



# NEWSLETTER

## SUMMER 2014



# Doctor of Plant Medicine Program



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- Ben Bolusky, Chief Executive Officer, Florida Nursery, Growers and Landscape Association
- Reggie Brown, Executive Vice President, Florida Tomato Exchange
- Richard Gaskalla, Director, Florida Department of Agriculture and Consumer Services, Division of Plant Industry
- Mary Hartney, President and Executive Director, Florida Fertilizer and Agrichemical Association
- Gary Hein, Doctor of Plant Health Director, University of Nebraska
- Joe Hodges, Vice President, The Andersons, Inc., Plant Nutrient Group Southern Region
- Paul Hornby, Florida State Plant Health Director, USDA-APHIS-PPQ
- Lisa Lochridge, Director of Public Affairs Division, Florida Fruit and Vegetable Association
- Madeline Mellinger, President, Glades Crop Care-Committee Chair
- Lacey Mount, Dellavalle Laboratory, Inc. Chair of the DPM Alumni Support Committee
- Martha Rhodes Roberts, Former FDACS, Deputy Commissioner of Agriculture, Adjunct Professor, University of Florida

### Faculty Advisory Committee

- Billy Crow, Entomology and Nematology Department
- Rebecca Darnell, Horticultural Sciences Department
- Nick Dufault, Department of Plant Pathology
- Jeff Jones, Department of Plant Pathology
- Norman Leppla, Entomology and Nematology Department
- Oscar Liburd, Entomology and Nematology Department
- Greg MacDonald, Agronomy Department
- Heather McAuslane, Entomology and Nematology Department
- Kimberly Moore, Environmental Horticulture Department, Ft. Lauderdale Research and Education Center
- Aaron Palmateer, Department of Plant Pathology, Tropical Research and Education Center
- Keith Schneider, Food Science and Human Nutrition Department
- Jason Smith, School of Forestry and Resources and Conservation
- J. Stacy Strickland, County Extension Director, Hernando County

### DPM Student Organization (DPMSO)

- Lisbeth Espinoza, President
- Wael Elwakil, Vice President
- Nicole Casuso, Treasurer
- Carla Burkle, Historian
- Amanda Hodges, Faculty Advisor

### DPM Program Staff

- Amanda Hodges, DPM Director
- Elena Alyanaya, DPM Program Assistant

# DPM NEWS

*Volume III, Summer 2014*

## Greetings!

<http://ufplantdoctors.org/>



## Plant Doctors: An Innovative Solution for Complex Systems

Food security, international trade, invasive species, environmental concerns, genetically modified organisms (GMOs), profitable agricultural production systems, water management, sustainable landscapes, and economic considerations: agricultural and plant health issues in the 21<sup>st</sup> century require a novel educational approach. The University of Florida, College of Agricultural and Life Sciences (UF, CALS) answered the need for agricultural education...

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## Faculty Highlight: Dr. Nicholas Dufault

Since the start of his employment with the University of Florida in November 2010, Dr. Nicholas Dufault has been involved with several academic activities that complement his role as a university faculty member. Dr. Dufault is an Assistant Professor and Extension Specialist in the Department of Plant Pathology, responsible for Vegetables and Agronomic Crops. Additionally, Dr. Dufault is involved in the Plant Science Research and Education Units Faculty Advisory Committee serving as the immediate past chair. In relation to the DPM program, Dr. Dufault serves as the Plant Pathology Department Liaison. The liaison sits on the DPM faculty advisory council and acts as a resource which students can use to ask questions or address concerns about plant pathology related topics. The liaison also coordinates the plant pathology faculty in preparation of the plant pathology DPM comprehensive written exam which is offered every semester.

Furthermore, Dr. Dufault aims to help reduce losses attributed to fungal diseases of agronomic and vegetable crops through monitoring, research, and education. His extension work more specifically targets peanut, cotton, potato, and watermelon producers throughout the state of Florida.

“My program uses fungicide trials to assist with product selection and to explore new or novel management strategies and products. Our research focuses on increasing our knowledge about environmental factors that affect disease, and assessing pathogen population diversity through molecular techniques and fungicide resistance. Ultimately, my goal is to help producers make educated and sound disease management decisions that will save them time and hopefully money.”

*...continued on page 4*

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**UF** UNIVERSITY of FLORIDA

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Aside from his extension appointment and traditional duties as a faculty member, Dr. Dufault has elected to serve as a committee member for several DPM students. Alumni that he mentored include Ken Johnson and Todd Leeson, while current committee involvements include serving as the chair for Christopher Ferguson, and as committee member for Wael Elwakil and Rebecca Barroco. His dedication to the DPM program and its students is reflected in his view of the program's overall effectiveness at training students for careers in academia and extension. When asked to qualitatively rate the program, Dr. Dufault responded with the following:

"I would rate the effectiveness of the training from the DPM program very high. Students have multiple opportunities to not only learn about integrated pest management strategies and other systems approaches to plant health, but also get hands-on experience. This experience can be through internships at the University and/or with external employment opportunities. The knowledge gained from these hands-on experiences provides DPM students with a unique training and educational experience that can build effective leaders. I think there are many career paths in both industry and academia that require this unique education and skill set."

**"Take advantage of every opportunity offered to you and enjoy what you do. Graduate school can be a stressful time, but it should be fun too."**

**"An expert is a person who has made all the mistakes that can be made in a very narrow field."  
— Niels Bohr**

*If a student was interested in working in your lab, what are some of the tasks and duties he or she could expect to be assigned?*

**Answer:** There are multiple tasks that students are assigned to in my laboratory. Because my program has strong extension component, we often investigate samples and plate colonies for disease identification. We process these samples so we can have an idea of about which fungi or other pathogens are present, and utilize that information when making a recommendation to a producer/grower. There are also many applied research projects that are conducted in my program. Each year the program will administer multiple fungicides trials for peanuts, watermelons and potatoes. These trials are setup each year to test new and novel products for fungal disease control as well as design and modify current spray programs. Students also have an opportunity to be a part of research projects examining fungicide resistance and pathogen biology related to the environment. One goal of my program is to provide producers and the industry not only with information for sound recommendations, but to better understand the pathogens involved in the different disease systems.

## NEW STUDENT PROFILE

We would like to welcome our new Summer 2014 student!



**"Flowers always make people better, happier, and more helpful; they are sunshine, food and medicine for the soul."  
- Luther Burbank**

*Jordan Williamson de Adames*

### Academic Credentials:

- B.S. in Entomology - Florida Agricultural & Mechanical University, Tallahassee, FL
- M.S. in Entomology, Specialization in IPM - Florida Agricultural & Mechanical University, Tallahassee, FL

### Why DPM?

I choose to dedicate my doctoral studies to the Doctor of Plant Medicine Program because of the extensive multi-disciplinary hands-on activities that it provides for agriculturalists becoming professionals. My background is based heavily in the entomology field, as I searched for doctoral programs I wanted my research focus to be more involved on the other aspects that have impacts on plant health this time around. Being a native Floridian and daughter of a Florist, I have always been interested in tropical fruit and ornamentals. I have understood their importance in our environment from a very young age. The University of Florida has the most prestigious plant research and educational programs in the state of Florida and also great relationships with local growers in our tropical environment. As a DPM student, I will be able to collaborate with these research and extension entities for real-world practical knowledge. Plants have a special place in my heart, and this is why I choose to be their protector. My goal is to expand and excel my knowledge within the tropical fruit and plant sector in order to aid in future assessment tools and diagnostics of diseases and pathogens affecting plant species.

## PROGRAM NEWS & DEVELOPMENT

For more details on each of the following stories and to stay informed of the most recent events and important announcements regarding the DPM program, be sure to check out our Facebook page at:

<https://www.facebook.com/pages/UF-Doctor-of-Plant-Medicine-Program/179188882121511>



You can also tune into our IFAS blog, updated regularly by Dr. Amanda Hodges, available at: <http://blogs.ifas.ufl.edu/plantmedicine/>.

*Continued from 3*

...innovation in 1999. Traditional doctoral (PhD) programs in plant pathology, entomology, nematology, agronomy, horticulture, and soil science focus on one disciplinary component of plant health problem-solving. Furthermore, many PhD graduate programs provide detailed study for only a subset of the discipline or an individual species. The traditional PhD has primarily trained graduates for placement in academic faculty positions. The question remains—why do higher education institutions continue to produce large numbers of highly specialized PhD candidates trained for only a few academic positions? Today, both the University of Florida and the University of Nebraska (<http://dph.unl.edu/>) offer the only worldwide interdisciplinary professional Plant Doctor educational programs.

As the UF, DPM Program Director, I am interested in increasing Plant Doctor educational enrollment. Our enthusiastic alumni and students prove the DPM Program's success and future potential. Our graduation rates for the Plant Doctor profession do not meet our increasing employer needs. Each edition of *DPM News* highlights accomplishments of our outstanding alumni. During the spring of 2014, *DPM News* also included a Faculty Highlight. Our DPM UF Faculty are PhD discipline-trained scientists who understand the value of the Plant Doctor profession. Although expanded student enrollment and program offerings would benefit the Plant Doctor profession, student enrollment limits should occur once graduation rates approach demand for employment opportunity. During 2013-2014, the UF DPM Program began intensively following the achievements of alumni. Statistics relating to our alumni will be periodically updated on our website and in *DPM News*.

Profile statistic information for our UF Graduate School PhD programs is available at:

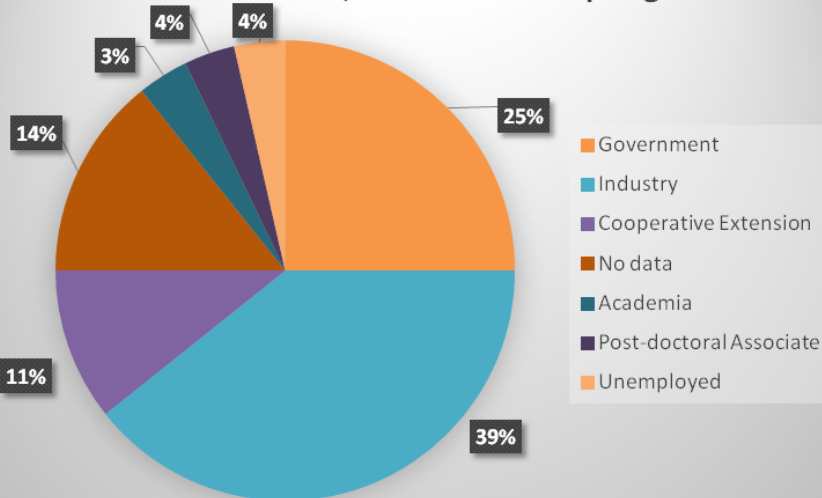
<http://graduateschool.ufl.edu/>

The following is a combined 2008-2013 summary of the UF discipline department data for Plant Pathology, Entomology and Nematology, Forest Resource and Conservation, Agronomy, Horticultural Sciences, and Soil and Water Science. A total of 228 graduates occurred from the collective disciplines. Each department averaged 38 graduates, and the total number of graduates per department ranged from 19 to 63. The overall average job placement per department following graduation is:

- Faculty: 17%
- Non-Academic Appointment: 27%
- Post-doctoral associate: 41%
- No Data: 15%

Within a similar time-frame, the DPM Program graduated 28 students. The data below provides the latest information as of July 2014 regarding DPM employment data for 2008-2013 graduates, according to DPM Program data collected from alumni. It should be noted that the PhD profile data as presented above only provide automatically generated data from the UF Graduate School immediately following graduation. As mentioned in our online DPM information related to the job placement of all alumni, the DPM degree prepares students for jobs. Many of our graduates are in high-demand and may change jobs 2 or 3 years following initial employment. Other graduates choose to remain with their initial employer as his/her job satisfaction is so high. High quality, motivated DPM graduates have unlimited job potential for employment as professional Plant Doctors.

DPM Alumni Jobs, Summer 2008-Spring 2013



Most PhD graduates interested in academia will spend an extended career as either a post-doctoral associate or a non-tenure track faculty member. The historical model for PhD education focuses on student job placement in tenure-track, academic positions. Within Florida and throughout the U.S., the job opportunities do not relate to the number of current PhD students.

## Plant D.O.C.T.O.R.S

*Diagnostic Observers Collaborating To Obtain Real Solutions*

The professional Plant Doctor (DPM/H) programs prepare students for real-world, interdisciplinary agricultural and plant health jobs. Students entering the professional Plant Doctor program need a strong scientific background (BS) in the biological or agricultural sciences. Intensive agricultural production knowledge is not necessary prior to entering the DPM program, but a passion for learning is an essential ingredient to success.



## Plant Doctor Training - the Benefits of a Florida Education

Although Florida is often associated with tourism and urban sprawl, agriculture continues to be a vital component of our economy. The following information is a direct quote from the Florida Department of Agriculture and Consumer Services (FDACS) website -

[www.freshfromflorida.com](http://www.freshfromflorida.com)

“Florida has 47,500 commercial farms, using a total of 9.25 million acres; Florida ranks second in the value of vegetable production; first in production value for oranges, grapefruit, fresh snap beans, sweet corn, watermelons, fresh cucumbers, fresh market tomatoes, squash and sugarcane; second in the production of greenhouse and nursery products, bell peppers, strawberries, and tangerines; 12th in beef cows; and accounts for 65 percent of total U.S. citrus production. Florida ranks seventh in agricultural exports with \$4 billion.”

Students enrolled within the University of Florida, DPM program benefit from the expertise of faculty from 7 primary discipline departments, 10 Research and Education Centers, and the Gainesville, Florida campus. The University of Florida also houses the [Southern Plant Diagnostic Network \(SPDN\)](#) Regional Center. The majority of DPM students complete their Plant Diagnostic Internship in the SPDN Regional Center Hub Laboratory. The SPDN has also served as the lead regional center for the [National Plant Diagnostic Network \(NPDN\) First Detector](#) educational program since 2002. DPM students continue to have opportunities to develop invasive species presentations and e-learning modules. When participating in NPDN or affiliated invasive species education, DPM students become familiar with emerging and urgent plant health issues. In recent years, an average of two new non-native arthropods per year have established in Florida alone. Continued efforts to educate highly trained Plant Doctors may assist in the development of novel approaches for prevention, pest management, and issue prioritization. Our DPM students also have opportunities to learn from outstanding regulatory, diagnostic, and applied research expertise within FDACS, Division of Plant Industry (FDACS-DPI) and the USDA-APHIS-PPQ. FDACS-DPI has one of the most substantial state-based diagnostic facilities in the country, and houses one of the largest arthropod reference collections in North America, the Florida State Collection of Arthropods (FSCA). The combination of expertise collaboratively in Gainesville and throughout the state of Florida provides an ideal environment for optimal student learning. USDA-APHIS-PPQ has a significant cohort of professionals employed in Florida. Furthermore, potential USDA-APHIS-PPQ internship opportunities for students may occur throughout the U.S.

Friends, alumni, students, and faculty - thank you for your continued support of the Plant Doctor Profession and the UF, DPM Program! The success of our students and alumni continues to depend upon the contributions and efforts of many, including you! Thank you for your interest in reading *DPM News*, and your feedback or comments are always welcome!

-Amanda Hodges ([achodges@ufl.edu](mailto:achodges@ufl.edu))  
DPM Director

## Latin-American and Caribbean (LAC) Scholarship

Insight from a Recipient - by *Lisbeth Espinoza, 3rd Year DPM Student*

Highly competitive students from Caribbean, Central, and South American countries may be eligible for the UF, DPM Latin-Caribbean (LAC) Scholarship (<http://www.ufic.ufl.edu/iss/LACScholarship.html>). The UF, DPM LAC Scholarship allows international students to qualify for state of Florida tuition rates. Eligible students should contact DPM Program Director Amanda Hodges [achodges@ufl.edu](mailto:achodges@ufl.edu) with further questions.

### *What is your perspective regarding the UF, DPM LAC Scholarship?*

"I am honored to serve as a UF, LAC Scholarship recipient as it has allowed me to pursue a degree in the DPM Program at the University of Florida. Additionally, my native country of Ecuador will benefit from my knowledge gains through the assistance I will provide to farmers upon degree completion. I plan to utilize my DPM training in order to increase and enhance Ecuador agricultural cropping systems by providing interdisciplinary advice and problem-solving solutions to local farmers. In doing this, I can help increase and enhance their cropping system."



#### DPM Student Photo Credits

Top left: Lisbeth Espinoza, 3rd Yr, *DPMSO President*

Bottom left: Wael Elwakil, 3rd Yr, *DPMSO Vice President*



## DPMSO - Fundraising pays off!

### *"Behind the Seeds" Tour*

### *Epcot in Orlando, FL*

The Doctor of Plant Medicine Student Organization strives to strengthen the bonds between DPM students while providing them unique opportunities to network, develop professionally, and participate in extracurricular activities that help condition our members to become proficient Plant Doctors.

On June 28, 2014, seven DPM students (pictured below from left to right: Eric Leveen, Daniel Mancero, Kayla Thompson, Lisbeth Espinoza, Tatiana Sanchez, Chris Ferguson, and Wael Elwakil) had the opportunity to attend an educational field trip at Walt Disney World's Epcot. In specific, *The Land Pavilion* at Epcot features a one-hour "Behind the Seeds" Tour of advanced hydroponic, agricultural, and aquaculture systems.

As a result of fundraising efforts from the past academic year, these students were granted travel stipends to attend not only the tour, but also spend the rest of day enjoying the theme park! More photos of tour will be uploaded to the [UF Doctor of Plant Medicine](#) Facebook page, so stay tuned!

Interested in learning more about this tour? Or want to schedule a visit? Check out the website at: <https://disneyworld.disney.go.com/events-tours/epcot/behind-the-seeds/>



# Advancing Professional Development

The DPM Program provides numerous opportunities for hands-on activities, field trips, and conference attendance. Students were able to learn about the operation efforts of industry, regulatory officials, and visit one of Florida's Research and Education Centers by attending a professional development trip to Fort Lauderdale and Miami during May of 2014. The May 2014 field trip was provided to students during the break between the spring and summer semesters in order to provide improved accessibility for personal development.

## Costa Farms Tour - May 9, 2014

DPM alumnus Dr. Michael Merida (*featured on page 6*), Production Manager, Foliage Division, Costa Farms was one of the tour leaders. DPM Faculty Advisory Committee Member Dr. Aaron Palmateer, UF Tropical Research and Education Center (TREC), also provided local leadership for the tour. Photos *left* and *below* provided by Ian Maguire, UF, TREC.



*“Premier Plant Doctor Training for Industry, the Private Sector, Government Employers, and Academia”*



## Port Everglades, the USDA-APHIS-PPQ Miami Inspection Station, & FLREC - May 8-9, 2014

DPM alumna Dr. Esther Serrano, USDA-APHIS-PPQ Identifier at Port Everglades provided key leadership for the tour. DPM Faculty Advisory Committee Member Dr. Kimberly Moore, Fort Lauderdale Research and Education Center provided the FLREC tour.

# Alumni Spotlight -

An interview with Dr. Mike Merida, *by Nicole Casuso, 1st Year DPM Student*



**Q. Can you share with us your academic background?**

**A.** I earned my bachelors of science degree through the Horticulture Department at the University of Florida in 2001. In 2002, I enrolled in the DPM program and graduated in May 2006.

**Q. Please describe your current occupation.**

**A.** I currently work as the Foliage Production Manager for Costa Farms where I manage over 800 acres of production. Primary responsibilities include managing growing practices, pest & disease management, field scouts, the potting department, live goods receiving, standards and process improvements, budgets and perpetual inventory.

**Q. What prompted you to pursue a career in industry?**

**A.** During my last internship prior to completion of my DPM degree, I worked for a large field nursery that produced different species of palms for landscape installations. This is when I felt that private industry would be the appropriate sector to apply the strong curriculum the DPM program provided.

**Q. Why did you choose the DPM program?**

**A.** I chose to pursue a degree in the Doctor of Plant Medicine program because of the strong base it would provide me upon graduation. It allowed me to grow within the company at a faster rate, applying all aspects from disease and insect diagnosis to crop nutrition and every other discipline in between.

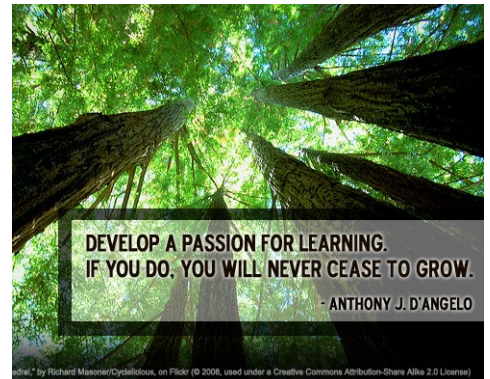
**Q. On a personal and professional level, how has your DPM degree influenced you?**

**A.** The DPM degree has not only opened many opportunities within the company but has also allowed me to grow within the industry. As a result of the extensive knowledge gain I received, I have been able to build strong relationships with companies dealing in various fertilizers, pesticides, soil products, herbicides, and biological agents. Earning a DPM degree is one of my proudest moments and continues to benefit me as a professional in plant world. Dr. Agrios had a great vision, and we as alumni, current students, and faculty are pioneers of his vision. I certainly have not looked back nor do I regret the decision I made years ago to pursue a DPM degree.

**"The only place success comes before work is in the dictionary"**  
- Vince Lombardi

## If the shoe fits... why DPM might be right for you!

*Nicole Casuso, 1st Year DPM Student*



**DEVELOP A PASSION FOR LEARNING.  
IF YOU DO, YOU WILL NEVER CEASE TO GROW.**  
- ANTHONY J. D'ANGELO

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Website: <http://dpm.ifas.ufl.edu/>

Wondering if the DPM program is the path you might want to pursue? Ask yourself the following questions and find out!

1. Are you passionate about the environment, agriculture, epidemiology, or insects?
2. Are you interested in experience that is hands-on, internships with local businesses or federal agencies, field work, and multidisciplinary studies?
3. Do you want to find work in academia, private industry, or government?
4. Do you like community outreach, networking, and attending workshops and scientific conferences?
5. Do you prefer application-based science?

If you answered **yes** to most of these questions, then we strongly encourage you to explore your options with the University of Florida DPM Program!

**Nicole Casuso**, Editor

*DPM Student - University of Florida*

**Amanda Hodges**, Ph.D., Co-Editor

*DPM Director - University of Florida*

**Questions, comments, or submissions?**

Email: [ncasuso@ufl.edu](mailto:ncasuso@ufl.edu) | [achodges@ufl.edu](mailto:achodges@ufl.edu)

**UF UNIVERSITY of FLORIDA**  
The Foundation for The Gator Nation





## DPM Students

Interested in learning more about our current DPM students?  
Visit our website at: [http://www.dpm.ifas.ufl.edu/current\\_students.html](http://www.dpm.ifas.ufl.edu/current_students.html)



Rebecca Barocco  
Arkansas, USA



Jamey Betts  
Georgia, USA



John Bonkowski  
Delaware, USA



Carla Burkle  
Florida, USA



Nicole Casuso  
Florida, USA



Theresa Chormanski  
Florida, USA



Morgan Conn  
Florida, USA



Wael Elwakil  
Egypt



Lisbeth Espinoza  
Ecuador



Christopher Ferguson  
Kentucky, USA



Tamika Garrick  
Jamaica



Christopher Kerr  
Florida, USA



Greg Kramer  
Florida, USA



Eric LeVeen  
South Carolina, USA



Daniel Mancero  
Ecuador



Alicyn Ryan  
Maine, USA



Tatiana Sanchez  
Colombia



Keumchul Shin  
South Korea



Lanette Sobel  
Florida, USA



Bruce Stripling  
Georgia, USA



Kayla Thomason  
Florida, USA



Jordan Williamson  
Florida, USA



*Thank you for  
reading!*



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All photos on the front and back covers of this newsletter were taken by Nicole Casuso, University of Florida, 1st year Doctor of Plant Medicine Student