

BUREAU OF PLANT & APIARY INSPECTION ANNUAL REPORT

July 1, 2015 – June 30, 2016

Tyson R. Emery, Bureau Chief



DIVISION OF PLANT INDUSTRY

Dr. Trevor Smith, Director



**Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner**

The past year has been eventful in several areas; the biggest one being the Oriental Fruit Fly Emergency Program in co-operation with the United States Department of Agriculture. There were also new finds on the Giant African Land Snail Program. An updated Grades and Standards was published after extensive reviews and updates during the previous year. As the year concludes, we strive to continue to do our best protecting Florida's Agriculture from Pests and disease every day.

-Tyson Emery

Chief – Bureau of Plant and Apiary Inspection

MISSION STATEMENT

The Division of Plant Industry's mission is to detect, intercept and control plant and honey bee pests that threaten Florida's native and commercially grown plants and agriculture resources. This is accomplished by implementing policies and procedures supported by Florida statutes and rules of the department and our division.

INTRODUCTION

The Bureau of Plant and Apiary Inspection is responsible for protecting Florida's agricultural industry and the public from the introduction and spread of serious plant and honeybee pests. This is accomplished by conducting regular inspections and surveys for the early detection of these pests. This bureau enforces Florida Statutes Chapter 570.32, 581, 586 and 593 as well as departmental rules 5B Florida Administrative Code pertaining to the movement of plants, plant products, honeybees, and honeybee products.

The bureau compiles an annual report following the close of each fiscal year. This report contains statistical information on Florida nurseries, nursery stock dealers, nursery stock, beekeepers, honeybee colonies, export certification, and other activities relating to the bureau's responsibilities.

This report is used as an organizational tool for planning bureau activities and budgetary needs. It is available to the public and the industry, and it provides frequently requested information concerning the plant and apiary industries in Florida.



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BUREAU OF PLANT AND APIARY INSPECTION PERSONNEL

Tyson Emery	Bureau Chief	Gainesville
Sheila McMahon	Staff Assistant	Gainesville
Bryan Benson	Assistant Chief, Plant Inspection	Gainesville
Stephen Hildebrandt	Environmental Specialist III	Gainesville
VACANT	Environmental Specialist III	Palmetto
Steven N. Kelley	Operations and Management Consultant I	Gainesville
Glenda Anderson	Senior Word Processing Systems Operator	Gainesville
Cathy Daniels	Senior Word Processing Systems Operator	Gainesville
Terri Hymes	Staff Assistant	Gainesville
Donna Pons	Staff Assistant	Gainesville
Maria Lucy Furnas	Senior Clerk	Gainesville
Sara White	Senior Clerk	Inverness
Debra Roush	Staff Assistant	Palmetto

REGION I

Christine Zamora	Environmental Supervisor II	Gainesville
Lane Pritchard	Administrative Secretary	Gainesville

Cheryl A. Jones	Environmental Supervisor I	Gainesville
Michael McMahan	Environmental Specialist I	Milton
Michael Bentley	Environmental Specialist I	Monticello
M. Janie Echols	Environmental Specialist I	Glen St Mary

Theresa R. Estok	Environmental Specialist I	Gainesville
Sol F. Looker	Environmental Specialist I	Palatka
Larry W. Smith	Environmental Specialist I	Panama City
Kelly Douglas	Environmental Specialist I	Trenton
VACANT	Agricultural Technician II	Gainesville

Stacey S. Simmons	Environmental Supervisor I	Tavares
Shelly M. Wayte	Environmental Specialist I	Ocala
Stephen R. Jenner	Environmental Specialist I	Inverness
Lauren L. Dorval	Environmental Specialist I	Tavares
Harry L. Morrison	Environmental Specialist I	Tavares
Mary C. Sellers	Environmental Specialist I	Tavares
Charlie L. Spriggs	Environmental Specialist I	Tavares
Tommie R. Powers	Environmental Specialist I	Tavares
Nora Marquez	Agricultural Technician II	Tavares
Robert Lawton	Agricultural Technician II	Tavares
Mike Hatcher	Agricultural Technician III	Inverness

Tracy L. Wright	Environmental Supervisor I	Deland
Kaleigh Hire	Environmental Specialist I	Palatka
Lisa Hassell	Environmental Specialist I	Jacksonville
Kevin S. Loadholtz	Environmental Specialist I	Deland
Karen G. Coffey	Environmental Specialist I	Port Orange
Jim McGhee	Environmental Specialist I	Deland
VACANT	Environmental Specialist I	Port Orange

REGION II

Serena Stornaiuolo	Environmental Supervisor II	Apopka
Lisa Dabbah	Administrative Secretary	Apopka

Anthony Puppelo	Environmental Supervisor I	Apopka
George A. Warden	Environmental Specialist I	Apopka
Lance A. Brown	Environmental Specialist I	Apopka
Anna J. Gourlay	Environmental Specialist I	Apopka
Sean McCarthy	Environmental Specialist I	Apopka
Jesse M. Krok	Environmental Specialist I	Apopka
Kathy A. Gonzalez	Environmental Specialist I	Apopka
Edgardo Vargas	Environmental Specialist I	Apopka
Arturo Montilla-Nolasco	Environmental Specialist I	Apopka
Larry Violet	Agricultural Technician II	Apopka
Karen S. Koby	Agricultural Technician II	Apopka

Daniel Merced	Environmental Supervisor I	Dade City
Gary Webb	Environmental Specialist I	Dade City
Albert L. Wright	Environmental Specialist I	Winter Haven
Susan C. Distelberg	Environmental Specialist I	Winter Haven
Laura Ureta-Cooper	Environmental Specialist I	Winter Haven
Karen R. Destefano	Environmental Specialist I	Dade City
Diana E. Bozeman	Environmental Specialist I	Dade City
Kenneth Miller	Agricultural Technician II	Dade City
Jodi Bixler	Agricultural Technician II	Winter Haven

Richard A. White	Environmental Supervisor I	Clearwater
Jason Spiller	Environmental Specialist I	Clearwater
Thomas S. Lastrapes	Environmental Specialist I	Clearwater
Mark A. Spearman	Environmental Specialist I	Clearwater
Gabriela M. Bernard	Environmental Specialist I	Clearwater
Linda G. McRay	Environmental Specialist I	Clearwater
Jessica Tromer	Environmental Specialist I	Clearwater
Sammy Lee Campbell	Environmental Specialist I	Clearwater
Bobbe A. Rose	Agricultural Technician II	Clearwater

William J. Salway	Agricultural Technician II	Clearwater
Dan A. Chiszar	Agricultural Technician II	Clearwater
Roberto Parrilla	Agricultural Technician II	Clearwater
Deborah L. Simmons	Agricultural Technician II	Clearwater
Calvin Snyder	Agricultural Technician II	Clearwater

Carlos Averhoff-Chirino	Environmental Supervisor I	Ft. Pierce
Scott D Berryman	Environmental Specialist I	Avon Park
Anthony Gubler	Environmental Specialist I	Cocoa
Glen Bupp	Environmental Specialist I	Cocoa
Jeanie P. Frechette	Environmental Specialist I	Vero Beach
Dagne A. Vazquez	Environmental Specialist I	Ft. Pierce
Richard T. Bloom	Environmental Specialist I	Avon Park
Keith Clanton	Environmental Specialist i	Avon Park
Teresa Ortell	Agricultural Technician II	Vero Beach

Joseph S. Hawk	Environmental Supervisor I	Bradenton
Eddie Anderson	Environmental Specialist I	Bradenton
VACANT	Environmental Specialist I	Bradenton
Karen Lea Etchells	Environmental Specialist I	Bradenton
Susan B. Youngblood	Environmental Specialist I	Bradenton
Mary Williams	Agricultural Technician II	Bradenton
Charles Smith	Agricultural Technician II	Bradenton
Patricia A. Bussell	Agricultural Technician II	Bradenton

Howard L. Wallace	Environmental Supervisor I	Tampa
Travis J. Streeter	Environmental Specialist I	Tampa
Brandon McCauley	Environmental Specialist I	Tampa
William R. Stokes	Environmental Specialist I	Tampa
Jose L Llanos	Environmental Specialist I	Tampa
Lisa Strange	Environmental Specialist I	Tampa
Maria Echevarria-Garcia	Agricultural Technician II	Tampa
VACANT	Agricultural Technician II	Tampa

VACANT	Agricultural Technician II	Tampa
William A. Counts	Agricultural Technician II	Tampa
VACANT	Agricultural Technician II	Tampa
Charles G. Davis	Agricultural Technician II	Tampa
VACANT	Agricultural Technician II	Tampa
Marvin L. Nelson	Agricultural Technician II	Tampa

REGION III

Scott Shea	Environmental Supervisor II	Miami
Elsie Aviles	Administrative Secretary	Miami
Esteban Godinez	Agricultural Technician II	Miami

Richard Tordi	Environmental Supervisor I	West Palm Beach
LeAnn M. West	Environmental Specialist I	Palm City
Jorge P. Gomez	Environmental Specialist I	West Palm Beach
Matt Miller	Environmental Specialist I	Belle Glade
Bill Churchill	Environmental Specialist I	West Palm Beach
Eduardo Solis	Environmental Specialist I	Palm City
James C. Lee	Environmental Specialist I	West Palm Beach
VACANT	Environmental Specialist I	Belle Glade
Carlene Sargeant	Environmental Specialist I	Delray Beach
Juan Carlos Ochoa	Environmental Specialist I	Boynton Beach
Jordan Williamson	Environmental Specialist I	West Palm Beach

Ellen J. Tannehill	Environmental Supervisor I	Pompano Beach
Sallie H. Simmons	Environmental Specialist I	Boynton Beach
J. Keith Harris	Environmental Specialist I	Pompano Beach
Michael Golub	Environmental Specialist I	Pompano Beach
Nury M. Marrone	Environmental Specialist I	Davie
Justiin Anto	Environmental Specialist I	Davie
Gangadai Azore	Environmental Specialist I	Davie
VACANT	Environmental Specialist I	Davie
Lane M. Smith	Environmental Specialist I	Delray Beach
Frank A. Burgos	Environmental Specialist I	Boynton Beach
VACANT	Agricultural Technician II	Davie
Merlene Francois	Agricultural Technician II	Davie

Charles Gonzalez	Environmental Supervisor I	Hialeah
Juan Garcia Lopez	Environmental Specialist I	Hialeah
Olga Garcia	Environmental Specialist I	Hialeah
Rebecca Sanders	Environmental Specialist I	Hialeah
VACANT	Environmental Specialist I	Miami
Keith J. Richardson	Environmental Specialist I	Hialeah
Haydee I. Escobar	Environmental Specialist I	Miami
Misael E. Igarza	Environmental Specialist I	Hialeah
Erick Aleman Espino	Agricultural Technician II	Hialeah
Miguel Hernandez	Agricultural Technician II	Hialeah
Gloria Gonzalez	Agricultural Technician II	Hialeah
Tommy Rosario	Agricultural Technician II	Hialeah
Sergio Delgado	Agricultural Technician II	Miami
Elena Kej	Agricultural Technician II	Hialeah
Beatriz Suarez	Agricultural Technician II	Hialeah

RosaMaria M. Quinones	Environmental Supervisor I	Miami
Luis Bradshaw	Environmental Specialist I	Miami
Maria C. Acosta	Environmental Specialist I	Miami
Juan Aleman-Martinez	Environmental Specialist I	Miami
Ciro Milian	Environmental Specialist I	Miami
Marieta Figueroa	Environmental Specialist I	Miami
Juan Menendez	Environmental Specialist I	Florida City
Jake Farnum	Environmental Specialist I	Florida City
Haylett Cruz-Escoto	Environmental Specialist I	Miami
Ana L. Ochoa	Environmental Specialist I	Florida City
Karen W. LeBoutillier	Environmental Specialist I	Florida City
Rosalba Pina	Agricultural Technician II	Miami
Christopher Alonso	Agricultural Technician II	Miami
Arturo Montillia-Nolasco	Agricultural Technician II	Miami

Matt W. Brodie	Environmental Supervisor I	Naples
Walter W. Golden	Environmental Specialist I	Ft. Myers

Mark Terrell	Environmental Specialist I	Labelle
Scott D. Krueger	Environmental Specialist I	Labelle
Richard L. Blaney	Environmental Specialist I	Naples
Leonora J. Coleman	Environmental Specialist I	Naples
Richard J. Nanneman	Environmental Specialist I	Naples
Roberto Delcid	Environmental Specialist I	Ft. Myers
Edward A. Ziegler	Agricultural Technician II	Naples

CITRUS NURSERY INSPECTION

Justin T. Ezell	Environmental Specialist III	Winter Haven
Randall A. Dean	Environmental Supervisor I	Avon Park
Donald G. Taylor	Environmental Specialist II	Avon Park
Peter Carbon	Environmental Specialist II	Gainesville
Ashley Nolen	Environmental Specialist II	Winter Haven
Johnny J. Yates	Environmental Specialist II	Winter Haven
Craig J. Landress	Environmental Specialist II	Avon Park
VACANT	Environmental Specialist II	Winter Haven

CITRUS TREE SURVEY

W. Jim Dowling	Environmental Supervisor I	Dade City
Kathy D. Morgan	Environmental Specialist I	Palmetto
Carrie L. Karppe	Environmental Specialist I	Dade City
Lavinia Hancock	Environmental Specialist I	Avon Park
C. David Wolf	Environmental Specialist I	Labelle
Janet L. Young	Environmental Specialist I	Vero Beach

APIARY INSPECTION

David Westervelt	Assistant Chief, Apiary Inspection	Gainesville
Pamela Brown	Administrative Secretary	Gainesville
Kelly Rodgers	Apiary Technician	Gainesville

Gary Van Cleef	Agriculture and Consumer Protection Supervisor	Gainesville
Kenneth Finch	Agriculture and Consumer Protection Specialist	Milton
Jeffrey D. Pippin	Agriculture and Consumer Protection Specialist	Bristol
Stephen Cutts	Agriculture and Consumer Protection Specialist	Bristol
Rob Horsburgh	Agriculture and Consumer Protection Specialist	Jacksonville
Rogelio Blanco	Agriculture and Consumer Protection Specialist	Tavares
Ryan Willingham	Agriculture and Consumer Protection Specialist	Gainesville

Caitlin Gill	Agriculture and Consumer Protection Supervisor	Winter Haven
VACANT	Agriculture and Consumer Protection Specialist	Sebring
VACANT	Agriculture and Consumer Protection Specialist	Vero Beach
Carmen Fraccica	Agriculture and Consumer Protection Specialist	Palm City
Lisa Reynes	Agriculture and Consumer Protection Specialist	Labelle
Fred Howard	Agriculture and Consumer Protection Specialist	Dade City

CARIBBEAN FRUIT FLY CERTIFICATION

Christine Frere	Environmental Specialist III	Ft. Pierce
Marilyn Quigley	Administrative Secretary	Ft. Pierce
Denise Marshall	Certification Specialist	Ft. Pierce
Barbara Scher	Senior Clerk	Ft. Pierce

Lisa Whiteman	Agriculture and Consumer Protection Supervisor	Ft. Pierce
Toni A. Weaver	Agriculture and Consumer Protection Specialist	Ft. Pierce
John Serra	Agriculture and Consumer Protection Specialist	Ft. Pierce

VACANT	Agricultural Technician II	Ft. Pierce
Brandon J. Morgan	Agricultural Technician II	Ft. Pierce
Louella Graham	Agricultural Technician II	Ft. Pierce
Katie Sue Weingarten	Agricultural Technician II	Ft. Pierce
VACANT	Agricultural Technician II	Ft. Pierce

Paul Sinnott	Agriculture and Consumer Protection Supervisor	Ft. Pierce
Mike Schlueter	Agriculture and Consumer Protection Specialist	Ft. Pierce
VACANT	Agricultural Technician III	Ft. Pierce
Jay L. Towler	Agricultural Technician III	Ft. Pierce
Ray D. Jordan	OPS Agricultural Technician II	Ft. Pierce
Daniel F. Ochse	OPS Agricultural Technician II	Ft. Pierce
Steven Rish	OPS Agricultural Technician II	Ft. Pierce
VACANT	OPS Agricultural Technician II	Ft. Pierce
William S. Blatch	OPS Agricultural Technician II	Ft. Pierce

Carol McKenzie	Agriculture and Consumer Protection Supervisor	Vero Beach
John Quigley	Agriculture and Consumer Protection Specialist	Vero Beach
John Wiggins	Agriculture and Consumer Protection Specialist	Vero Beach
Brandy Boisvert	Agricultural Technician III	Vero Beach
VACANT	Agricultural Technician II	Vero Beach
VACANT	Agricultural Technician II	Vero Beach
Eric Witter	Agricultural Technician II	Vero Beach
Mathew McCloskey	Agricultural Technician II	Vero Beach
VACANT	Agricultural Technician II	Vero Beach

Joyce Willis	Agriculture and Consumer Protection Supervisor	Labelle
Ted A. Phillips	Agriculture and Consumer Protection Specialist	Winter Haven
Lisa A. Blakey	Agriculture and Consumer Protection Specialist	Labelle
Ricky Byrd	Agricultural Technician II	Winter Haven
Mary J. Graham	Agricultural Technician II	Labelle
Karen Noland	Agricultural Technician II	Labelle

Giant African Land Snail Program

William M. Torres	Environmental Specialist III	Miami
Mark Anthony McDonald	Environmental Specialist	Miami
Julio A. Rodriguez	Staff Assistant	Miami
Lorenn Dewitz	OPS Staff Assistant	Miami
Mary Yong Cong	Biological Scientist IV	Miami

Sergio H Riveron Ponomarenko	Agriculture & Consumer Protection Specialist	Miami
Sherry Anne Steele	Agriculture & Consumer Protection Specialist	Miami
Earl Keith Dalberry	Agriculture & Consumer Protection Specialist	Miami
Marcus Leonard Jones II	Agriculture & Consumer Protection Specialist	Miami
Ana Perez	Agriculture & Consumer Protection Specialist	Miami

David M. Ortiz	OPS Agriculture Technician III	Miami
Carolina Reece	OPS Agricultural Technician II	Miami
Robert George Shim	OPS Agricultural Technician II	Miami
Nubia I Tapia	OPS Agricultural Technician II	Miami
Carlos H Aguilera	OPS Agricultural Technician II	Miami

Emilio J. Armas	OPS Agriculture Technician II	Miami
Roxanne Bono	OPS Agriculture Technician II	Miami
Pedro D. Buzzi, Jr.	OPS Agriculture Technician II	Miami
Carlos Anibal Cambana	OPS Agricultural Technician II	Miami
Reinaldo Casanas	OPS Agricultural Technician II	Miami
Gabriel M. Collazo	OPS Agricultural Technician II	Miami
Yelitza Crespo Avila	OPS Agricultural Technician II	Miami
Margarita Diaz	OPS Agricultural Technician II	Miami

Tina Ruth Porter	OPS Agricultural Technician II	Miami
Denis Maria Acosta	OPS Agricultural Technician II	Miami
Fernando Aguila	OPS Agricultural Technician II	Miami
Travis Sentell Thurmond	OPS Agricultural Technician II	Miami

Yannick Michael Dyer	OPS Agriculture Technician III	Miami
VACANT	OPS Agriculture Technician III	Miami
Eve Olivia Martinez	OPS Agriculture Technician II	Miami
Sandra Isabel Montoya	OPS Agricultural Technician II	Miami
Natasha Felicia Newkirk-Carbs	OPS Agricultural Technician II	Miami
Alvaro P. Pertuz	OPS Agricultural Technician II	Miami
Stanley Joseph Pigniat	OPS Agricultural Technician II	Miami
Davenia Davette Polydor	OPS Agricultural Technician II	Miami



DETECTOR DOG PROGRAM

Michael Sabato	Environmental Specialist III	Miami
Jennifer Mestas	Environmental Specialist II	Miami
Ives Lopez	Environmental Specialist II	Miami
Greg Farina	Environmental Specialist II	Apopka
Karen Holton	Environmental Specialist II	Tampa
Larry Bynum	Environmental Specialist II	Miami
Omar Garcia	Environmental Specialist II	Miami



NURSERIES

There are 6,948 registered nurseries currently reported under inspection as of June 30, 2016 a change of **1** from 6,949 last year. Nurseries may report more than one location; the total number of locations reported under inspection is 8,695 a slight drop from the 8,727 reported number of locations last year.

During the 2015-2016 Fiscal Year, 413 new nurseries were registered. During the same period, only 3 nursery location was marked out-of-business. A total of 34,995 inspections were made at nursery locations this fiscal year. This is a slight drop from the 40,363 inspections of nurseries reported last year.

Plant Inspection personnel spent approximately 53,495 hours working on nursery related issues.



	Nurseries	Locations
2014-15	6,949	8,727
2015-16	6,948	8,695

Nursery and Location Changes



NURSERY STOCK DEALERS

There were a total of 2,984 nursery stock dealer establishments with active registration at the end of fiscal year 2015-2016. This compares with 2,916 registered nursery stock dealer establishments last year. Some nursery stock dealers have multiple locations. The total number of registered nursery stock dealer locations is 8,960 at the end of fiscal year 2015-2016. A decrease of 2432 registered locations reported over last year.

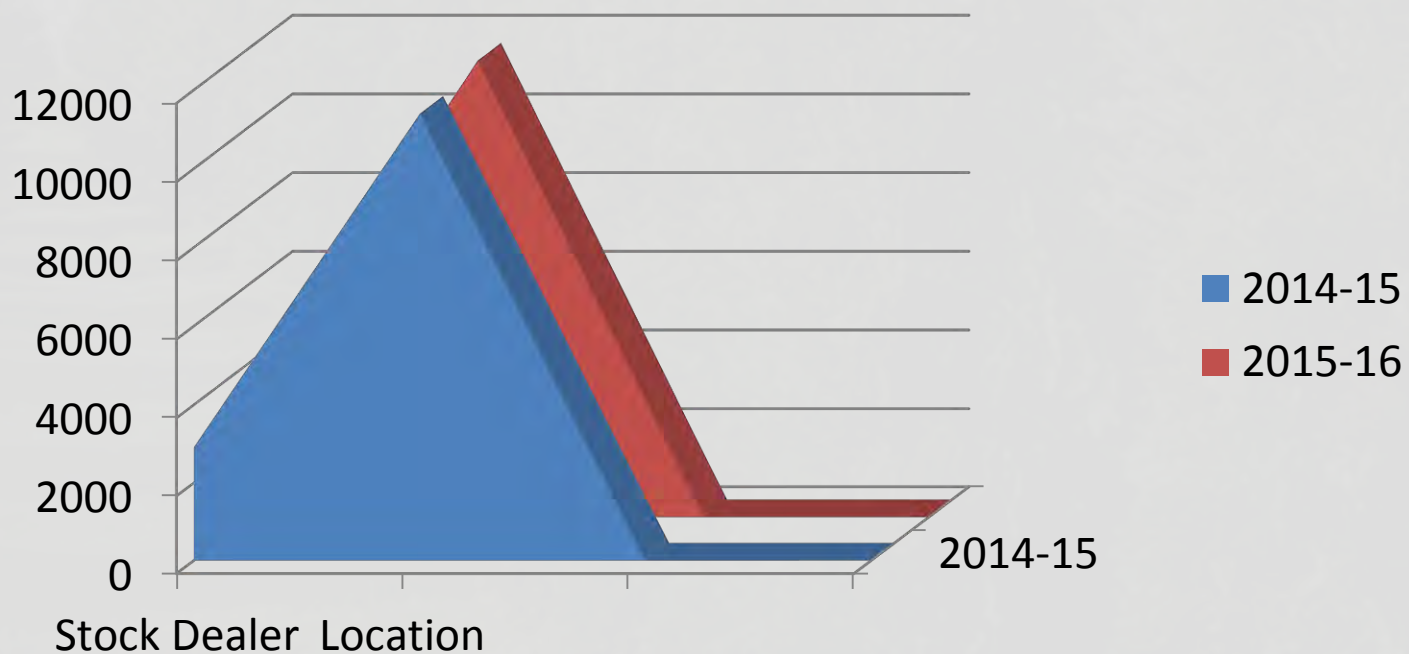
During this period of time, 261 new nursery stock dealers were registered and 2 nursery stock dealer were marked out-of-business. Plant Inspection personnel made 15,922 inspections of nursery stock dealer locations this fiscal year. This compares with 15,642 inspections of stock dealers last year.

Plant Inspection personnel spent 15,539 hours working on stock dealer related issues.



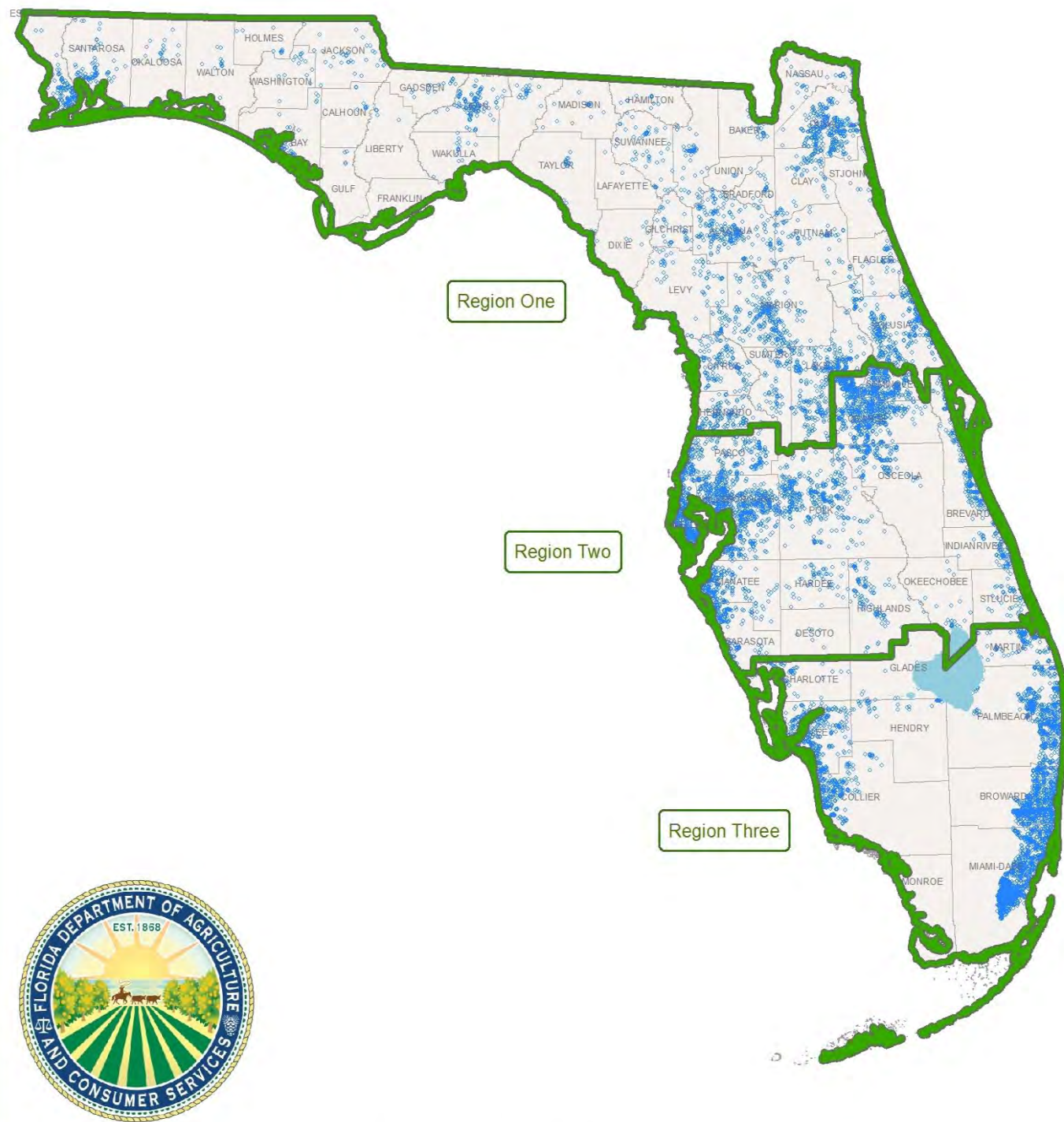
	Stock Dealers	Locations
2014-15	2,916	11,392
2015-16	2,984	11,627

Stock Dealer and Location Changes



Florida Nurseries and Stock Dealers

July 8, 2016



Plant Inspection Regions Nurseries and Stock Dealers

User: albritm1

0 40 80 160 240 320 Miles

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<u>FEES COLLECTED 2014-2015</u>	
Type of Charges	Amount Collected
NURSERY CERTIFICATE FEES	442,218.76
STOCK DEALER FEES	261,288.60
APIARY FEES	84,181.00
SPECIAL INSPECTION FEES	930,126.57
SPECIAL INSPECTION APIARY	44,522.06
BOLL WEEVIL	103,686.84
PROTOCOL	667,693.92
RETURNED CHECKS	256.80
SERVICE CHARGE	95.00
INSECT ID	8,110.00
INTRO. PERMIT FEES	400.00
RECORDS REQUESTS (MISC)	1,784.08
CASUARINA PERMITS	00.00
REIMBURSEMENTS	379.53
SALE OF SURPLUS PROPERTY	1,066.43
SALE OF GOODS & SERVICES	37.51
IRRADIATOR FEES	Discontinued
BRS	688.68
INSURANCE RECOVERY	100.00
CURRENT YEAR REFUND	1,406.60
PUBLICATION REIMBURSEMENT	80.60
TOTAL	\$2,548,267.63

PLANTS AND NURSERIES UNDER INSPECTION BY COUNTY			
COUNTY	TOTAL ACRES	TOTAL PLANTS	TOTAL NURSERIES
ALACHUA	1,250.99	6,755,181	187
BAKER	96.75	77,630	29
BAY	20.14	12,700	15
BRADFORD	10.2	32,407	16
BREVARD	973.04	1,102,299	205
BROWARD	1,666.77	2,808,227	398
CALHOUN	10.95	4,399,450	4
CHARLOTTE	311.43	659,812	47
CITRUS	714.06	340,304	87
CLAY	17.82	472,768	38
COLLIER	808.21	180,804,984	150
COLUMBIA	220.49	691,072	40
DESOTO	544.57	2,076,854	28
DIXIE	105.63	9,741	15
DUVAL	630.79	988,279	72
ESCAMBIA	47.50	371,347	41
FLAGLER	854.19	1,639,168	22
FRANKLIN	0.10	500	1
GADSDEN	664.27	12,632,811	19
GILCHRIST	199.11	910,454	33
GLADES	2,734.35	679,297	16
GULF	.44	1,920	3
HAMILTON	94.38	54,367	13
HARDEE	1,594.61	4,602,270	49

COUNTY	TOTAL ACRES	TOTAL PLANTS	TOTAL NURSERIES
HENDRY	666.16	20,731,616	42
HERNANDO	669.01	517,911	77
HIGHLANDS	1,978.55	3,788,551	94
HILLSBOROUGH	1,534.05	14,590,877	399
HOLMES	1.95	4,250	6
INDIAN RIVER	964.87	341,453	85
JACKSON	9.36	17,315	22
JEFFERSON	264.08	2,359,251	27
LAFAYETTE	146.63	5,061,185	7
LAKE	11,488.33	43,810,967	229
LEE	2,372.23	2,254,027	257
LEON	38.25	135,661	34
LEVY	1,171.42	10,535,668	62
LIBERTY	1.35	2,425	3
MADISON	102.59	1,563,350	19
MANATEE	1,014.13	64,180,435	145
MARION	740.78	1,482,203	177
MARTIN	2,098.97	2,735,815	159
MIAMI-DADE	20,766.03	112,975,626	1,039
MONROE	5.63	21,556	14
NASSAU	157.96	33,766	17
OKALOOSA	13.45	23,472	17

COUNTY	TOTAL ACRES	TOTAL PLANTS	TOTAL NURSERIES
OKEECHOBEE	2,470.70	279,495	23
ORANGE	1,386.47	44,606,254	350
OSCEOLA	238.26	773,132	59
PALM BEACH	1,732.65	20,843,349	222
PASCO	189.12	1,213,347	93
PINELLAS	70.16	273,061	196
POLK	665.8	8,039,801	234
PUTNAM	121.19	827,906	51
SANTA ROSA	298.34	679,848	42
SARASOTA	226.12	4,671,780	104
SEMINOLE	143.50	2,753,036	121
ST. JOHNS	198.41	1,012,997	58
ST. LUCIE	2,014.02	653,059	90
SUMTER	184.03	2,645,118	29
SUWANNEE	600.18	12,175,833	41
TAYLOR	84.46	4,199,361	13
UNION	11.15	10,440	6
VOLUSIA	2,013.98	2,686,488	232
WAKULLA	12.07	226,020	10
WALTON	3.61	10,795	11
WASHINGTON	5.50	9,702	10
SUMMARY	72,446.29	617,882,044	6,948

NURSERY STOCK BY KIND-- PLANTS

KIND OF STOCK	2013-2014	2014-2015	2015-2016
Orange	3,267,449	4,189,148	4,266,838
Grapefruit	344,478	230,750	186,120
Lemons	13,494	38,435	87,877
Mandarin	152,546	205,859	401,751
Seedbed	5,025,412	6,171,274	5,785,468
Seedling	1,789,096	2,141,048	1,745,316
Miscellaneous	727,703	701,260	245,974
TOTAL CITRUS	11,320,178	13,677,774	12,719,344

Aquatics	1,090,703	1,497,423	2,348,141
Ornamentals	83,304,932	87,595,086	72,142,172
Shrubs	84,426,667	105,488,870	99,888,162
Caladiums & Other Bulbs	182,363	195,465	376,326
Vegetable Transplants	265,030,043	257,856,777	263,844,489
Fruit/Nut	3,179,018	1,012,077	227,831
Palms	19,792,364	30,571,736	22,431,859
Foliage	57,108,408	87,595,086	72,142,172
TOTAL NON-CITRUS	514,114,498	571,812,520	316,234,350
GRAND TOTAL	525,434,676	585,490,294	546,120,496

VIOLATIONS AND STOP SALE & HOLD ORDERS

Between July 1, 2015 and June 30, 2016, Division of Plant Industry personnel issued three Stop Sale administrative complaint letters, and there were no violations that resulted in monetary penalties. There were three stop-sale and hold orders for failure to renew annual registration. During the same period-of-time, 32 stop-sale and hold orders were released

QUARANTINES

A number of plants were placed under quarantine this fiscal year to prevent further dissemination of potentially serious plant pests. 51 'new' quarantines were issued to regulated entities during the past year. 192 'release from quarantine' were processed during the same period of time.

IMPORTED FIRE ANT (IFA) CERTIFICATION PROGRAM

As of June 30, 2016, there were 776 nursery and stock dealers under compliance agreement for Imported Fire Ant certification purposes. During this period, plant inspection personnel spent 3,405 hours associated with IFA activities.



(Solenopsis invicta Buren) the Red Imported Fire Ant

COMMERCIAL CITRUS NURSERY INSPECTION (CNI) PROGRAM

As of June 30, 2016, there were 314 citrus propagating nurseries certified and inspected on a 30-day cycle. These locations consist primarily of commercial citrus nurseries for use in commercial citrus groves. This includes 25 own-use nurseries, 15 citrus research facilities, 2 dooryard citrus producers only and 65 commercial/dooryard citrus nurseries. Our inspectors are restricted from inspecting more than one nursery per day to prevent transport of citrus diseases/pests between nurseries. During this period, 5 commercial citrus nurseries were impacted by quarantine actions resulting in the destruction or limited movement of exposed plants until released from quarantine. During this reporting period Plant Inspection Personnel spent 17,801 hours associated with inspection activities.



BOLL WEEVIL ERADICATION PROGRAM

At the close of the 2015 cotton-growing season, there were 193 commercial cotton producers in the state. These producers planted 59,120.45 acres of cotton in 16 counties. There was no boll weevil trapped in the state during the 2015 season.



(*Anthonomus grandis*) The Boll Weevil

FIREWOOD AND UNPROCESSED WOOD PRODUCTS

The movement of firewood and unprocessed wood products requires a special permit issued by the Division of Plant Industry for intrastate shipments over 50 miles and all interstate shipments. A master permit is required to ship firewood and unprocessed wood products into the state. Between July 1, 2015 and June 30, 2016, the division had special permits established with 16 states; Florida based businesses under compliance totaled **11** for the same period. Personnel spent 806.2 hours associated with firewood and unprocessed wood products inspection activities.

IMPORT INSPECTIONS

Distribution centers, nurseries importing foreign plant material and post-entry quarantine locations are potential high-risk sites for bringing in exotic insect pests and plant pathogens due to the large volume of plant and plant products imported to these sites. Import inspection activities were conducted at high risk locations throughout the state. During this reporting period Plant Inspection Personnel spent 6,671.8 hours associated with import inspection activities. These inspections are instrumental in preventing the introduction of exotic insect pests and plant pathogens into the US via Florida. During the fiscal year 2015-2016 there were six post entry quarantine permits authorized. During the same period of time state inspectors conducted 26 post entry quarantine inspections on plant material.

NON-PROHIBITED AQUATIC HARVESTING PERMITS

The Division of Plant Industry has regulatory authority of permitting for the importation, transportation, cultivation, collection, sale or possession of any aquatic plant. Non-prohibited aquatic plant harvesters are now required to be registered as a nursery and sign a compliance agreement/permit to harvest non-prohibited aquatics. For the period of July 1st, 2015 to June 30th, 2016, the division issued 8 aquatic harvesting permits. The Division currently has 37 active nurseries under compliance.



ENDANGERED PLANT HARVESTING PERMITS

Harvesting Endangered and Commercially Exploited plants requires individuals to have a permit issued by the Division of Plant Industry. Between July 1, 2015 and June 30, 2016, the division issued 68 permits as compared to the 55 permits issued during the same period last year.

PEST DETECTION RECORDS

Pest Records	Arthropods/Mollusca	Diseases /Nematodes
New Host Records	28	12
New County Records	145	9
New State Records	10	2
New U.S. Records	5	3
New to Continent	1	1

NEMATONE CERTIFICATION ACTIVITIES

ORNAMENTAL NURSERIES

Florida nursery stock is regulated for certain nematodes when shipped to California, Arizona, Texas, Louisiana, European Union (EU) and other countries. The Division of Plant Industry has plant inspectors across the state responsible for conducting nematode sampling in order to meet certification requirements. During the 2015-2016 Fiscal Year, nematode certification personnel evaluated 1,236 ornamental nursery locations consisting of 19,197.7 acres. During this reporting period, plant inspection personnel spent 12,664 hours related to nematode certification activities.

COMMERCIAL CITRUS NURSERY SITES APPROVED FOR PRE-MOVEMENT

There were no nematodes of citrus detected in citrus nurseries this year. During this fiscal year 61 citrus nursery sites consisting of 306.03 acres were sampled and approved for pre-movement of commercial citrus plants.

PITS

There were no nematodes of citrus detected in pits this year. During this fiscal year 35 soil pits consisting of 1,232 acres were sampled and approved for nematode certification.

SAMPLES TAKEN

A total of 5,417 samples were collected and processed from citrus nurseries, soil pits, and ornamental nurseries for nematode certification during the 2015-2016 year.

ORIENTAL FRUIT FLY (*BACTROCERA DORSALIS*) ERADICATION PROGRAM

A single male of the Oriental fruit fly, *Bactrocera dorsalis* (Hendel) (Tephritidae), was captured in a methyl eugenol-baited fruit fly detection trap in Miami (Miami-Dade Co.) on 17 August 2015. This is the first appearance of Oriental fruit fly in Florida since 2014. The Oriental fruit fly has been found in Florida on several earlier occasions, beginning in Pinellas Co. in 1964. Several members of this complex of species are of great economic importance, and the Florida and U.S. Departments of Agriculture respond aggressively to the detection of any of these fruit flies in the State.

The response to the detection intensified and expanded the trapping program. An additional Oriental fruit fly was detected in Miami (north of Redland, Miami-Dade Co.) on 26 August 2015, immediately followed with the detection of over 100 flies by 1 September 2015. This triggered an eradication program which will rely on various control methods including soil drenching at larval finds and male annihilation technique for adults.

Plant Inspection personnel detected 157 Oriental Fruit Flies and spent 23,090 hours in Miami-Dade County from 17 August 2015 to 03 March 2016. To eradicate this pest, treatment was conducted in a 1.5-square-mile area around the fly detections. This treatment consisted of attracting male flies to bait which consisted of an attractant, an insecticide, and a thickening agent. The flies were killed when they feed on the bait. The bait mixture was applied weekly to upper portions of telephone and utility poles. The application was one life cycle of the fly, eradication declared on February 13, 2016.



TRAPPING ACTIVITIES

The bureau examines and services various insect traps throughout the state for the early detection of exotic pests. Details are summarized below.

FRUIT FLY DETECTION (FFD)

Plant Inspection personnel tended 349,487 Jackson traps and 77,463 Multi-lure traps on a three week basis. In addition, USDA personnel tended 553,800 Jackson traps and 117,988 Multi-lure traps bringing the total number of traps statewide to 1,124,480.

During this period Plant Inspection personnel spent 17,146 hours working on FFD related activities.

GYPSY MOTH DETECTION

Plant Inspection personnel ran 710 gypsy moth traps throughout north Florida with no gypsy moths detected during fiscal year 2015-2016. During this period field personnel completed 655 trap servicing. Inspectors spent a total of 371 hours tending and servicing gypsy moth traps in 20 counties.

OTHER EXOTIC TRAPPING

Plant Inspection personnel conducted 45 servicing of European Corn Borer traps, 14 servicing of Sweet Potato Weevil. In addition Inspection Personnel also conducted an additional 964 servicing of other Exotic Traps, including but not limited to: Mexican Rice Borer, Exotic Wood Boring Beetles,, Golden Spotted Oak Borer, etc. Plant Inspection personnel spent over 926 hours tending these traps.

CITRUS TREE SURVEY

Citrus Tree Survey (CTS) personnel conducted survey regulatory activities consisting of 2,203 hours during this reporting period. During this period, a total of 68,950 acres were surveyed for USDA annual citrus census and 13,249 inspections for Citrus Pest Survey (PPD), and Citrus Health Response Program. CTS personnel also participated in the regulatory activities associated with Import/Export Inspection, Giant African Land Snail, Gladiolus Rust Survey and Export Certification.

EXPORT CERTIFICATION

Export Certification – allows for nurseries and nursery stock dealers to export plants and plant products out of the state and/or country. During the fiscal year 2015-2016, Plant Inspection personnel issued the following number of export certificates for plants and plant products destined to other states and countries.

- State Phytosanitary Certificates 4,925 certificates
- Federal Phytosanitary Certificates: 10,143 certificates
- Federal Re-export Certificates: 547
- Federal Processed Products: 25 certificates

Canadian Greenhouse Certification – allows for nurseries to export to Canada based on quarterly inspections using authorized stickers in place of a phytosanitary certificate. We currently have 114 nursery locations under compliance and have authorized 4 ,168 stickers to be printed this year.

Canadian Blueberry Certification – allows for blueberry fruit shipments to enter Canada based on negative trapping surveys for the blueberry maggot using authorized stickers in place of a phytosanitary certificate. During the past fiscal year we certified 72 locations consisting of 2,175 acres in Florida and authorized the printing of 1,100 stickers to be printed.

Tropical Spiderwort Certification – allows for commercial nursery shipments to meet the quarantine requirements of North Carolina in regards to freedom of the noxious weed, Tropical Spiderwort. For this reporting period 589 compliance agreements were issued and at the present time there are 1,033 nursery locations actively under compliance for Tropical Spiderwort.

CONSUMER ACTIVITIES

Plant Inspection routinely assists consumers by responding to complaints and requests for information or by investigating plant pest problems. From July 1, 2015 until June 30, 2016 there were **1,382** consumer requests received by the Division of Plant Industry Helpline and forwarded to Plant Inspection for follow-up. The program areas of the calls included GALS, Fruit Fly, Citrus Health, Laurel Wilt and Nursery Certification.



CARIBBEAN FRUIT FLY PROTOCOL PROGRAM

The Caribbean fruit fly, *Anastrepha suspensa* (Lowe), has been a serious pest of many tropical and sub-tropical fruits of central and south Florida. From the 1965 introduction in the Miami area to the present, this pest has caused concern for many Florida growers and consumers throughout the world. Due to the economic severity that is imposed on fresh fruits and the need to protect other areas of the world against this pest, rigid agricultural regulations have been established to prevent the movement of infested material and also, to provide a means for compliance. A program was developed in the 1980's and implemented in Florida to certify fruit as fly free. This program is called the Caribbean Fruit Fly Protocol Program (CFFPP).

CITRUS

During the 2015-2016 season there were 41,080 acres certified under CFFPP which produced 2,640,906 cartons of certified citrus. The certified fruit shipped to Japan, South Korea, China, California and Texas

During the fiscal year 2015-2016, CFFPP personnel conducted the following number of inspections:

- Fruit fly trap services: 32,439
- Harvesting inspections: 4,168
- Packing house inspections: 1,528
- Acreage surveyed in and around production areas for preferred hosts: 281,112

PEACH

During the 2015-2016 season there were 320 acres certified under CFFPP which produced 5,370 cartons of certified peaches. The fruit was certified to ship to Texas.

During the fiscal year 2015-2016, CFFPP personnel conducted the following number of inspections:

- Fruit fly trap services: 362
- Harvesting inspections: 24
- Packing house inspections: 4
- Acreage surveyed in and around production areas for preferred hosts: 3,140

CARAMBOLA

During the 2015-2016 season there were 120 acres certified under CFFPP which produced 9,444 cartons of certified Carambola. The fruit was certified to ship to Texas.

During the fiscal year 2015-2016, CFFPP personnel conducted the following number of inspections:

- Fruit fly trap services: 270
- Harvesting inspections: 60
- Packing house inspections: 13
- Acreage surveyed in and around production areas for preferred hosts: 640

Personnel dedicated 64,799 hours to the Caribbean Fruit Fly Protocol Program during the 2015-2016 fiscal year. Also, they contributed 3,907 hours to the Oriental Fruit Fly emergency program.

OFFICE OF AGRICULTURE LAW ENFORCEMENT REPORT OF AGRICULTURE PRODUCTS ENTERING FLORIDA

A total of 26,909 vehicles carrying plants and plant products were reported entering and exiting Florida through the agriculture inspection stations operated by the Office of Agricultural Law Enforcement Unit during the 2015-2016 Fiscal Year. The commodities indicated below were reported from shipments entering Florida. Statistics provided by the Office of Agricultural Law Enforcement.

Commodity	# of Shipments	# of Violations
AAA Multiproducts	912	67
Aster	2	0
Avocado	734	15
Broccoli	1739	8
Cauliflower	980	3
Celery	772	2
Chrysanthemum	4	0
Citrus	2954	39
Cucumbers	58	6
Cut Christmas Tree	34	1
Cut Fern	6	3
Cut Flowers	150	8
Cut Foliage	73	4
Firewood	19	1
Garden Lettuce	3689	29
Green Onions	2542	45
Hay	116	7
Lime	255	12
Mangoes	560	13
Melon	158	9
Nursery Stock	1684	153
Oak	32	1
Onion	552	11
Organic Vegetables	2624	27
Other-Plant	960	62
Palms	416	11
Pepper	274	5
Pine Straw	4	0
Potato	245	1
Produce- Foreign	1030	87
Produce-Domestic	1925	18
Seed Potatoes	61	1
Sod	68	1
Spinach	772	0
Sugarcane	5	2
Tomato	439	17
Unknown	38	1

GIANT AFRICAN LAND SNAIL (GALS) PROGRAM

During routine fruit fly monitoring activities, a snail specimen that had been collected by a homeowner in Miami Dade County was provided to a Florida Department of Agriculture and Consumer Services Division of Plant Industry inspector and later identified by DPI, Florida Museum of Natural History and USDA APHIS PPQ taxonomic specialists as *Achatina fulica*, Giant African Land Snail (GALS). The specimen was collected on September 8, 2011 in the City of Miami, Miami-Dade County. Since the initial detection, almost 162,000 snails have been collected on 682 properties in 30 core areas of infestation.

Giant African Land Snails are a potential threat to a wide variety of crops, including vegetable, field, oil, ornamental and fruit crops. Our primary mission is to protect the health and value of American agricultural resources threatened by the establishment of exotic pests. Therefore, the first priority is to detect and/or mitigate economically important pest introductions to prevent production losses and/or trade disruption to U.S. growers and industry that would result from the establishment of economic pests and their spread. In addition, this agricultural pest poses a human health risk as a carrier of the rat lungworm (nematode) which can cause eosinophilic meningitis in humans.

Fifty-two personnel are assigned to the GALS program in Miami-Dade County, Florida. Program activities include six core teams carrying out survey, control, regulatory and outreach in their assigned areas based on positive cores.

Survey and control activities involve biweekly inspections including the mechanical collection of GALS, molluscicides bait applications and debris removal. As of June 30, 2016 the following was completed by our survey and control teams:

163,178 inspections

85,061 properties bait treated

Over 2 million pounds of debris removed

161,960 GALS collected

Regulatory and outreach activities involve nursery, stock dealer, solid waste, recycling, transfer facilities, illegal dumpsite inspections and helpline calls. As of June 30, 2016 the following was completed by our regulatory and outreach teams:

1,815 nursery inspections

711 stock dealer inspections

1,144 solid waste/recycling/transfer station inspections

2,277 Lawn maintenance inspections

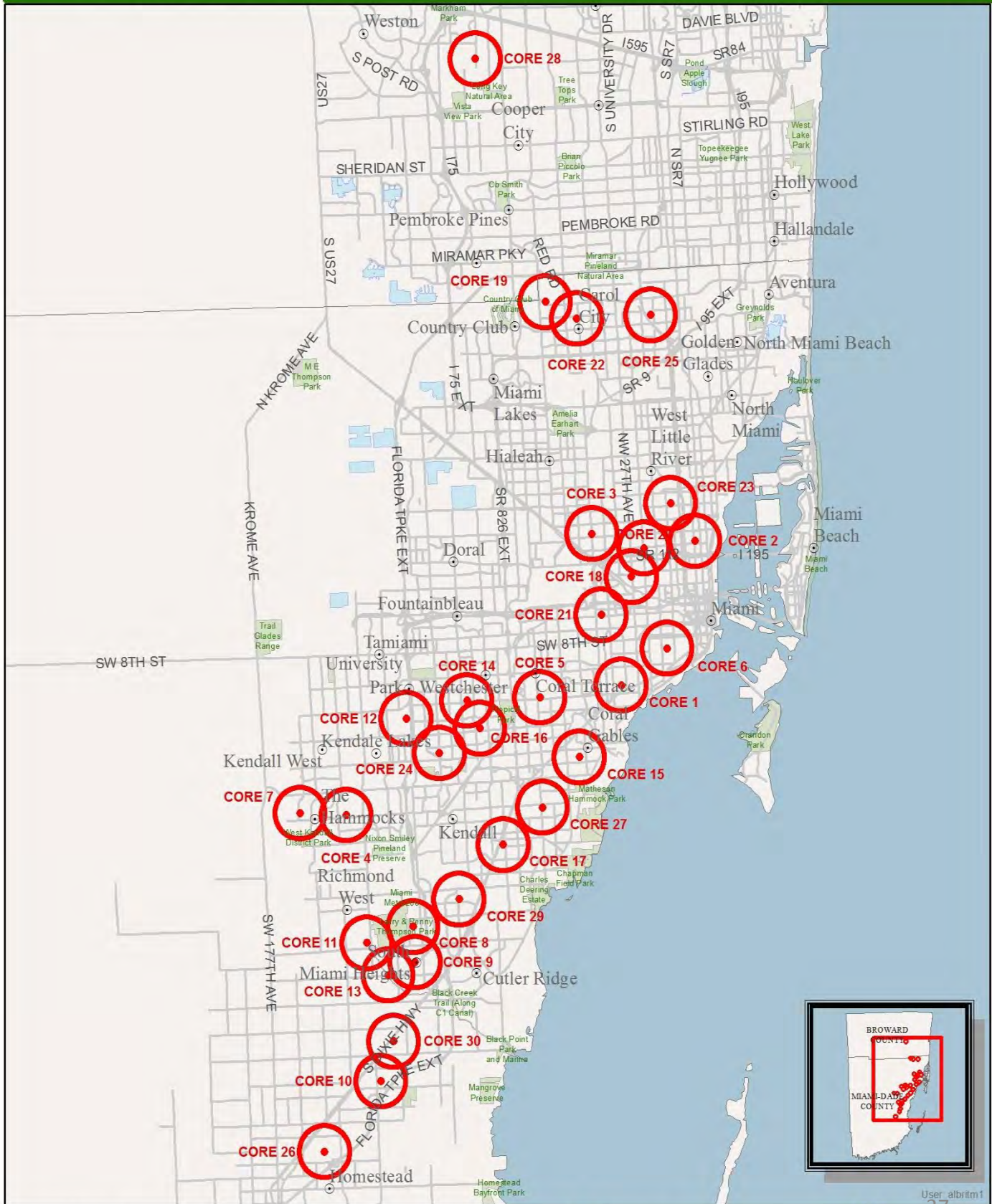
399 illegal dumpsite inspections

2,190 helpline resolved



Giant African Land Snail (GALS) Detections

Miami-Dade and Broward Counties, July 8, 2016



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37
USDA

DETECTOR DOG PROGRAM

A primary objective of this program is to continue safeguarding our nations' food and environmental security through early detection of exotic pests and pathogens that threaten our agricultural production and ecological systems. This program provides the opportunity for early identification and mitigation of plant pests through the use of detector dog technology directed at high risk pathways. We have trained canines deployed at mail/parcel hubs and distribution centers targeting high risk fruit fly host material.

During the past year, the Detector Dog Inspection section has added canine technology to our Giant African Land Snail (GALS) eradication efforts. This is an additional tool to be used in our successful eradication campaign against this plant pest by conducting field inspections on properties previously identified as positive or high risk for infestation.

We currently have four canine teams deployed parcel facilities conducting inspection of packages for high risk plants and plant products. Two teams are located in Central Florida (Orlando & Tampa) and two teams located in Miami. Teams conduct daily inspections at private mail sort facilities targeting plant pests that may negatively impact Florida agriculture and the food supply. Routine inspections using detector dog technology include detections of fruit, vegetables, plants and plant products mailed from within the state and into the state of Florida. High-risk target fruit identified through canine alerts include citrus, mangos, apples, pears, avacodo, lychee, kumquats and peaches.

We have two canine teams deployed on the GALS eradication program in Miami. The focus is to assist with early detection of live GALS on high risk properties. For properties that have been previously positive, the canine teams serve as an additional negative inspection and confirmation that a positive is free of the snails. For helpline calls or new detections, the canines can supplement a thorough survey and help quickly delimit infestations.

In addition to the six canine/handler teams, FDACS-DPI has one program manager headquartered in Miami to supervise the handlers and oversee the detector dog program. The program manager is responsible for conducting annual canine certification, program development and problem solving in all canine inspection areas.

During this reporting period FDACS-DPI personnel dedicated over 15,250 hours associated with the Detector Dog Inspection program.



APIARY INSPECTION – REGISTERED FLORIDA BEEKEEPERS



2015-2016 Florida Registered Beekeepers 4,180

2014-2015 Florida Registered Beekeepers 3,858

2015-2016

Honey Bee Colonies Certified Maintained 469,348

Honey Bee Colonies Seasonally Transported Out of State 362,912

Number of States to which Bees are shipped 29

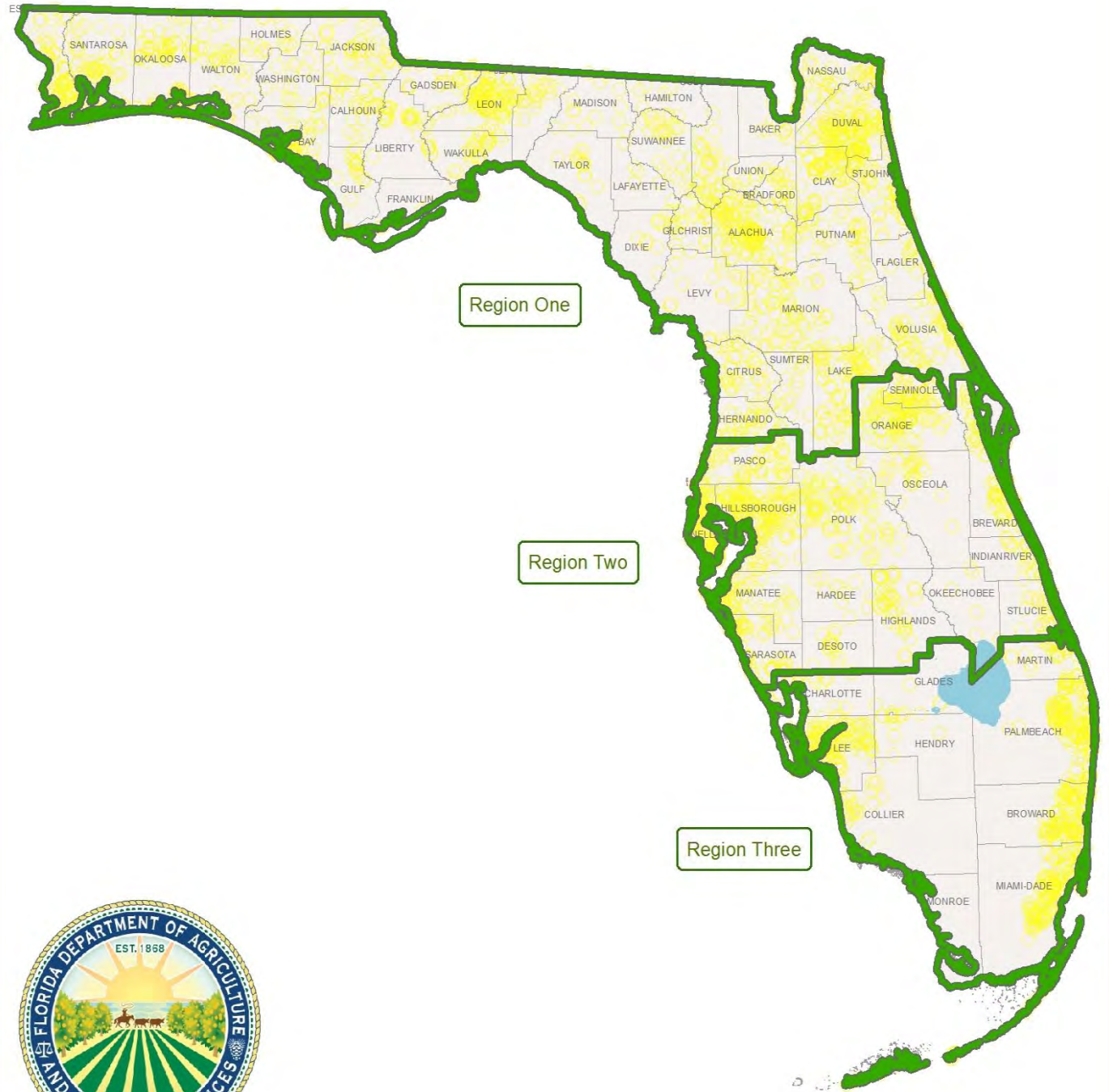
Honey Bee Colonies Entering the State of Florida 213,951

Number of States Shipping Bees into Florida 26

Number of African Honey Bee Samples identified in Apiary Bee Laboratory 367

Florida Apiaries

July 8, 2016



Region One

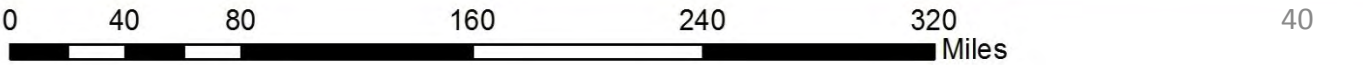
Region Two

Region Three



 Plant Inspection Regions  Apiaries

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COMMERCIAL BEEKEEPING

The Commercial Professional Apiculture (Beekeeping) Industry has for the short term adapted to:

1. Colony Collapse Disorder (CCD)/Significant unanticipated honey bee colony losses. Honey bee total colony losses over the 2015-2016 winter were dropped to 44%. Over the previous three years; winter loss survey data collected indicates an average 24% loss. This is a stressful business model. At this time honey bee biology and astute beekeepers can replace these losses temporarily. Beekeepers have found that keeping strong healthy colonies alive is easier than trying to play catch-up with weak colonies.
2. Varroa mites (invasive/Asia) a robust external parasite of honey bees and as a vector of viral infections continue to negatively impact honey bee colony health. Chemical treatments can temporarily reduce Varroa populations, but create
3. Collateral damage. In the broadest sense, killing a small bug (Varroa) on a big bug (honey bee) is extremely difficult if not impossible without damaging sub-lethally the big bug (honey bee). A new section 3 has been issued for Apivar® mite treatment strips for the control of varroa mites. Commercial Beekeepers are finding it harder to control the Varroa with the treatments available to them Apivar® has been a lifesaver for the beekeeping industry. A section 18 has also been issued for Hops Guard® II giving the beekeepers another tool in the war against varroa mites.
4. Nosema spp. is a microsporidian digestive tract system destroyer. Historically Nosema apis was known and consistently controllable by beekeepers. The newly found Nosema Ceranae (invasive/Asia) are not as responsive to control measures. Beekeepers in the south are seeing more colonies lose in the summer months thought to be from Nosema Ceranae.

The price of honey has hit an all time record high price this year making beekeepers expand their operations to help increase the production of honey even with a 1/3 of a crop they are making a substantial increase in income. Wholesale honey prices; light honey \$2.25 – 3.00, medium \$2.00 – 2.70, dark \$1.85 – 2.50 and Tupelo \$3.85 – 5.00+

RECREATIONAL BEEKEEPING

As noted in the opening figures, the interest in honey bees and beekeeping has increased remarkably over the last several years. Local and regional beekeeper associations have multiplied from 5 local associations throughout the state to over 35. The Apiary Section's regulatory services and its educational outreach training have increased in parallel with new beekeeper registrations. With the signing of the new Honey Bee law allowing beekeeping in back yards under FDACS guidelines opening the flood gates for new beekeepers.

POLLINATION, FEE BASED MODEL

Florida's leadership in fruit, vegetable, and berry production is dependent on managed honey bee pollination. Without a vital, active, and healthy managed honey bee industry, the production of strawberries, blueberries, watermelons (even seedless), citrus, avocado, lychee, cucumbers, squash, and a host of other agriculturally important products would suffer. Additionally think of all the fruits, nuts, seeds, and berries that support Florida's environment and wildlife that honey bees are responsible for by incidental pollination. Florida has 4,180 registered beekeepers; Niche pollinators (1 - 10 colonies) 3,099, sideliners (11 – 200) 767, and commercial beekeepers (201 +) 314 provide this direct benefits.

The state of Florida serves as a honey bee nursery for 362,912 bee colonies from 29 States during the months starting July through March. Colony losses over the summer migratory pollination season are addressed by dividing the remaining live honey bee colonies to make up losses. This is an intense management time for commercial migratory beekeepers preparing for the next fee based pollination season. Without this market, the commercial industry would shrink significantly. After finishing almond pollination in California in early March beekeepers may travel to Washington or Oregon for fruit pollination or back to Florida to solidify colony numbers for the following Spring, and/or to catch the additional honey flows Florida offer; Citrus, Palmetto, Galberry, Mangrove and Brazilian Pepper and many other ornamental and wild flower. As spring progress north so do the beekeepers; blueberries, strawberries, apples, peaches, cranberries, pumpkins, cucumbers and cherries are awaiting pollination from Florida to Maine.

Beekeepers and their honey bee colonies still alive after the summer season return to Florida in late July to repeat the cycle if they have the critical mass and resources.

APIARY RESEARCH ACTIVITIES

Collaborating with the University of Florida/Institute of Food and Agriculture Sciences (UF/IFAS)

- Collaborating with UF/IFAS, field testing legal mite treatments to compare efficacy and with a goal to improve the Varroa control product in the challenging heat and humidity of Florida and reducing residues.
- Collaborating with UF/IFAS, Mitigating the impact of African honey bees: determining how managed European honey bee colonies affect drone congregation areas.
- Collaborating with UF/IFAS, Assessment of honey bee pathogens in the *Apis mellifera* and non-*Apis* pollinator communities in North Central Florida

