer, an assistant professor in the sociology and criminology & law department, part of the College of Liberal Arts and Sciences.

Researchers have also looked at psychological impacts on residents of Franklin County, home of Apalachicola Bay, the state's most famous source for fresh oysters. The project was led by Glenn Morris, director of UF's Emerging

Pathogens Institute, and includes IFAS' Steve Otwell and Bill Mahan, who's both a Sea Grant agent and the Franklin County extension director.

Oil didn't wash ashore in Franklin County, but the situation caused enormous economic stress in the community nonetheless, Mahan said. For a time, BP was hiring local boats and crews to look for oil, but because little seafood was being harvested, other aspects of the county's economy were hurt.

"There were profound levels of depression and anxiety," Morris said.

Researchers also spoke to residents of Baldwin County, Ala., where oil did come ashore, and they found similar impacts on both communities.

"There's an urgent need to follow up on these issues," Morris said. His team has applied for a National Institutes of Health grant to expand the research to other Gulf Coast communities.

Lawsuits might seem like an obvious solution for coastal residents trying to rebuild their lives. But existing statutes and case law decisions don't adequately address oil spills, said Jon Mills, a retired dean of UF's Levin College of Law and leader of the law and policy focus group.

"The regulatory and statutory system that exists now is basically for regulation and oversight of drilling, and clearly there were some problems," Mills said. "So, one thing that will come out of our work is recommendations for improvement."

That's a point task force members seem to agree on — the Gulf oil spill was a wake-up call, not a fluke. And that may be the most important lesson anyone takes away from the situation, Frederick said.

"We want to sketch out what does need to be done, and what we need to prepare for the next one," he said. "Because there likely will be another one."

Gardening project helps prison inmates earn their keep

BY MICKIE ANDERSON

Brother Jacobs is preaching the gospel of produce.

Justin Jacobs, nicknamed “Brother” because of his Christian faith, is 28 and has been in and out of Florida’s corrections system since his teens. In the summer of 2010, he was nearing the end of a five-year sentence at Berrydale Forestry Camp for cocaine trafficking.

But through a program at IFAS’ West Florida Research and Education Center in Milton, he’s become an expert in, and an avid proponent of, vegetable gardening.

Jacobs, from Key West, is laid-back and surferlike as he espouses the wonders of fresh produce and what learning to grow food has meant to him.

“They’ve taught me a little bit of everything. How to grow stuff, how to grow it fast and big,” he says. “Out of all the (work release) jobs I could have, this is the one I really wanted.”

Back home, his mother runs a landscaping business, and he envisions making a crime-free living helping clients start a small garden or improve an existing one.

Maj. Mark Barber, who was previously on the Berrydale Forestry Camp staff and is now based at the state’s Calhoun Correctional Institution in Blountstown, says the gardening program has not only worked wonders with inmates’ self-confidence, it’s also saved taxpayers a ton of money.

Since it began in January 2009, the farm has produced more than \$190,000 worth of produce — that’s some 398,000 pounds of vegetables, including sweet corn, potatoes, snap beans, squash, cucumbers, tomatoes and cabbage.

The farm has often produced so much — trailers full of produce — they’ve had to give it to other area prison facilities.

Barber says he’s been amazed at what learning a skill has done for the men. To

prisoners, food is one of the few highlights in a day. Before, prison officials could barely give vegetables away, he said, but now the men can’t get enough.

And that’s made the prisoners who grow it rather popular with their peers.

“They’ve got a sense of accomplishment,” Barber said. “So now, you hear them talking and they’re like, ‘We did that. You like that squash? You’re welcome. Those greens are good, aren’t they?’”

While IFAS has similar programs around the state, West Florida REC Director Jeff Mullahey hopes to secure funding to expand the program into one that would include classroom lessons as well as hands-on skills, so that prisoners can earn a certificate that could help them land a job upon release.

“I’d love to see it become a true state-wide program,” he said. “To me, this is just a classic case of what IFAS does. We create knowledge.”

Inmates tend tomatoes grown with plastic mulch at the West Florida REC.



“A lot of what we do here,” Doug Mayo says, “is deal with weeds.”

On his desk, parallel to his nameplate, Doug Mayo keeps a leather-sheathed machete branded “Nicaragua.” It’s a reminder, he says, of a visit to the Central American country where he saw a man slash down two acres of weeds by hand, with more than 30 acres to go.

“No matter how thick into it we get, at least we don’t have to deal with anything like that.”

Nevertheless, as Jackson County extension director, Mayo has had a year overrun with challenges. Since the days of sprawling plantations, much of the county’s economy has depended on row crops such as cotton and peanuts — crops that have been severely stunted by a summer of unusually high temperatures and record drought.

“You get a year like this maybe once every ten,” says Ronald Barber, manager of Campbellton Farm Service, a one-stop-shop for area farmers. “Makes you want to cry.”

Mayo is a livestock man — it’s been his area of expertise since he started his career in largely urban Polk County. But when he moved to rural Jackson County in 2000, he was initially shocked by the number and variety of calls the office received.

“The relationship between the community and extension here goes back for decades,” he says. “A lot of the farmers and ranchers here can’t afford their own specialists and researchers like the big guys do. For them, we’re a little piece of the University of Florida in their own neighborhood.”

Mayo and the extension team have a long-held friendship with Barber and other area farmers and ranchers. Every once in a while, the office will receive a “bouquet” from Barber, a clump of weeds that need to be identified for treatment. It might be crowfoot, johnsongrass, smutgrass or a noxious plant that’s virtually unheard of in the area. The extension agents receive calls

on everything from the basics of planting to the amount of drying time wet hay needs before storage (too-moist hay can catch fire due to heat from decomposition).

Extension agent Clyde Smith fields topics including cotton, field crops, forestry and pest management. Charles Brasher specializes in vegetables, small farms and home gardening. There’s tremendous support for 4-H activities in the area, keeping agent and youth education specialist Ben Knowles busy.

“This is an area built on ag,” says local cattle specialist Larry Warden as he and Mayo look over a cattle pasture Warden helps maintain. The two have been testing ways to get rid of blackberry briar, a thorny weed that’s been spreading across the grazing land. “Guys like Doug that will work with you to help solve your problems... sometimes that’s better than money around here.”

– STU HUTSON





Julia Vaill Gatlin found a new career in preserving the past

Who she is: Julia Vaill Gatlin, executive director of the Ximénez-Fatio House Museum in St. Augustine and president of the St. Augustine Archaeological Association.

IFAS CONNECTION: She has two degrees from UF's College of Agricultural and Life Sciences — a bachelor's in animal sciences and a master's in agribusiness management, which she returned to campus to earn after raising four children.

HOW THE DEGREES HELP: Gatlin's career path has taken many twists and turns. She's been a banker, a medical office manager, an equine nutritionist for Seminole Feed in Ocala, and she now oversees the museum, where she's been able to secure nearly \$1 million in historic preservation grants.

"They didn't specifically teach us grant writing in school, but I remember very clearly having to learn how to write a business plan," she says. "I think that's really helped me so much."

THE LAST TIME SHE CALLED IFAS FOR HELP: In her role running the museum, Gatlin and the staff had long been troubled by a gap in the Ximénez-Fatio home's history. They had no records indicating when a wing of the house had been built. But then Gatlin remembered learning about dendrochronology (tree-ring dating) in a class at UF. A few calls later, she had IFAS faculty member Leda Kobziar on site with a team of researchers, who took wood samples and were able to solve the mystery.

— MICKIE ANDERSON



CALS honors teachers, advisers at annual banquet



The 2011 CALS Scholarship and Leadership Awards banquet was held April 14 at the Paramount Plaza Hotel and Suites in Gainesville. The event honored not only students but also teachers and advisers. For student awards presented at the banquet, see Page 24

JACK L. FRY AWARD FOR TEACHING EXCELLENCE BY A GRADUATE STUDENT – *Catherine Shoulders*

GRADUATE TEACHER/ADVISER OF THE YEAR – *Emilio Bruna*

UNDERGRADUATE ADVISER OF THE YEAR – *Miranda Kiggins, Sandra TenBroeck*

UNDERGRADUATE TEACHER OF THE YEAR – *Michael Gunderson, Ricky Telg*

Graduate Student Teaching Award

Catherine Shoulders, a doctoral student in the agricultural education and communication department, received a 2010/2011 Graduate Student Teaching Award from the UF Graduate School April 22. She was one of 19 grad students campus-wide to receive the award.

Gamma Sigma Delta

UF's chapter of the Gamma Sigma Delta honor society held its annual awards

banquet April 6 in the Reitz Union on UF's Gainesville campus. The society, which encourages advancement in all branches of agriculture, presents awards to students, faculty and administrators as well as outstanding individuals in agricultural and natural resources industries.

This year's honorees are:

JUNIOR FACULTY AWARD OF MERIT – *Alan Wright*

SENIOR FACULTY AWARD OF MERIT – *Richard Litz*

INTERNATIONAL AWARD OF MERIT – *Peter Hansen*

DISTINGUISHED LEADERSHIP AWARD OF MERIT – *Ed Osborne*

DISTINGUISHED SERVICE TO AGRICULTURE – *Jim Spratt, director of governmental affairs for the Florida Nursery, Growers and Landscape Association; Bryan Nelson, state representative for Florida's District 38.*

2011 Florida Citrus Hall of Fame

The Florida Citrus Hall of Fame's 2011 inductees were announced March 4 at a ceremony at Florida Southern College in Lakeland. One of the four men inducted was Robert Bullock, an emeritus associate professor at the Indian River REC in Fort Pierce. Bullock worked as a research entomologist at the center from 1961 to 1999, assisting citrus growers with insect pest problems. Respected for his knowledge of citrus production, Bullock was a proponent of integrated pest management and pioneered the use of fixed-wing aircraft for pesticide application.

Mead Johnson Award

James Collins, an assistant professor with the food science and human nutrition department, is the 2011 recipient of the Mead Johnson Award from the American Society for Nutrition. Collins, who was formally presented with the award April 10 at the society's annual meeting in Washington, D.C., was honored for a series of published papers that identified and investigated genes encoding proteins that control the body's use of the micronutrient copper during states of iron deficiency. Iron deficiency

has been called one of the 10 most serious global health problems.

2011 W.O. Atwater Lecturer

Nutritional biochemist Bob Cousins, an eminent scholar in the food science and human nutrition department, has been selected as the 2011 W.O. Atwater Lecturer by the USDA's Agricultural Research Service. This honor recognizes scientists who have made significant contributions toward improving human diet and nutrition. Cousins delivered a lecture, "Driving From Vitamin A to Zinc During the Genomic Revolution," at the annual Experimental Biology meeting in Washington, D.C. on April 12.

Maria Gallo named agronomy chairman

In January, molecular genetics researcher Maria Gallo was named chairman of the agronomy department. A member of the department faculty since 1996, Gallo had been interim chairman since September 2009, when Jerry Bennett stepped down after 17 years as chairman. Her goals include increasing the number of undergraduate agronomy majors and raising private funds for new department facilities. She is also the 2011 president of the Crop Science Society of America.

International Programs achievement award winners

Three faculty members were honored for their efforts to make Florida a more significant global agricultural power at the IFAS International Programs annual achievement awards event, held Jan. 28. Mel Sunquist, an emeritus professor in wildlife ecology and conservation, received the UF/IFAS International Fellow Award; he's best known for his studies on tigers in Nepal and India. Kelly Morgan, an associate professor in soil and water science at the Southwest Florida REC in Immokalee, received the UF/IFAS International Achievement Award for his efforts worldwide, notably in Costa Rica. And Gadsden County extension agent Alex Bolques received the UF/IFAS Award for Excellence in Internationalizing Extension for his contributions to

horticultural training programs in Costa Rica and Ecuador.

Jackie Burns to lead Citrus REC

Jackie Burns, a longtime researcher at the Citrus REC, is the new director of the Lake Alfred center, one of the world's largest facilities dedicated to a single commodity. Previously, Burns was interim director for about two years. She's been with the center since 1987 and has researched physiological processes related to abscission and harvesting, as well as methods of maintaining fresh citrus quality during handling, shipping and storage.

FAES 2011 Annual Awards

Dozens of distinguished IFAS researchers were honored May 19 at the Florida Agricultural Experiment Station's fourth annual awards ceremony.

The event, held at the Samuel P. Harn Museum of Art on UF's main campus, honored faculty members and graduate students from around the state for their research accomplishments in 2010, which ranged from published studies to patented plant varieties to membership in prestigious academic organizations.

"This is a very special celebration, because the honorees have devoted so much time and effort to work that occurs far away from the spotlight — in laboratories, in libraries and in the field," said Mark McLellan, FAES director and IFAS dean for research. "It's great to give them an evening where their colleagues say 'we appreciate what you're doing' and let them get a little better sense of how important their work is."

AAAS FELLOWS — *Kenneth Boote, Linda Young*

RESEARCH PROFESSOR EMERITUS — *Larkin "Curt" Hannah*

BEST MASTER'S THESIS — *Evelien Van Ekert*

BEST DOCTORAL DISSERTATION — *Charles Hunter*

RICHARD L. JONES NEW FACULTY RESEARCH AWARD — *Michelle Danyluk, Robert Fletcher*

PLANT PATENT AND TRADEMARK HOLDERS — *Paul Lyrene (blueberry cultivar Primadonna®); Kevin Kenworthy, Robert Beiriger and Bryan Unruh (centipede grass Hammock®); Richard Henny and Jianjun Chen (aglaonema cultivar Mondo Bay®, epipremnum cultivar UFM10, philodendron cultivar Frilly Philly™); David Clark (coleus cultivars Big Red Judy® and Velvet Mocha®); Zhanao Deng and Brent Harbaugh (caladium cultivars Cranberry Star, Summer Rose, Firecracker Red, Garden White and Berry Patch); Craig Chandler (strawberry cultivar Florida Radiance); Jose Chaparro (nectarine cultivar UFRoyal, peach cultivars Gulfcrimson and Flordabest); Ronald Barnett and Ann Blount (oat cultivars Horizon 270 and LA99016); Gordon Prine (annual ryegrass cultivar Florina®)*

UTILITY PATENT HOLDERS — *Lonnie Ingram, Keelnatham Shanmugam, Lorraine Yomano, Johnathan Moore*

UF RESEARCH FOUNDATION PROFESSORS — *Michael Dukes, Kevin Folta, Sabine Grunwald, Julie Maupin-Furlow, Madan Oli, Ramesh Reddy*

RESEARCHERS AWARDED MORE THAN \$1 MILLION IN GRANTS IN FISCAL YEAR 2009-2010 — *Rebecca Darnell, Michael*

Dukes, William Haller, Peter Hansen, Carrie Harmon, James Jones, Matias Kirst, Maurice Marshall, Frank Mazzotti, Tony Romeo, Nayda Torres

RESEARCH INNOVATION AWARDS — *Eric S. McLamore, Pratap Pullammanappallil, Jay Garland; Peter J. Hansen, Manabu Ozawa, Naohiro Terada; Alan D. Ealy, Kirk P. Conrad; Daniel A. Hahn; Ahmed H. Mohamed, Wendell Cropper, Grenville Barnes, Bon Dewitt; Matias Kirst, George Casella; Jane E. Polston; Bielinski Santos, Steve Johnson, Jason Rohr; G. Cliff Lamb, Nicolas DiLorenzo; Nemat O. Keyhani; Yuncong Li, Qingren Wang, Andrew Ogram, Shouan Zhang, Bin Gao, Andrew Zimmerman, Guodong Li, Xiaohui Fan*

NATIONAL ACADEMY OF SCIENCES MEMBERS — *Robert Cousins, Lonnie Ingram*

UF EMINENT SCHOLARS — *Robert Cousins, William Dawson, Andrew Hanson, Marjorie Hoy, Harry Klee, Andrew Schmitz*

UF DISTINGUISHED PROFESSORS — *Daniel Cantliffe, George Casella, Lonnie Ingram, James Jones, Ramachandran P-K Nair*

GRADUATE RESEARCH PROFESSORS — *Howard Johnson, K. Ramesh Reddy*



IFAS Dean for Research Mark McLellan, left, congratulates Robert Fletcher, one of two recipients of the Richard L. Jones New Faculty Research Award.

CALS honors outstanding students at annual banquet



Sarah Burleson had a big night at the CALS Scholarship and Leadership Awards Banquet, receiving the Alumni and Friends Leadership Award and recognition as a CALS Honors Scholar and CALS Ambassador. Here, she poses with interim CALS Dean Mark Rieger.

The 2011 CALS Scholarship and Leadership Awards banquet was held April 14 at the Paramount Plaza Hotel and Suites in Gainesville. Much of the event focused on student achievements, detailed below. For teaching and advising awards presented, see Page 22.

AGRICULTURAL AND LIFE SCIENCES COLLEGE COUNCIL CLUB OF THE YEAR —
Agricultural Economics Club

ALUMNI AND FRIENDS LEADERSHIP AWARD —
Sarah Burleson

LARRY J. CONNOR MEDAL OF EXCELLENCE —
Olga Luaces

JIMMY G. CHEEK GRADUATE STUDENT MEDAL OF EXCELLENCE —
Andrew Barbour

E.T. YORK JR. MEDAL OF EXCELLENCE, OUTSTANDING JUNIOR AWARD —
Cory Pollard

J. WAYNE REITZ MEDAL OF EXCELLENCE, OUTSTANDING SENIOR AWARD —
Bryant Shannon

HONORS SCHOLAR RECIPIENTS — *Alexandra Albe, Anam Ali, Carly Barnes, Richard Bowen, Kaitlyn Burgess, Sarah Burleson, Daniel Cordiner, Alexandra Crabb, Lillie Emmelhainz, Allison Fick, Stephanie Hall, Chelsea Heatherington, Sarah Knapp, Stephen Morgan, Samiah Moustafa, Fae A. Nageon de Lestang, Katrina Sharp, Marina Vaerst, Ashleigh Woodruff, Chloe Wright*

CALS Ambassadors for 2011-2012

Thirty-three students have been named CALS Ambassadors for 2011-2012. Chosen for their academic performance and leadership, the new ambassadors will create awareness of CALS academic programs and agribusiness careers. They'll speak at high schools, community colleges and meetings of civic organizations.

They are:

Lordwidge Atis, John-Walt Boatright, Adrienne Boyette, Anthony Cannon, Hassan Casanova, Kendra Claude, Arielle Claude, Blair Clovin, Paula Cohen, Alexis Davis, Lauren Der, Charles Doyle, Carissa Driggers, Aaron Dukes, Rusty Hartline, Carolyn Huntley, Kimberly Jones, Ana Luiza Fraise, Lauren Mayo, Stephanie McKay, Brittany Oliver, Claire Page, Alyssa Porter, Mary Reed, Jenna Rogers, Alanna Scaccia, Joylisia

Scott, Andrew Shahan, Kaylie Smith, Jessica Southard, Zachary Sweat, Libby Weber, Gernide Zamor

The Gator Nation is everywhere

They say The Gator Nation is everywhere, and that certainly applies to CALS alum Sean Bierle (B.S., Entomology and Nematology, 2002), who can be found everywhere from white water rapids to mountainsides as founder and head teacher of the Alzar School. It's a nonprofit, traveling high school for motivated teens, combining strong academics with outdoor adventure and service-learning projects. Based in Boise, Idaho, the school routinely conducts programs in the western U.S., Mexico and Central and South America.

Gemma Spofforth honored

In December, Gemma Spofforth, a family, youth and community sciences major, was one of three graduating seniors campus-wide to receive UF's Outstanding Leadership Award. Spofforth was selected based on her grades and leadership experience, including extensive volunteer work at a crisis center and being one of UF's most successful competitive swimmers.



At the TailGATOR celebration in September, several CALS Ambassadors share a moment together. From left, Alexis Davis, Gernide Zamor, Jonathan Dumas and Lillie Emmelhainz.



CALS alum Sean Bierle takes on white water rapids; after graduating in 2002 he founded a traveling high school that combines academics, outdoor adventure and service-learning projects.

TailGATOR

At the 2010 TailGATOR celebration, the CALS Alumni and Friends honorees included:

AWARD OF DISTINCTION — *Frankie Hall (B.S., Agricultural and Extension Education, 1979); Jack Vogel (B.S., Forestry, 1969); Paul Willis (B.S., Food and Resource Economics, 1983).*

HORIZON AWARD — *Bridget Carlisle (B.S., Animal Sciences, 1995, M.S., Agricultural Education and Communication, 2005); Gillian Folkes Dagan (B.S., Food Science and Human Nutrition, 2000, Ph.D., Food Science and Human Nutrition, 2004).*

American Society of Agronomy and Crop Science Society of America and the Soil Science Society Scholarships

Two IFAS students received prestigious scholarships at the 2010 joint annual meeting between the American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America, held Oct. 31-Nov. 4 in Long Beach, Calif.

Agronomy senior Kaylene Sattanno was one of 12 students nationwide selected by

CSSA as 2010 Golden Opportunity Scholars. Sattanno was selected based on her academic achievements and interest in crop science. She plans to attend graduate school in agronomy and focus on integrated crop-livestock production.

A senior in soil and water science, Ashlyn Smith-Sawka was one of two students receiving the SSSA's 2010 National Society of Consulting Soil Scientists Scholarships. The scholarship encourages top students to enter nationally recognized soil-science programs. Smith-Sawka is interested in soil genesis and landscape relationships and plans to attend graduate school.

Florida Agricultural Hall of Fame

Probably everyone who's ever been inducted to the Florida Agricultural Hall of Fame has strong IFAS connections, but the 2011 group stands out. The inductees are Bill and Trudy Carey, Pat Cockrell, Paul Lyrene and Joe Orsenigo.

The Careys, known for their dairy cattle export business, volunteered with Florida 4-H, FFA and Florida Agriculture in the Classroom, programs that IFAS helps operate. Bill Carey died in 1997; Trudy Carey lives in Brandon and still manages the business.

Pat Cockrell, a longtime Florida Farm Bureau leader, earned a bachelor's degree in agriculture from UF, was president of the UF/IFAS Agriculture Council advisory group, and played a major role in ensuring that 2008 UF budget cuts didn't disproportionately affect IFAS. He died in June 2011.

Paul Lyrene, a recently retired UF horticultural sciences professor, is a plant breeder whose blueberry cultivars built Florida's blueberry industry to the point where the state is the nation's No. 2 producer, after Michigan, with annual receipts of \$65 million.

Joe Orsenigo was a longtime horticultural sciences professor at the Everglades REC, known for his efforts in breeding sugarcane and developing best management practices for weed control in sugarcane and vegetable crops. He died in 2009.

USDA's 2011 Agricultural Outlook Forum

Carly Barnes, a senior majoring in agricultural education and communication, was one of 24 college students nationwide invited to attend the U.S. Department of Agriculture's 2011 Agricultural Outlook Forum, held Feb. 24-25 in Arlington, Va. Invitees were chosen based on deans' recommendations and essays on the theme "Agriculture as a Career." Barnes called the event "one of the most memorable and impactful programs I've been able to be a part of while an undergraduate student."

Food Industry University Coalition Student Industry Case Competition

A team of students from the Agricultural Economics Club took first place at a national event, the First Annual Food Industry University Coalition Student Industry Case Competition, held at the National Grocers Association annual meeting Feb. 23-26 in Las Vegas. Teams from eight universities took part, developing recommendations to help grocers use social media effectively. The team included Bethany Coon, Brandon Davis, Andrew Mason, Juan Rojas and Marshal Sewell.

Teresa Balsler appointed CALS dean



Photo Courtesy of Peck Studios

Teresa Balsler

University of Wisconsin-

Madison administrator Teresa Balsler has been named dean of UF's College of Agricultural and Life Sciences.

Balsler, who was previously director of UW-Madison's Institute for Cross-college Biology Education, will take the post July 1. She'll also be a professor with the soil and water science department.

"Dr. Balsler has great vision for the revitalization of the land-grant ideals," said Jack Payne, senior vice president for agriculture and natural resources. "She also brings great passion for teaching and a wonderful enthusiasm for positioning higher education to be leaders in the coming age by leveraging our capacity for creativity and growing diversity."

Balsler said she plans to place special emphasis on critical issues such as food and energy security.

As dean, she'll oversee all aspects of the college's undergraduate and graduate education programs, which involve about 5,100 students and 760 faculty members.

Balsler has been a member of the UW-Madison soil science faculty since 2001 and has directed the Institute for Cross-college Biology Education since 2008.

She was awarded a doctorate in soil microbiology from the University of California at Berkeley in 2000 and bachelor's degrees in biology and earth sciences from Dartmouth College in 1992.

In 2010, Balsler was named U.S. Professor of the Year by the Carnegie Foundation for the Advancement of Teaching, in the Outstanding Doctoral and Research Universities Professor category.

Balsler is the first woman appointed dean of CALS; she succeeds Mark Rieger, interim dean since September 2010.

Researchers sequence fruit genomes



Kevin Folta

part of a consortium that sequenced the genome of the woodland strawberry, a wild relative of today's cultivated strawberry varieties. The woodland strawberry is genetically less complex than its cultivated cousins, making it easier for scientists to use in research.

"We've created the strawberry parts list," Folta said. "Now we know the molecular

nuts and bolts that make up the strawberry plant."

With the help of the genome sequence, strawberry breeders may improve upon traits such as fruit quality and aroma. They might even be able to produce fruits containing higher levels of healthful phytochemicals.

Fred Gmitter, a horticultural sciences professor at the Citrus REC in Lake Alfred, took part in efforts to sequence the sweet orange and clementine mandarin. Though the citrus fruits look similar, the clementine has one set of chromosomes while the sweet orange has two.

Researchers hope that the gene sequences they've discovered will lead to new tools to fight citrus greening, a bacterial disease that poses the greatest threat to Florida's \$9 billion citrus industry.

Other possible benefits from the genome include methods of developing trees that better tolerate salt, bad soil and extreme temperatures, and produce more attractive, nutritious fruit.



Strawberries and citrus are two of Florida's most valuable crops, and IFAS researchers have paved the way for development of tastier, more disease-resistant varieties by leading genome-sequencing efforts for the fruits.

Kevin Folta, an associate professor with the horticultural sciences department, was

Pine consortium wins \$20 million grant



From left: Tim Martin, Gary Peter, Martha Monroe

Economically and ecologically, pine trees are one of the most important crops in the Southeast. In February, a UF-led consortium was awarded a five-year,

\$20 million federal grant to help pine forest landowners and foresters adapt to and mitigate climate change in the coming decades.

The grant was one of three funded by the USDA's National Institute of Food and Agriculture as part of a program to develop new ways of using farming and forestry for carbon sequestration — the practice of storing carbon via living plants and plant products to slow the buildup of carbon dioxide in the atmosphere.

Principal investigator Tim Martin, a professor in the School of Forest Resources and Conservation, said the grant will fund efforts to develop and deliver better management practices for southern pine — notably loblolly pine, which accounts for 80 percent of planted forest in the Southeast.

The project's ultimate goal is to help planted pine better withstand droughts, intense storms and increased pest and disease pressures associated with climate change, Martin said. To do this, the consortium will integrate research, education and outreach efforts.

Some specific aspects of the project include research to make trees grow faster and larger, with reduced need for fertilizer. The grant also will support field experiments to determine how soils, climate and management influence loblolly pine's carbon-sequestration potential.

Entomology building renamed Steinmetz Hall

The entomology and nematology building has a new name: Steinmetz Hall.

The building was formally dedicated May 25, to honor alumnus Charles Steinmetz and his wife Lynn for their recent \$5 million gift to the department. The funding will support three \$1 million endowed professorships as well as a research fund, an entrepreneurship fund and an existing student scholarship fund.

Each of the three endowed professorships will focus on a different area of critical importance — urban entomology, biosecurity and emerging pest management technology.

Charles Steinmetz is well known for moving Florida's pest management industry forward. He was an early advocate of baiting as an effective, cost-efficient and safe method of delivering pesticides to target organisms.

At the ceremony, Steinmetz reminisced about his early days in the business, and mentioned that he initially prepared his own baits, using materials such as peanut butter and sugar water.

The dedication ceremony was attended by members of the Steinmetz family, UF President Bernie Machen, UF Senior Vice President for Agriculture and Natural Resources Jack Payne, leaders in Florida's pest management industry and numerous department faculty.

The event included the unveiling of new signage and tours of the department.

Charles Steinmetz received a bachelor's degree in agriculture from UF in 1961. He began his career with

Orkin, working as a district branch manager. In 1977, Steinmetz bought Middleton Pest Control and later sold it to Sunair Service Corp. He founded All America Termite and Pest Control Inc. in 1982, and sold it to Sears, Roebuck and Co. in 1997.

Steinmetz received the UF Distinguished Alumnus Award in 1999.



You can't say Julie Padowski is afraid of getting in over her head.

A soil and water science doctoral candidate who hails from Springville, N.Y., Julie Padowski took on the question: How are the nation's urban water managers dealing with increased water demand? To answer it, she's looking at water resources not only in terms of what we have, but also in the way they're managed.

Selected as the 2010 recipient of a \$10,000 fellowship from the National Water Research Institute, Padowski expects to complete her urban water sustainability and management analyses in 2011. The work will include a survey of water utility managers around the country.

Padowski worked with Associate Professor Jim Jawitz for both her master's and doctoral degrees. She concedes her project is ambitious, but says it's in the spirit of the interdisciplinary National Science Foundation program she's in, which encourages young researchers to approach a problem from all angles.

"It's a big question, one that can be tackled with either breadth or depth," she said. "There were a lot of studies that look at water issues in-depth, but only locally ... no one has done this sort of large-scale investigation from a national perspective."

She doesn't believe we're in danger of running out of water, but predicts conservation efforts will remain front and center for urban water managers for years to come.

The 29-year-old says she finds water dominating her thoughts — but that it's not a bad thing.

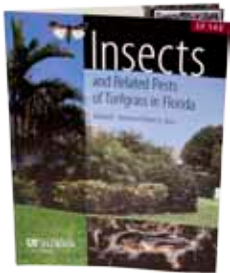
"You find in the end that it drives your everyday motivations and thoughts ... and that's what it takes to do projects like these. You have to be perpetually interested and thinking about them," she says. "The real key is to still find it exciting for however long you do it."

And she does. — MICKIE ANDERSON



New from the IFAS EXTENSION BOOKSTORE

We offer educational resources that deliver practical solutions for the challenges Floridians face. Our products are the result of collaborations between research scientists and educators from the UF campus, 13 Research and Education Centers, and 67 Cooperative Extension Service offices statewide.



Insects and Related Pests of Turfgrass in Florida

Mole Crickets...Chinch Bugs...Fire Ants... and more!

Learn how to identify and manage the 10 most common insects and related pests that infest Florida turfgrass. This newly revised edition features color photographs showing the pests, the damage they cause and how to control them. **SP 140, \$5**



Identification Guide to the Frogs of Florida

Here's a handy guide to the frogs and toads you might encounter around the pond, in the woods or in your own backyard. Each of Florida's 27 native and three nonnative species is identified with full color photos and information about their habitats, diet, range and breeding behaviors. **SP 468, \$16**



Florida Citrus: A Comprehensive Guide

From tree selection to product marketing, Florida Citrus: A Comprehensive Guide is an essential reference for all things citrus. The editors have distilled current research and historical data to explain how growers can make sound decisions toward achieving success and sustainability. **SP 278, \$30**



Get Healthy Together

This 15-lesson CD curriculum teaches children ages 7 to 10 and their caregivers about fun ways to eat right and stay healthy. Each lesson features learning activities, physically active games and recipes for healthy snacks. The CD includes detailed lesson plans, printable hand-outs and activity books, and evaluation forms. **SP 371, \$20**



Angler Shirt

Warmer weather's here and you'll look great in this short-sleeved angler shirt embroidered with an IFAS or IFAS Extension logo. Available in sizes S-XL, in your choice of gold, blue or white. **\$30**



IFAS Tote Bag

Lightweight yet sturdy, this reusable tote bag imprinted with the IFAS logo is perfect for a trip to the supermarket, gym or beach. **\$2**

For more information go to
IFASbooks.com
or call (800) 226-1764



Wayne Smith and Mitzi Austin.

Wayne Smith and Mitzi Austin

Former Director of the School of Forest Resources and Conservation (SFRC) Wayne Smith and his wife, Mitzi Austin, have pledged a gift of 231 acres of land in Jackson County, Fla., to ultimately establish an endowed professorship fund for SFRC, in conjunction with their estate plan.

Proceeds from the sale of the land will establish The Wayne Smith and Mitzi Austin Forest Resources Law and Policy Endowment, which will support an SFRC professorship to be used for teaching, research and extension activities and programs in forest resources policy and law, with an emphasis on conflict resolution.

Their gift is the first IFAS endowment to qualify for the newly established Faculty Now Initiative. Through this program, the university will provide the benefitting IFAS unit faculty support funding equal to approximately 4 percent of their endowment commitment total for three consecutive years starting in 2010.

“I grew up on a farm in rural Florida and the education I received at the University of Florida as a first generation college student provided the key that opened the wider world for me,” Smith said. “So Mitzi and I want to do what we can to provide similar opportunities for other young people in the future.”

Also included in their estate plan are gifts to the existing Wayne Smith Student Leadership Fund and the John Gray Fund for Excellence in Forest Resources and Conservation.



Ann and Harold B. Clark.

Harold B. Clark Award

Dr. John E. Clark of Baton Rouge, La., on behalf of the Clark family, has pledged \$100,000 to establish The Harold B. Clark Award in memory of his father, the late Harold B. Clark, a former UF food and resource economics professor and mentor to many foreign students.

Harold B. Clark was selected as a College of Agricultural and Life Sciences professor of the year in 1960 and the department's outstanding professor in 1968 and 1972. In addition to his teaching responsibilities, he traveled extensively to assist, lecture and plan agricultural programs in many areas of the world, including Bangladesh, Uganda, Belize, Venezuela, Pakistan, Algeria and Indonesia.

The fund will provide food and resource economics students an opportunity to travel and study abroad as well as provide venues to conduct dissertation research and present research results at professional meetings. It will also allow students to engage in research projects and professional development and employment opportunities, both in academia and the private sector.

Roseville Farms

The Mid-Florida Research and Education Center in Apopka held a dedication ceremony Sept. 29, 2010, for the Roseville Farms Research Greenhouse and the Roseville Farms Innovative Propagation Technology Training Laboratory.

Roseville Farms' generous donation of 17,000 square feet of greenhouse space, tissue culture laboratory equipment and funds for laboratory renovation created new



David Raab, left, owner of Roseville Farms, with Senior Vice President for Agriculture and Natural Resources Jack Payne at the dedication.

facilities for research and industry training at MFREC.

Roseville Farms was founded by David Raab and is the largest producer of clematis plants in North America.

About UF/IFAS Development

The IFAS Development program serves as the central fundraising effort to secure private support for UF/IFAS in partnership with the SHARE Council direct support organization and the UF Foundation, Inc. Charitable gifts provide the “margin of excellence” for IFAS academic, research and extension programs and facilities.

Ways to give

Your gift will ensure that UF/IFAS will continue to provide quality teaching, research and extension programs for the benefit of the people, food, agricultural and life sciences industries and natural resource interests of our state.

There are several ways you can make your contribution, including cash, securities, charitable bequests, life income gifts, real estate and life insurance.

For more information, contact the IFAS Development Office at (352) 392-1975 or visit the website at <http://development.ifas.ufl.edu>.



IFAS reaches Florida Tomorrow Campaign goal

In July 2005, the University of Florida launched its third and largest ever comprehensive campaign with a goal to raise \$1.5 billion in private gifts. The 7-year campaign will enhance funding for its teaching, research and extension programs and facilities. IFAS set its Florida Tomorrow campaign goal at \$100 million, and as of Dec. 31, 2009, the IFAS development program successfully achieved its goal with gifts totaling \$100,040,771.

The Florida Tomorrow Campaign

IFAS Campaign Summary

(7-1-2005 through 6-30-2010)

Donor Data:

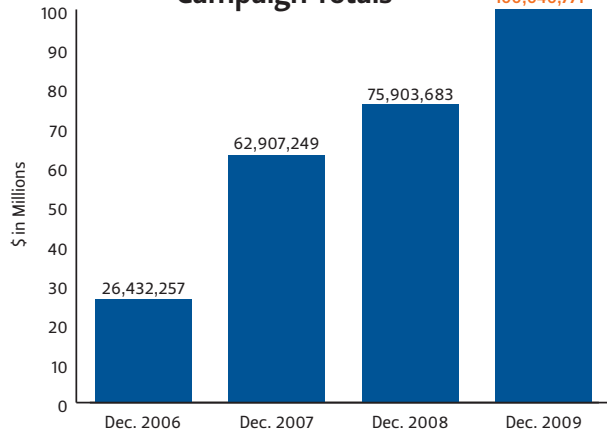
First-time donors	3,187
Repeat donors	2,373
Total donors to IFAS during campaign	5,560

Endowment Data:

Total new endowments	92
Total new endowment gifts	\$39,809,262

(excludes state match)

IFAS Florida Tomorrow Campaign Totals



*The IFAS Florida Tomorrow Campaign as of May 30, 2011, has received gifts totaling \$122,829,817.

On behalf of UF/IFAS, thank you to all of our alumni, friends and other entities that have made the IFAS campaign such a success to date.

2009-2010 Year-End Gift Report

As of June 30, 2010

Total Gifts **\$22,304,439**

Sources of Private Support

Organizations/Associations	\$1,030,406
Corporations	\$6,634,131
Alumni, parents and friends	\$13,883,595
Foundations	\$702,563
Faculty/Staff	\$53,744

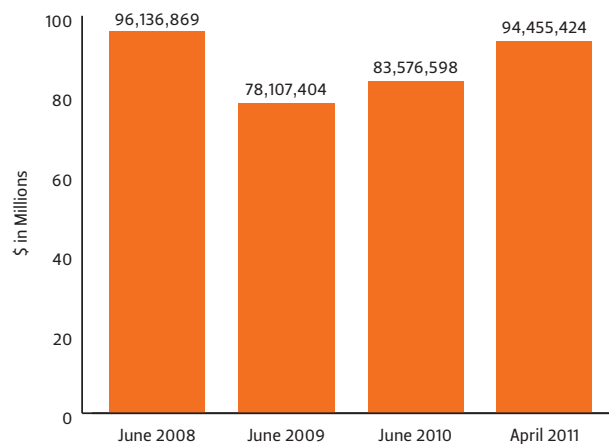
Endowments

Total portfolio value	\$83,576,598
Number of new IFAS endowed funds	8
Gift value of new endowments	\$290,510
Largest Single Gift	\$12,000,000

IFAS Endowments

Endowments are named, permanent funds that provide annual renewable support for donor-designated IFAS programs. Endowments are managed and invested by the University of Florida Foundation. As of June 30, 2010, more than 250 IFAS endowments have been established by individual alumni, businesses, organizations, associations and friends.

IFAS Endowment Values



FOR MORE INFORMATION, CONTACT THE IFAS DEVELOPMENT OFFICE

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OFFICE: (352) 392-1975 · FAX: (352) 392-5115 · ONLINE GIVING: [HTTP://DEVELOPMENT.IFAS.UFL.EDU](http://development.ifas.ufl.edu)

SPIDER SILK AND SUNRISE



As dawn breaks at the Plant Science Research and Education Unit in Citra, a spider puts the finishing touches on its web, built on a stalk of energycane. A close relative of sugarcane, energycane has garnered attention as a potential feedstock for bioenergy production, says Lynn Sollenberger, an agronomy professor. He's evaluating the crop for its water requirements, yield and chemical composition.

"Energycane contains small amounts of sugar and large amounts of the structural carbohydrate, cellulose," he said. "These characteristics, along with it being very well adapted to the Florida environment, make energycane one of the most promising grasses for use as a bioenergy crop in Florida."