

# Focus Team Year in Review

January –December 2009

## G4F4 – Effective Pest Management

*Faculty (as of 2/08/10-data are preliminary; do not distribute as final or use in reporting)*

	Faculty Name	Unit	Effort*
1	Adcock, Collin W	Washington County - Northwest	15%
2	Alleyne, John C	Highlands County - South	20%
3	Arthurs, Steven P	Mid-Florida REC - Apopka	100%
4	Bolques, Alejandro	Gadsden County - Northwest	5%
5	Brown, Stephen H	Lee County - South Central	10%
6	Burn, Brooke L	Sumter County - Central	20%
7	Buss, Eileen A	Entomology & Nematology	100%
8	Caldwell, Douglas L	Collier County - South Central	25%
9	Chen, Jianjun	Mid-Florida REC - Apopka	30%
10	Chung, Kuang R	Citrus REC - Lake Alfred	5%
11	Cisar, John L	Ft Lauderdale - REC	10%
12	Connelly, Cynthia R	FL Medical Ento Lab - Vero Beach	3%
13	Crow, William T	Entomology & Nematology	90%
14	Davis, Jr, James E	Sumter County - Central	10%
15	Denny, Geoffrey C	Gulf Coast REC - Balm	15%
16	Dessaint, Margaret	Manatee County - South Central	49%
17	Devalerio, James T	Bradford County - Northeast	10%
18	Eckhardt, Erin Harlow	Duval County - Northeast	80%
19	Elliott, Monica L	Ft Lauderdale - REC	50%
20	Eubanks, Shepard D	Holmes County - Northwest	10%
21	Fasulo, Thomas R	Entomology & Nematology	10%
22	Fedunak, Charles A	Lake County - Central	5%
23	Felter, Elizabeth A	Orange County - Central	10%
24	Frank, J H	Entomology & Nematology	25%
25	Gazula, Aparna	Alachua County - Northeast	15%
26	Gillett-Kaufman, Jennifer L	Entomology & Nematology	50%
27	Harmon, Carrie Lapaire	Plant Pathology	25%
28	Henry, Mary E	Hillsborough County - South Central	40%
29	Holmes, David B	Marion County - Central	5%
30	Hunsberger, Adrian	Miami-Dade County - South	35%
31	Jacobson, Dianne Dilger	Highlands County - South	5%
32	Jordi, Rebecca L	Nassau County - Northeast	10%
33	Kern, Jr, William H	Ft Lauderdale - REC	10%
34	Knox, Gary W	North Florida REC - Quincy	10%
35	Lamborn, Alicia Ramirez	Baker County - Northeast	10%
36	Lenhardt, Matthew A	Citrus County - Central	30%

37	Mackay, Wayne A	Mid-Florida REC - Apopka	2%
38	Mahan, Jr, William T	Franklin County - Northwest	5%
39	Mayer, Henrique	Miami-Dade County - South	20%
40	Mitchell, Ralph E	Charlotte County - South Central	15%
41	Mizell, III, Russell F	North Florida REC - Quincy	25%
42	Morse, Jane V	Pinellas County - South Central	70%
43	Mossler, Mark A	Agronomy	10%
44	Olczyk, Teresa	Miami-Dade County - South	30%
45	Orfanedes, Michael S	Broward County - South	15%
46	Palmateer, Aaron J	Tropical REC - Homestead	40%
47	Park Brown, Sydney G	Gulf Coast REC - Plant City Campus	15%
48	Parker, Lelan D	Orange County - Central	45%
49	Pelham, Jennifer L	Osceola County - Central	45%
50	Popenoe, Juanita	Lake County - Central	30%
51	Price, James F	Gulf Coast REC - Balm	40%
52	Rainey, Donald P	Sarasota County - South Central	25%
53	Ramos, Jennifer Mae	Orange County - Central	20%
54	Rudisill, Ken R	Bay County - Northwest	25%
55	Schall, William Lawrence	Palm Beach County - South	40%
56	Seals, Linda M	Brevard County - Central	45%
57	Sewards, Joseph J	Putnam County - Central	10%
58	Shibles, David B	Polk County - South Central	25%
59	Shives, Sylvia A	Manatee County - South Central	20%
60	Stamps, Robert H	Mid-Florida REC - Apopka	9%
61	Thralls, Edmund L	Orange County - Central	10%
62	Unruh, Joseph B	West Florida REC, Milton	20%
63	Vallad, Gary E	Gulf Coast REC - Balm	20%
64	Warren, Mark W	Flagler County - Central	5%
65	White, Celeste T	Orange County - Central	45%
66	Williams, Larry L	Okaloosa County - Northwest	10%
67	Worthen, Dreamal I	FAMU	5%
68	Zerba, Jr, Raymond H	Clay County - Northeast	10%

\* Represents the faculty member's estimated time spent in this focus area as a portion of all programmatic effort expended during the year.

*Clientele Contacts (as of 2/08/10-data are preliminary; do not distribute as final or use in reporting)*

Comparison Group	Educational Materials	Field Visits	Office Visits	Group Participation	Phone Consults	Email Consults	Web Visits*
G4F4	4,299	1,337	23,072	50,791	22,601	21,615	2,465,382
Goal 4	19,524	17,000	152,398	702,893	163,417	232,732	12,182,649
All Goals	44,391	133,486	280,790	3,249,265	445,520	754,161	83,549,490

\*Web Visits may contain duplicated counts.

*Volunteers (as of 2/08/10-data are preliminary; do not distribute as final or use in reporting)*

Comparison Group	Volunteer Headcount	Volunteer Hours
G4F4	461	32,082
Goal 4	4,502	299,994
All Goals	34,714	1,342,999

*Multi-State Activity (as of 2/08/10-data are preliminary; do not distribute as final or use in reporting)*

State	Faculty Headcount
Alabama	1
California	1
Georgia	3
Texas	2
Guam	1
Puerto Rico	2
U.S. Virgin Islands	2
Unduplicated Headcount	8

*Outcomes (as of 2/08/10-data are preliminary; do not distribute as final or use in reporting)*

Comparison Group	Number Evaluated for Change in Knowledge	% Who Changed	Number Evaluated for Change in Behavior	% Who Changed	Number Evaluated for Change in Condition	% Who Changed
G4F4	7,520	92.0%	5,553	66.7%	2,878	55.1%
Goal 4	58,937	90.7%	43,593	70.7%	18,270	56.7%
All Goals	397,547	86.7%	283,225	75.9%	109,293	63.4%

*Impacts (as of 2/03/10-data are unedited and preliminary; do not distribute as final or use in reporting)*

Faculty (Author)	Unit	Impact/Outcome/Success Story
Adcock, Collin W	Washington County - Northwest	<p>o 79% of 48 attendees for the “Growing Herbs” educational program indicated they learned the basics on how to properly grow herbs as a result of this program. While 83% said they learned proper fertilizer techniques and 56% indicated they learned how to control herb pest properly. This indicates a positive interaction that may result in better resource conservation and a cost savings by growing herbs at home.</p> <p>o Helped 330 people correctly ID pest and disease problems from samples and provide economical solution to their problem through Field visits, Office</p>

		consultations, and phone calls. This also increases the county's awareness of extension services. This result indicates the ability to provide and serve the public on issues that could lead to resource conservation, better environmental conditions, and a production cost savings. It also helps follow up with objective 6.
Arthurs, Steven P	Mid-Florida REC - Apopka	Implemented biological pest control programs for landscape maintenance company. This approach involved evaluating beneficial arthropods that could be used to control various insect pests that were normally sprayed with chemical insecticides. This allowed the maintenance company to reduce its use of chemical pesticides at various locations around the greater Orlando area
Bolques, Alejandro	Gadsden County - Northwest	In 2009, 388 homeowners and landscape maintenance personnel attend six extension programs that provided knowledge and skills in home horticulture, landscape culture and maintenance, pest management options, new product information, and pesticide-use and safety to better manage their residential landscapes and the environment. Of these, 120 attendees were abroad that received landscape maintenance training in Guayaquil, Ecuador because of internationalizing extension efforts.
Brown, Stephen H	Lee County - South Central	Quick identification and treatment of the new Croton Scale within a week of taking the class that Stephen offered at Terry Park
Burn, Brooke L	Sumter County - Central	40 % of surveyed participants (n=192) managed yard pests responsibly by using UF/IFAS recommended pesticides, 33% used the least toxic pesticides available, such as soaps and oils, 21% decreased pesticide usage, and 35% read labels more carefully, 43% applied pesticides as a spot treatment rather than broad applications, and 21% handpicked or pruned out insect pests instead of using pesticides. 149 out of 192 participants practiced effective pest management principles.
Buss, Eileen A	Entomology & Nematology	I provided some training on turfgrass insect pest management to a local pest control company in November 2009. In the talk, I explained why a shovel is an important tool for monitoring pests, determining soil conditions, and for pesticide spill control. Only half of the company's 100 pest control, termite, and lawn trucks carry a shovel, and the senior operations manager is making sure the other 50 trucks get one so they can do better pest management and be prepared for emergencies.
Caldwell, Douglas L	Collier County - South Central	23% (n=74) in the post-class surveys stated they get an increase in salary if they obtained the pesticide certificate; 46% (n=74) stated they though they may get a salary boost once they passed the test.
Chen, Jianjun	Mid-Florida REC - Apopka	Isolated Ficus benjamina cultivars that were resistant to Gynaikothrips uzeli and also isolated a predator from the infested plants can control this invasive thrips.
Chung, Kuang R	Citrus REC - Lake Alfred	Participate in extension and education programs focusing on the control of foliar fungal diseases of citrus as a coauthor in several fact sheets in the 2009 Florida Citrus Pest Management Guide.
Cisar, John L	Ft Laud - REC	Demonstrated the efficacy of new treatments leading to the improvement in turf.
Connelly, Cynthia R	FL Medical Ento Lab - Vero Beach	Mosquito biologists in Florida were trained to properly identify the 80 mosquito species that occur in the state. Many of the 80 species are not pests and are not important vectors of disease. If mosquitoes are misidentified, or not identified at all, insecticides may be used unnecessarily. By using the skills to identify mosquitoes properly, they reduce the amount of insecticides used to target mosquitoes and/or they utilize techniques that do not require pesticides, such as dumping out water-holding containers.
Davis, Jr, James E	Sumter County - Central	Outcomes *76.9% of the 30 Master Gardeners that responded through a follow up survey stated they have decreased their pesticide use after attending the Sustainable Landscape Program.

		<p>*100% of the 30 Master Gardeners that responded through a follow up survey stated they spot treat pests only when needed after attending the Sustainable Landscape Program.</p> <p>*100% of the 30 Master Gardeners that responded through a follow up survey successfully named more than three beneficial insects in the landscape.</p> <p>Impacts University of Florida research reports that improper pesticide use can harm beneficial such as honeybees and other organisms. Teaching Master Gardeners to adopt at least three methods in using pesticides more appropriately is one step in protecting our natural resources in Sumter County, as well as around the State. University of Florida research states that improper use of pesticides can dramatically affect the reducing of beneficial insects. The value of beneficial insects is reported to be highly underestimated. Master Gardeners share and help educate residents on lessons learned taught in the Natural Resource Conservation program. Educating Master Gardeners on the importance of spot treating for pests, reducing pesticide use and using methods to not eliminate beneficial organisms will help keep our environment healthy and safe.</p>
Dessaint, Margaret	Manatee County - South Central	<p>Success Story— Teaching Methods Pay Off</p> <p>We have made a concerted effort to include hands-on training in the recertification classes (as opposed to lecture only). For example, we have included glow-germ/black light to illustrate proper pesticide hand-washing;; used spill kits to demonstrate how to clean up pesticide spills; brought multiple plant problem samples for participants to identify, including use of a microscope; and included a grounds walk-through for looking at plant problems in situ. This has resulted in many positive comments, such as: “I’ve never been to a class where there are live samples” and “Now I understand because I can see the pest under the microscope.” One pesticide applicator informed me that after he attended the class on how to properly rotate pesticides based on mode of action, he returned to his storage shed and reorganized his products, shelf by shelf, based on mode of action. A result of this type of hands-on approach is to “make real” a host of plant problems and possible solutions. This is seen in the positive evaluation results (stated above) where 74 out of 89 participants in four classes expressed economic benefits and environmental concern due to new pesticide and landscape information. This benefits Extension as a whole because customers see us as a useful industry resource that improves their bottom line. Environmental protection is enhanced as a result of their actions.</p>
Eckhardt, Erin Harlow	Duval County - Northeast	In 2009, 207 individuals completed the Limited Commercial Landscape Maintenance Workshop. Of the participants surveyed (n=77), 93.5% (72) indicated that they gained knowledge in the areas of pesticide labels, integrated pest management, and landscape management.
Elliott, Monica L	Ft Lauderdale - REC	A 2-day intensive palm management training program was held three times in 2009 - twice at the Fort Lauderdale Research and Education Center and once in Pinellas County. Included in this training is information on palm disease management. Of the 99 persons who completed the evaluation form, 85% of the participants indicated they would be changing their disease management practices as a result of this training. 80% indicated they would highly recommend (5 on a 1 to 5 scale) this training to a colleague.
Eubanks, Shepard D	Holmes County - Northwest	Agent instructed 150 Holmes County homeowners and landowners how to properly care for their lawns and properly apply pesticides as needed. This resulted in protecting the environment and water resources.
Fasulo, Thomas R	Entomology & Nematology	The State of Georgia approved my 35 CEU tutorials for use in that state. In early 2010, I will be working with the Georgia Pest Control Association to develop a Web site listing the CEU categories for each tutorial. This makes a total of five states,

		including Florida, that approve these tutorials for licensed pesticide applicator renewal.
Frank, J H	Entomology & Nematology	Success: Research on biological control of pest mole crickets. The beneficial wasp <i>Larra bicolor</i> has now been reported from 46 of Florida's 67 counties. It can out-reproduce its mole cricket hosts. This gives incentive to homeowners with lawns (guided by extension agents) to install nectar-source plants in locations where a higher level of control of pest mole crickets is desired.
Gillett-Kaufman, Jennifer L	Entomology & Nematology	<p>Buss, E.A. and J.L. Gillett-Kaufman. 2009. Basic Tree and Shrub Pest Management. UF/IFAS Pest Management University. Apopka, FL. October 29. (19 participants)</p> <p>Buss, E.A. and J.L. Gillett-Kaufman. 2009. Basic Turf Pest Management. UF/IFAS Pest Management University. Apopka, FL. October 28. (26 participants)</p> <p>Buss, E.A. and J.L. Gillett-Kaufman. 2009. Basic Turf Pest Management. UF/IFAS Pest Management University. Apopka, FL. March 25. (24 participants)</p> <p>Buss, E.A. and J.L. Gillett-Kaufman. 2009. Basic Tree and Shrub Pest Management. UF/IFAS Pest Management University. Apopka, FL. February 25. (27 participants)</p> <p>Our landscape plant health care stakeholders need reliable training that is focused on the latest research and that will provide their companies with tools to improve human health, the environment, and/or the community by minimizing calendar pesticide applications and using a more targeted approach for managing key pests in urban landscapes.</p> <p>Assess the training needs of pest management professionals that would provide essential knowledge and skills to conduct reduced-risk pest management in the urban landscape.</p> <p>A needs assessment or task analysis was conducted with representatives of the landscape pest management industry, UF/IFAS county and state faculty, and the Florida Department of Agriculture and Consumer Services. Topics discussed included programs or training that are currently being offered within individual pest control companies or through private consultants, county and state Extension faculty, and trade organizations (e.g., Florida Pest Management Association, Florida Turfgrass Association, International Society of Arboriculture). The knowledge and practical skill set that ID card holders (usually the technicians) and PCOs (usually the owners, managers, or technical directors) should have to efficiently and safely select, prepare, transport, and apply pesticides against damaging pests within an integrated pest management (IPM) program will be identified. The availability of existing programs was compared with the knowledge and skills needed to safely manage pests in the urban environment, and priority topics for basic training material that would prepare pest managers for training at Pest Management University (PMU) was identified.</p> <p>Develop a basic, hands-on curriculum for pest management professionals that focuses on environmentally-responsible arthropod pest management.</p> <p>Cooperators from private companies and University of Florida county and state faculty were asked to share with us any presentations, handouts, or exercises that they use or have used in their training for PCOs and ID card holders. These materials were evaluated for inclusion in PMU training modules.</p> <p>Training modules include aspects of pesticide label reading, proper application techniques for use against key turf and ornamental pests, equipment calibration and basic math, chemical spill response, developing an integrated pest management program for key pests, or pesticide resistance management.</p> <p>One-day trainings can be offered at the Mid-Florida Research and Education Center through PMU. Pest managers and county faculty who attended were provided with a certificate, and a binder with all of the materials provided. The content of the binder was explained and hands-on exercises were demonstrated. The knowledge gained by pest managers and county faculty as a result of the training was assessed using a pre- and post-test each time the training is offered.</p>

		Of the 93 people trained all of them reported that they had a change in knowledge about pest management that would help them with their jobs.
Harmon, Carrie Lapaire	Plant Pathology	Phone consultations with a producer of salad greens helped him devise a new way to prevent disease epidemics in his greenhouses. This increased the number of cuts he could make, increasing his profitability and reducing inputs.
Henry, Mary E	Hillsborough County - South Central	With shrinking budgets around the state, public institutions are taking advantage of programs using inmates or those with community service sentences to perform basic labor required for maintaining buildings. Inmates from the State of Florida's Hillsborough Correctional Institution perform many of the maintenance duties of the Gulf Coast Research and Education Center as part of such a program. Faculty at the Center sought to improve the skills and certifications of interested inmates by including them in training for the Ornamental and Turf exam held for faculty and staff at the Center in April. Seven inmates participated in the training and exams and each passed the two exams required for licensure, increasing their qualifications and job prospects following their incarceration.
Jordi, Rebecca L	Nassau County - Northeast	This agent provided 48 private consultations to local landscaping companies, garden centers, Nassau County and city projects. Using a conservative estimate of \$75 per consultation this agent saved local landscaping companies \$3,600 in 2009. Nassau County Building Maintenance requested this agent for three plant identification projects in 2009 which included invasive plants. They would pay a professional consultant \$90 per hours for their expertise. UF/IFAS Extension provides them with valuable information at no cost. The number of hours provided in 2009 was estimated to be 14 hours which would equate to a savings of \$1,260 to Nassau County.
Kern, Jr, William H	Ft Lauderdale - REC	UF School of Structural Fumigation 2009 The 2009 class contained 38 students that attended 40 hours of instruction, demonstration, and examination. Of the 34 students that took the final exam, 26 (76%) passed with 70% or better. There were 16 students from the class that took the State licensing exams for Fumigation Certified Operator or Fumigation Special ID cardholder. Nine students took the Fumigation Certified Operator Exam and 67% passed. Seven students took the Fumigation Special ID cardholder exam and 100% passed.
Lamborn, Alicia Ramirez	Baker County - Northeast	Twenty-eight (28) adults participated in one of three programs teaching them how to manage pests in their gardens and landscapes by adopting Integrated Pest Management principles. Participants learned how to identify weeds, insects and diseases using Extension resources, as well as the use of beneficial insects and environmentally-friendly products such as insecticidal soaps, oils, and 'Bt'. Participants also learned about how cultural control methods which includes applying the correct amount of water and fertilizer, proper pruning techniques and plant spacing can decrease pest problems. Post-program evaluations revealed that 78% of participants indicated they increased their knowledge of Integrated Pest Management (IPM) principles and at least 50% indicated that they felt comfortable enough to share that information with others. Two month follow-up surveys of 14 participants indicated that 7 (50%) adopted at least one (1) of the Integrated Pest Management principles since attending the program. The surveyed participants that have adopted IPM principles since attending the program represent 25% of the total participants.
Lenhardt, Matthew A	Citrus County - Central	New agent in Summer 2009 - no measurable impacts available at this time. A review of Citrus County pesticide certification testing data reported by the Bureau of Compliance Monitoring (Florida Department of Agriculture and Conservation Services) indicate more than 80% passing rate for horticulture and agriculture industry professionals taking the Ornamental and Turf and the Private Applicator certification tests. Further investigation revealed no data exists on the number of horticultural or agricultural businesses in need of commercial certifications.



		To accomplish Extension's educational objective, this agent intends to use several different educational methods and activities. The first phase will include familiarization and relationship building with the professional agricultural and horticultural industry clientele by having scheduled meetings with as many as possible. This agent also intends to offer various turf and ornamental management workshops, Best Management Practices seminars, as well as Private Applicator and Ornamental and Turf licensing opportunities.
Mayer, Henrique	Miami-Dade County - South	Success Story: The Ficus whitefly, <i>Singhiella simplex</i> has been causing a lot of damage to ficus trees and hedges in Miami-Dade County.[Problem]. Extension, in cooperation with many cities, municipalities, and pest control business [Partners], sponsors some workshops aimed at educating pesticide operators on the characteristics and management of the whitefly, in order to reduce the pesticide resistance of the insect, and also to protect the water bodies for potential pesticide pollution. One hundred and thirty seven landscapers participated in two workshops [People]. Participants were surveyed several weeks after the classes, and 75% indicated they were following our recommendations. According to UF, this should reduce pesticide resistance and control de pest population [Impact]. Due to increased interest, these workshops will continue [Conclusion].
Mitchell, Ralph E	Charlotte County - South Central	<p>"The Bedbug Menace" &amp; "Rodent and Mole Management" -September 22, 2009  Twelve (12) Participants learned about a newly re-emerging pest, the bedbug and the scope of the problem in our area. Bedbug biology and control options were also discussed. This program was immediately followed by a workshop on rodent and mole management. Understanding the biology and cultural control methods is key to suppressing these common pests. Ten (10) participants completed an end-of-program evaluation. As a result of this workshop, 100% of these participants indicated that they Strongly Agreed/Agreed that they increased their knowledge of bedbug biology and life history. Additionally, 100% Strongly Agreed/Agreed that they felt more confident about making good decisions regarding the ID of bedbug infestations and control options. One-hundred percent (100%) Strongly Agreed/Agreed that they had increased their awareness of rodent and mole biology and life history. Ninety percent (90%) Strongly Agreed/Agreed that they felt more confident about making good decisions regarding the best management of rodent and mole problems.</p> <p>"Household Pests"&amp; "Is That a Dangerous Spider?". -September 29, 2009  Twelve (12) participants increased their understanding on all types of Household Pests and local Spiders. As a result of this workshop, attendees are now better able to select a safe and effective control for numerous Household Invaders.</p> <p>Stinging Insects -October 8, 2009  On October 8th, twelve (12) people attended a program on "Stinging Insects" presented by Dr. Fred Santana educated residents on how to identify, avoid and control many local Stinging Insects found in our homes and grounds; including Africanized Honeybees. This was also considered a Safety Training for County Employees. As a result of this workshop, 100% of these participants indicated that they Strongly Agreed/Agreed that they increased their knowledge of stinging insect biology and life history. Additionally, 88% Strongly Agreed/Agreed that they felt more confident about making good decisions regarding avoiding stinging insects. One-hundred percent (100%) Strongly Agreed/Agreed that they can now identify at least one new stinging insect. Ninety percent (90%) Strongly Agreed/Agreed that they plan to implement at least one new tip that they learned at this program.</p>
Mizell, III, Russell F	North Florida REC - Quincy	At the NFREC Fall Field Day about 35 attendees were informed of the sustainability of growing fruit and nut crops in Florida. Proper cultivar selection and pest



		management strategies and tactics such as insect traps, biorational insecticides and decision making processes were discussed and demonstrated. As a result the participants will now think twice before attempting to grow certain difficult crops and when they chose to grow will chose the proper cultivars and tolerate some pests and control their "real" pests more efficiency and with more regard the impact and risk to the environment and human health.
Morse, Jane V	Pinellas County - South Central	Using mailers to convey information on a timely basis to this clientele group is not practical (it is expensive, time-consuming and time-delayed). Working with our distance education personnel the agent developed an online newsletter blog. This online blog can disseminate information on an immediate basis and can also be used to market and advertise Extension classes for this group (they are required to obtain continuing education to maintain their licenses). Subscriptions to this online blog continue to increase by approximately 5 to 6 each month. Surveyed participants find this blog to be a very helpful and useful tool. Due to the immediacy and freeness of this format, participants are able to receive information real-time that they would otherwise not receive from us if we were using mailers. We will continue to use blogs to immediately disseminate information, market programs and provide information of interest to this group.
Mossler, Mark A	Agronomy	Information provided to stakeholders helps reinforce the three areas of integrated pest management: exposure reduction, proper diagnosis, and appropriate treatment.
Olczyk, Teresa	Miami-Dade County - South	Most of the Miami-Dade County nursery workers and a high percentage of the owners and growers are Spanish speaking only. They need trainings and updated information on new pests and their management in Spanish. Forty three Spanish speaking nursery owners, growers and workers participated in the Nursery Scout Training workshop and hands-on activities conducted in Spanish (cooperation with the Texas A&M). They received a Certificate of Completion which will help several of them to apply for a better position or keep their job.
Orfanedes, Michael S	Broward County - South	<p>Broward County Extension Provides Solutions to Combat Serious Exotic New Pests</p> <p>Ficus whitefly, red palm mite, laurel wilt and a host of other new disease and insect problems that are damaging landscapes countywide have put Broward County Extension Education at center stage as the lead agency tasked with providing effective management options to thousands of affected property owners and the hundreds of pest control companies that service them.</p> <p>Through its many workshops, fact sheets, news articles and consultations, Extension has provided property owners, pest control professionals, arborists, government officials and the news media with research-based options for managing these pests. During 2009 alone, over 15 Ficus whitefly programs were conducted to provide UF-IFAS research-based information on identification, scouting, insecticide treatments and options for replacing devastated Ficus hedges and trees.</p> <p>A recent survey sent out to 92 clientele who attended one of our Ficus whitefly programs conducted during 2009 yielded 49 responses which revealed the following:</p> <p>As a result of having attended the Extension whitefly program,</p> <ul style="list-style-type: none"> <li>* 98% of respondents reported being better able to identify all life cycle stages of Ficus whitefly;</li> <li>* 96% said they were more knowledgeable about control products;</li> <li>* 90% reported being more knowledgeable about recommended pesticide application techniques;</li> </ul>

		<p>* 80% said they were more knowledgeable when speaking with their customers about whitefly;</p> <p>* 61% said that as a result of following UF-IFAS recommendations, they are seeing better results on their customers' properties;</p> <p>* 78% said that they were now managing Ficus whitefly in a more environmentally friendly manner;</p> <p>Through its targeted outreach efforts, Broward County Extension is helping residents and pest control businesses work in tandem to combat one of the most serious insect pests the county has experienced in years and encouraging long-term solutions for the future.</p>
Palmateer, Aaron J	Tropical REC - Homestead	<p>A total of 286 participants were surveyed during various workshops, seminars, hands-on activities and other educational programs that received training on effective disease management in Miami-Dade County nursery (and landscape) industries. The highest participation was in the programs on Integrated Pest Management (IPM) and scouting for diseases and disorders in the nursery and landscape.</p> <p>Approximately 98% of the participants in these programs indicated that they had gained valuable knowledge that will lead to changes in their disease management programs. Growers and Industry professionals estimate savings up to 20-25% in the cost of pesticides due to more frequent early detection of problems and implementation of less expensive spot treatments. This year I have received 9 personal phone calls from local nurseries praising me for providing information on disease management that has reduced or in 2 cases eliminated major disease problems in their operations.</p>
Parker, Lelan D	Orange County - Central	<p>One of the purposes for site visits in the Integrated Pest Management program is for growers to understand the implementation of biological control and to have an open discussion on the issues with acceptance and rejection on the use of biologicals. According to ten growers that I had an open discussion with, all have said to gain more knowledge on biological controls and plant to use some form of natural enemies to reduce greenhouse pests. Upon revisiting, seven growers, each have been using biological control and have been able to reduce their pesticide applications and pest populations.</p>
Popenoe, Juanita	Lake County - Central	<p>The agent processed 223 plant clinic samples. These samples would normally have cost the grower at least \$30 each for private analysis, thus saving growers at least \$6,690 while helping them produce better crops and use fewer chemicals.</p>
Rainey, Donald P	Sarasota County - South Central	<p>Effective Pest Management</p> <p>The Green Industry Best Management Practices (GI-BMP) program focuses on four core objectives: 1) Landscape plant selection and maintenance, 2) appropriate use of water resources, 3) appropriate use of fertilizer, and 4) Integrated Pest Management Principles (IPM). The overall goal of the GI-BMP program is the protection of natural resources "specifically water quality -by helping reduce non-point sources of pollutants that impact the environment.</p> <p>Within the IPM module, the target audience was 500 participants. The primary objective was to reach a 70% GI-BMP participation level in protecting water resources by demonstrating IPM as part of normal landscape maintenance practice. Normal practice includes such principles as proper pest identification, spot spraying only as needed, and reduction in unnecessary preventive pesticide application. It also includes the ability to demonstrate landscape water protection practices such as mixing and loading pesticides away from water bodies and storing pesticides within locked areas.</p>

		<p>To help monitor the effectiveness of the IPM module, a 44-question one year follow-up survey of 383 professionals who attended the GI-BMP education outreach program during the first four months of 2008 was conducted. The results were very encouraging, namely:</p> <ol style="list-style-type: none"> <li>1. Some 72% of the respondents reported using an IPM program (either often or always) after taking the GI-BMP class, a 24% increase over a previous evaluation.</li> <li>2. Significantly, a 100% increase was reported by those who went from using an IPM program “often” to “always” after completing the GI-BMP course.</li> </ol>
<p>Ramos, Jennifer Mae</p>	<p>Orange County - Central</p>	<p>Outcome 1: Currently, class evaluations rate the FYN program as a top educational program. 50% of post surveys were returned to the office and they revealed that 78% chose plants based on site conditions, 55% grouped plants by their water needs, 81% have low maintenance areas included into the landscape, 78% direct their downspouts (drains) into the lawn or plant beds, 58% have plant beds watered separate from lawns, 85% avoid practices that encourage pests (excess fertilizer and irrigation, mowing to low, etc.), 61% use the least harmful pesticide (soaps, oils), 54% use slow release fertilizers, 93% feel that FYN practices are easy to use, 79% believe that FYN practices will save time on yard work, 62% believe that FYN practices will save money on pesticides, 79% believe that FYN practices will save money on their water bill.</p> <p>Impact 1: The FYN program will help to reduce nutrient loads and pollution in water bodies of targeted areas through homeowner awareness of proper landscape practices. Currently there is not sufficient time in the targeted areas to evaluate water quality. Water quality will be tested annually and a 5 year comprehensive review of educational impacts will be made.</p> <p>Outcome 2: A second round of classes was presented in the fall of 2009 for Home Depot and Lowes and included a class for all industry professionals and other retail stores. There was an average of 15% increase in knowledge from pre-test to post-test. Employees have explained how beneficial this program was to help their customers. “Seminar was very informative and interesting.” “This has been one of the most beneficial seminars I have ever been to.” “I have been with Lowe’s 9 years and this was the best training I have had from outside support.” “I would like to come to another class.” “Outstanding presentation.” “I recommend this for department heads.”</p> <p>Impact 2: Increased employee education will be transferred to customers that seek advice from these stores. Better customer service will improve customer satisfaction and reduce improper landscaping practices. Currently there aren’t any statistics that evaluate customer satisfaction, though increased cooperation from management to conduct classes must reflect employee satisfaction.</p> <p>Success Story: The Habitat for Humanity Foundation in Winter Park, Florida contacted Florida Yards &amp; Neighborhoods for consultation on landscaping and design for a home that was just finishing construction. After completing a site analysis a detailed landscaping plan was developed within the allotted budget. The organization was so impressed with the FYN consultation that they asked FYN to become a permanent source of advice for future houses. While discussing ideas the organization was given an explanation of services provided by the Extension Service. The Habitat for Humanity organization is now working with other Orange</p>

		County Extension agents to develop an extensive homeowner program for outdoor and indoor services including air quality, landscape maintenance, water conservation, nutrition counseling and other consumer sciences.
Rudisill, Ken R	Bay County - Northwest	<p>Outcomes: 96% of (n=27) of participants knowledge of the Green Industries BMP's and how they will affect the lawn care industry has increased because of this program. Participants were taught topics which included integrated pest management, weed identification, fertilizers, pesticide laws, water protection, and pesticide safety.</p> <p>The pre-test average was 72.5% and the post-test average was 82.6%. The results show an increase in knowledge of 13.9%.</p> <p>55% of (n=15) participants surveyed after the class marked they will use the recommended fertilization rates and methods of application as presented in the BMP manual.</p> <p>71% of (n=20) participants surveyed after the class marked they will inform their clients of the recommendations contained in the BMP manual that apply to their situation.</p> <p>93% of (n=26) participants passed the test.</p> <p>Impact: Public education on pests, handling of fertilizers/pesticides, proper watering, and management of yard waste can reduce the potential adverse impacts to waters from runoff from lawns (EPA, National Management Measures to Control Nonpoint Source Pollution from Urban Areas (November 2005, EPA-841-B-05-004).</p> <p>Outcomes: 94% of (n=29) of participants in the Limited Lawn and Ornamental and Limited Commercial Landscape Maintenance education program completed a required 6 hour training course and passed the Limited Commercial Landscape Maintenance and Limited Lawn and Ornamental pesticide applicator license exam. Topics included integrated pest management, weed identification, plant installation, pesticide laws, water protection, and pesticide safety.</p> <p>Impact: A "summary of the water quality monitoring efforts by USGS's National Water Quality Assessment Program (2004) revealed high concentrations of pesticides... in urban waterways." Program attendees learning alternative pest management strategies and plant care techniques can potentially reduce the impacts of pesticides on the environment and water systems.</p>
Schall, William Lawrence	Palm Beach County - South	<p>1. In August a local nursery became aware that they must be in compliance with the Environmental Protection Agency's Worker Protection Standard. The nursery was completely unaware of the requirements. They contacted the agent who went out to the nursery instructed management staff in the requirements. As a result, the nursery set up a program. Later in the year, they were inspected by the Department of Agriculture and Consumer Services. The WPS program was acceptable to the inspector, thus saving the nursery an initial \$1,250 in initial non-compliance fines, with the potential of an additional \$10,000 fine, per infraction in follow-up inspections.</p> <p>2. Representatives of a county pest control firm attended the March 4, 2009 Integrated Pest Management Update. They indicated as a result of the training, they were saving an average of \$100 per month, or about \$1200 annually as a result of pest management techniques taught in the workshop</p>
Seals, Linda M	Brevard County - Central	A local certified pest control operator company requested 1,000 copies of the "How to Water St. Augustine grass" brochure to distribute to its customers. The company indicated that the brochure was extremely helpful in educating its customers about the potential pest issues associated with over-watering St.

		Augustine grass. In total, over 4,000 of the brochure copies were distributed to landscapers via hand delivery or downloaded from the website.
Shibles, David B	Polk County - South Central	A survey was sent out to 800 Polk Horticulturer Newsletter readers which was read by ca.1500 Polk County residents. An average of 87% of respondents indicated they had adopted at least one Florida Friendly landscape maintenance principle based on information they had read in the newsletter -use of mulch to conserve water, calibration of irrigation system to save water, use of Florida Friendly techniques to control pests, putting the right plant in the right place and proper use of fertilizer. These data were extrapolated to other Extension programs.
Shives, Sylvia A	Manatee County - South Central	Have guided and maintained guidance to 6 nurseries about effective pest management without building up resistance to commonly used chemicals.
Thralls, Edmund L	Orange County - Central	<p>Objective 1: At least 20 county residents will attend a Residential Horticulture Program event. By the end of the program, 80% will have increased their knowledge of general horticulture care for Central Florida as measured by a pre-test and post-test.</p> <p>Outcomes for Objective 1: 93% (93/99) of the Residential Horticulture Program events were attended by at least 20 county residents in 2009. 89% (4,975/5,590) displayed knowledge gain of general horticulture care for Central Florida. More residents living near the new Extension Education Center are showing up more frequently as the new landscape enhancement draws attention to class offerings for those driving by the center.</p> <p>Impact for Objective 1: Many residents in the local area often visit the Plant Clinic and brag about how much more they know about care needed to grow plants in a Florida landscape because of the classes they attended. They are using less pesticides, and less water than they did before attending the classes and still enjoy being out in their landscape.</p> <p>Objective 2: At least 25 families will attend the Landscape Design Program events offered at three different times during the year. By the end of the program, 80% of the families will demonstrate the proper use of the FYN Florida Plant List in selecting the “right plant” for the “right place” in their landscape renderings by review of a Master Gardener Volunteer or the Extension Agent conducting the Program.</p> <p>Outcomes for Objective 2: There were three, 4-day landscape design program events held in 2009. One class was 80% filled (20/25) and the remaining was overfilled (&gt;25 families each program event) as the program was presented at various venues in the County. 72% (53/74 families) demonstrated the proper use of the FYN Florida Plant List in selecting the “right plant” for the “right place” in their landscape renderings by review of a Master Gardener Volunteer or the Extension Agent conducting the Program. They learned environmentally friendly methods for control of some problems areas through proper plant selection; something they did not know before attending the program. They also learned they could reduce maintenance and pest pressure as a result.</p> <p>Impact for Objective 2: 53 families claim they will be implementing Florida Friendly Landscaping principles as they develop their new landscapes. They indicate that they will practice water conservation as a conscious decision in their landscapes by grouping plants based on water needs. They will reduce use of pesticides in the landscape by adding plants that are better adapted to the region in Orange County.</p>

		Success Story: Telephone contact, office visits and casual conversations in the neighborhoods indicate that this is an important and highly sought program for many homeowners new to Central Florida. Homeowner Patty Magalnick has shared with me how much she has enjoyed implementing her new landscape plantings because her plants look so much better with the care tips she learned from this program.
Unruh, Joseph B	West Florida REC, Milton	A survey conducted at the 15th Annual Gulf Coast Turfgrass Expo and Field Day revealed that 98% of respondents (n = 84) indicated that herbicide trials conducted at the WFREC were "important" to "extremely important". - 58% of the respondents stated that their knowledge on weed management increased as a result of attending the field day. - In the same survey, 74% of the respondents indicated that they would use the new herbicides when they become available.
Vallad, Gary E	Gulf Coast REC - Balm	The primary goals of the ornamental plant pathology program is to inform the industry about common and emerging disease problems, and the best means to manage disease through the integrated use of cultural, biological and chemical controls. The ornamental industry was provided an update on chemical controls for several foliar diseases of common landscape plants including phytotoxicity information, as well as recommendations for disease management and pesticide rotation. The continued screening of new chemical controls for diseases of landscape ornamentals is necessary, since product availability is limited, periodic label revisions may change or prohibit the use of available products, and the disease management strategies used by clientele are constantly evolving to achieve the most efficient and effective level of control with minimum economic and environmental impact.
White, Celeste T	Orange County - Central	A comparison of exam results for those clients who took the exams immediately after a review class (post-train) was compared to those who took the exam without training (walk-ins). Results indicate that 19% more individuals passed the exams after the review class and obtained an average of 10% higher scores. In addition, a pre and post test survey was conducted for 57 program participants. In a comparison of pre and post tests scores, there was an average increase 20 points (28%). A random sampling survey was sent in November to 50 participants of a Lawn and Ornamental Pest Management training with a 20% return. All 10 of the recommended practices were being used by 70% of survey participants. The highest rated survey responses were "Regularly scout or monitor for pests" (100%) and "Identify the problem before selecting a pesticide" (100%) and "Learn about pests and their life cycles to properly time controls" (100%).
Williams, Larry L	Okaloosa County - Northwest	A field visit to inspect the turfgrass areas of a new office complex resulted in the property owners correctly identifying a previously misdiagnosed insect pest and not wasting money on unnecessary pesticide. The property owners were also misinformed as to the type of turfgrass they had onsite. Learning the correct type of turfgrass allowed the owners to not make a costly mistake of over-fertilizing, which would have resulted in the new turf areas declining.
Zerba, Jr, Raymond H	Clay County - Northeast	During 2009 POW year, Agent was personally responsible for delivering information specific to the requirements needed for certification/re-certification for Limited Commercial Landscape Maintenance/Pest Control Operators (187 CORE, 193 L&O CEUs), Green Industry Best Management Practices (146 FI-BMP Credits), and Right of Way (19 ROW CEUs) certifications by participating in 13 Regional one-day Short Courses held in either Duval, Nassau or St. Johns County. Through end of program surveys of 80+% of clients completing the 18 educational programs agent delivered showing a 95+% adoption rate of suggested BMP practices this made a significant impact on landscapes being maintained by the Green Industry in Northeast Florida and exceeds the planned objective of 75% adoption rate.

