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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

October 9, 2017

Hurricane Irma made landfall on the Florida Keys on Sept 10 as a category 4 hurricane, and again in Southwest Florida as a category 3 hurricane. Irma was the largest, most powerful hurricane ever recorded on the Atlantic Ocean, and is among the strongest hurricanes ever to make direct landfall in the United States. Besides causing major devastation to Florida's coastal communities, Irma was large and powerful enough to bring hurricane and tropical storm conditions to every one of Florida's 67 counties. Hurricane Irma's path coincided with some of Florida's most productive agricultural landscapes, and consequently it caused major losses to all segments of production agriculture. Continued on page 2.

FAWN Weather Summary

Date	Air Temp °F		Rainfall	Ave Relative Humidity	ET (Inches/Day)
	Min	Max	(Inches)	(Percent)	(Average)
Balm					
8/1 – 10/9/17	66.56	94.60	16.78	85	0.14
Belle Glade					
8/1 – 10/9/17	69.17	98.44	27.90	89	0.15
Clewiston					
8/1 – 10/9/17	70.90	95.95	20.92	85	0.16
Ft Lauderdale					
8/1 – 10/9/17	72.01	94.75	24.78	81	0.17
Homestead					
8/1 – 10/9/17	67.37	94.51	30.71	85	0.15
Immokalee					
8/1 – 10/9/17	70.41	100.33	28.67	87	0.15
Okeechobee					
8/1 – 10/9/17	68.65	97.48	26.75	88	0.15

When in Doubt – Scout!

The storm ripped through the major vegetable production area of SW Florida wiping out virtually one hundred percent of all vegetables which were planted prior to the hurricane – approximately 4,500 - 5000 acres of tomatoes, peppers, herbs, squash, cucumbers, melons, corn and beans.

In addition, approximately 15,000 acres of land had been prepared for planting and plastic laid. Nearly one hundred percent of the plastic was lost as well.

Crops in Manatee Ruskin area were battered but survived but were damaged and will make a 50% crop at best. Other South Florida production areas typically start planting later and fared better.

Flooding and wet conditions following the storm impeded re-bedding/replanting and recovery efforts and experts predict a 3-5-week delay in crops coming out of SW Florida.

The National Weather Service forecast calls for a fairly stagnant pattern for most of the week, with high pressure centered just to the north. A Bermuda high is forecast to keep an easterly wind across the region through most of the week as well bringing drier conditions and reduced chance of thunderstorms until Thursday or Friday. By the end of the week, models are showing a tropical wave approaching the region. This could develop into a very weak closed low that meanders over the Bahamas through the weekend, slowly approaching South Florida. This would increase the chances for showers and storms by the weekend.

For additional information, visit the National Weather Service in Miami website at http://www.srh.noaa.gov/mfl/newpage/index.html

Insects

The hurricane knocked down insect populations and pressure has been relatively light to date. Growers are advised to be vigilant and continue their regular scouting program as populations will undoubtedly rebound.

Whiteflies

Growers and scouts in the Manatee/Ruskin area report finding mostly low levels of whiteflies in tomatoes but report seeing a significant amount of TYLCV in the fall crop.

Around SW Florida, whitefly populations seem to have really dropped off after the hurricane but there are still a few around. Respondents report finding low numbers of whitefly adults in cucurbits and occasional whiteflies scattered through eggplants and tomatoes and remark that the past few weeks have been the lowest for whiteflies in recent history.

Reports indicate that whiteflies are also showing up on some crops around Homestead.

Tomato growers in the Quincy area are having a terrible problem with whiteflies and virus and whitefly numbers have been astronomical in South Georgia as well causing issues in a wide range of crops.

Even though populations of many insect pests such as whiteflies were negatively affected by the storm and are present in low numbers. They can build up quickly, so growers should scout regularly to avoid being taken unawares later in the season. Preventative soil applications of either imidacloprid, thiamethoxam, dinotefuran, flupyradifurone or cyanatraniliprole should be used as normal in tomato and cucurbits.

Consider the use of metalized (UV reflective) mulch as an additional management practice for day-flying pests such as whiteflies, thrips, aphids, pepper weevil and even broad mites, the last of these which use flying insects to move around.

Table 1; Systemic insecticides applied to soil for whitefly control

Common name	Mode of Action	Trade Names	Rates
Imidacloprid	4A	Various	Check Label
Thiamethoxam	4A	Platinum 75 SG	1.66 - 3.67
	4A	Venom 70% Scorpion 35 SL Certador 10%	5 - 7.5 oz/ac 9 -1 0.5 fl oz/ac 32.5 - 47.5 fl oz/ac
Flurpyradifuron	4D	Sivanto 200 SL	21-28 fl oz/ac
Verimark	28	Verimark 18.7%	5-10 fl oz/ac

Efficacy Ratings for Insecticides and Miticides on Tomato

		Whiteflies	Other pests controlled			
MOA	Active Ingredient	Whiteflies	Southern Armyworm	Spider mites	Stinkbugs	Leafminer
4A	dinotefuran	E**			G	
4A	imidacloprid	E**				
4A	thiamethoxam	E**			G	
4D	flupyradifurone	E**				
23	spiromesifen	E†		E		
23	spirotetramat	E†		G		
7C	pyriproxyfen	E†				
28	cyantraniliprole	E**	E			E
1B	malathion	G*				
3A	beta-cyfluthrin	G*	F		G	
3A	bifenthrin	G*			G	
3A	esfenvalerate	G*	G			
3A	fenpropathrin	G*	F		F	
3A	lambda cyhalothrin	G*	F			
3A	permethrin	G*	G			
3A	zeta-cypermethrin	G*	G		F	
4A	acetamiprid	G				
9	pymetrozine	G†				
16	buprofezin	G†				
21 A	fenpyroxiamate	G		G		
4A	clothianidin	F**				
Unk.	horticultural oil	F†		G		
Unk.	Azadiractin	F†				
Unk.	Soap, insecticidal	F†				

*** OP+Pyrethroids tank mix. † Effective primarily against nymphs ** Most Effective as a drench. Check labels before using any pesticide.**

For more whitefly management tips – see:
Management of Whiteflies, Whitefly-Vectored Plant Virus, and Insecticide Resistance for Vegetable Production in Southern Florida - http://edis.ifas.ufl.edu/in695

Worms

Growers are beginning to find a few worms and worm eggs and egg masses around Immokalee, mostly loopers and southern armyworms in tomato, pepper, eggplant, squash and cukes. They are also finding some melonworms in cucurbits.

Melonworms are also causing problems on some Oriental cucurbits around Homestead.

Glades area growers report a significant outbreak of fall army worm in sweet corn leading up to full moon, with some fields running 25 to 40% neonate to 2 instar larvae.

Growers in Palm Beach area are already reporting significant levels of diamondback moth on early planted collards, kale, arugula, and broccoli for about the past 2 weeks. This could signal trouble for the coming season.

Respondents in Manatee County report a significant outbreak of tomato pinworm in some fields in numbers not seen in many years.

Leafminer

Leafminer are present in tomato in the Manatee Ruskin area and growers report that numbers have picked up somewhat in the past week.

East Coast respondents indicate they are beginning to see traces of leafminer activity showing up in some eggplant.

Around Immokalee, growers and scouts are seeing low levels of leafminer activity in eggplant and report finding occasional mines in squash and cucumbers as well. Numbers remain below treatment thresholds.

Some leafminer activity has also been reported in Homestead as well.

Spider mites

Pepper growers in St Lucie, Martin and Palm Beach counties are seeing occasional spider mite activity at very low levels in pepper.

Thrips

Melon thrips are fairly common on susceptible crops around Homestead.

On the East Coast, growers report only traces of thrips showing up in some bell pepper.

Diseases

Bacterial spot

Respondents in the Manatee Ruskin area report that bacterial spot is present in tomatoes roughed up by Hurricane Irma.

Low levels of bacterial spot are showing up in tomatoes around Southwest Florida and spread has been aided by the wind and rain last week.

Reports indicate that bacteria is coming in with some transplants that went through the storm and were grown out in uncovered greenhouses which lost their tops.

There have been no reports of bacterial spot in bell pepper most likely because of the widespread adoption of resistant cultivars. Some bacteria has been reported in susceptible hot and specialty pepper varieties.

Since water movement spreads the bacteria from diseased to healthy plants, workers and farm equipment should be kept out of fields when fields are wet because the disease will spread readily under wet conditions.

It is important to apply sprays before and during rainy periods. Spraying wet plants can actually assist in the spread of bacterial spot. If conditions are favorable, frequent spraying may not be sufficient to maintain bacterial spot below damaging levels.

The traditional recommendation for bacterial spot control consists of copper and maneb or mancozeb. The effectiveness of copper is limited, because of the widespread occurrence of copper tolerance among strains of Xanthomonas.

In the past few years, a number products have come on the market that have given good results in research trials when used in rotation or together with traditional controls such as copper. These include Tanos (Dupont) as well as the SAR elicitor Actigard (Syngenta), Leap (Certis), Double Nickel 55 (Certis), Regalia (Maronne Bioinnovations) and Serenade and Sonata (AgraQuest). Attention to application techniques is as important as choice of material in achieving adequate control.

Pythium

Growers and scouts report that Pythium is widely present in tomato, pepper, beans, squash and other crops planted after Hurricane Irma but surprisingly not at as bad as some folks expected.

Pythium is one of the Oomycetes or "water molds." It thrives in moist soils and multiplies and spreads rapidly under wet conditions. Although Pythium is capable of producing several spore types, zoospores and oospores are most important.

Zoospores are mobile. They are produced rapidly and in great numbers and contribute to the organism's ability to cause disease almost "over-night." Zoospores may be detected within half an hour after a site is flooded and can "swim" for up to 30 hours and move three or more inches through soil.

Oospores are extremely durable and can survive in soil and infected crop debris for more than 10 years. A number of broadleaf and grassy weeds may host Pythium spp. and serve as important sources of inocula.

While other fungi such as Fusarium spp. and Rhizoctonia spp. may also cause damping off of seedlings, the majority of damping-off diagnosed at the UF/IFAS SWFREC Plant Disease clinic is due to Pythium spp.

Growers may consider applying a fungicide to help limit damage of damping off caused by Pythium spp.

For Pythium root rot or other diseases of concern, currently labeled fungicides can be found in the Vegetable Production Handbook for Florida,

- **Chapter 7, Eggplant** at http://edis.ifas.ufl.edu/cv124
- **Chapter 12, Pepper** at http://edis.ifas.ufl.edu/cv130
- **Chapter 17**, Tomato at http://edis.ifas.ufl.edu/cv137

As always, it is recommended that a disease diagnostic clinic assist with determining the pathogen associated with the problem in order to make an effective fungicide management recommendation.

Fusarium

Grower and scouts report finding some fusarium coming into tomato and pepper behind cracked stems on plants that survived the storm.

Southern Blight

Growers also finding some southern blight showing up in tomato around Manatee County and in SW Florida – not at high levels but more than is normally seen in the fall.

Since many growers in SW Florida who lost plastic due to the Hurricane and re-bedded and laid plastic without a fumigant, growers should be alert for the possibility of increased levels of soil borne diseases.

Phythophthora

Low levels of Phythophthora are showing up on pepper in a few locations. Reports indicate that some plants may be coming infected from the greenhouse.

Rhizoctonia

Growers in the Glades are reporting significant challenges with rhizoctonia on green beans planted in wet soils.

Tomato Yellow Leaf Curl Virus

Reports from the Quincy area indicate that growers are facing major challenges with TYLCV in fall tomato.

TYLCV is showing up widely around Manatee and Hillsborough Counties with some fields reaching as high as an 8 - 10% infection rate.

Gummy stem blight

Very low levels of gummy stem blight has been reported in fall watermelon around SW Florida.

Anthracnose

Anthracnose is showing up on some fall watermelons.

This disease is favored by high temperatures and frequent rains and high humidity which promote disease development and spread.

All aboveground plant parts can be infected. Symptoms vary among the species of cucurbits infected. Leaf lesions begin as water soaked and then become yellowish circular spots. On watermelon foliage the spots are irregular and turn dark brown or black. On cucumber and muskmelon, the spots turn brown and can enlarge considerably. Stem lesions on muskmelon can girdle the stem and cause vines to wilt. Stem cankers are less obvious on cucumbers.

The most striking diagnostic symptoms are produced on the fruit, where circular, black, sunken cankers appear. On watermelon the spots may measure 1/4 to 1/2 in. (6 to 13 mm) in diameter and up to 1/4 in. (6 mm) deep. When moisture is present, the black center of the lesion is covered with a gelatinous mass of salmon colored spores. Cankers lined with this characteristic color can never be mistaken for any other disease. Similar lesions are produced on muskmelon and cucumber.

Weeds

Weeds are going to be significant factor this fall is many plantings around SW Florida. There are a number of different scenarios going on right now with fields that have been patched up and re-prepped in many different ways typically without benefit of a fumigant. Growers are already seeing some fields with serious germination of weeds in plant holes. Due to flooding in many fields enough fertilizer moved into the row middles and alleys that grasses and weeds are really green and vigorous in those areas.

Weed competition can seriously affect yields if uncontrolled and weeds can also harbor pests and diseases which can affect crops as well.

News You Can Use

Irma preliminary Florida ag damages total $2.5 billion

Florida Commissioner of Agriculture Adam Putnam announced this week that Hurricane Irma caused $2.5 billion in agricultural damage in Florida. The estimated economic damages broken out by agriculture sector according to the Florida Department of Agriculture and Consumer Services' preliminary report are as follows:

• Total Florida agriculture: $2,558,598,303

• Citrus: $760,816,600
• Beef cattle: $237,476,562
• Aquaculture: $36,850,000
• Field crops: $62,747,058
• Greenhouse/Nursery/Floriculture: $624,819,895
• Dairy: $11,811,695
• Fruit & veg. (excludes citrus): $180,193,096
• Sugar: $382,603,397
• Forestry: $261,280,000

View the full report - http://tinyurl.com/ybb24e4y

You bet it's Wet! - Southwest Florida has had almost six feet of rain!

Chad Gillis
News Press
September 25, 2017

Southwest Florida is nearly 2 feet above average rainfall for the year, and we've already had enough rain to beat the highest precipitation totals in the past 15 years.

Lee and Collier counties are just above 70 inches of rain for the year, which is more rain than has fallen in a single year in more than a decade. And there's still three months left this year.

Even 2005, the year several hurricanes made landfall in Florida, is behind 2017. The year that ended with Wilma making landfall in Collier County and brought 68 inches of rain for the year.

"We're very wet, I know that's an understatement but that's kind of where we sit," said John Mitnik, the South Florida Water Management District's top engineer. "For the wet season we're about 150 percent above average rainfall sitting here at the end of September, and we've still got a couple of weeks, maybe six weeks of wet season to go through. So we'll see what the rest of it brings us."

This year has seen weather at the extremes, with the driest conditions recorded in nearly a decade bringing drought-like conditions one year after El Nino rains dumped more than a foot of rain in the dry season.

To put that into perspective, this year's precipitation is nearly twice what fell in 2007, during the entire year, according to water district records.

Lake Okeechobee, the liquid heart of the Everglades, shrank down to about 11.5 feet above sea level in May, enough to cause water managers to worry about South Florida's water supply.

June brought record rains. July was pretty dry. August dumped nearly 20 inches for a month that averages just more than 9 inches.

Then came September and Hurricane Irma, which pushed the region over 70 inches.

Hurricane Irma dumped upward of 20 inches in localized areas, but the heaviest rain was actually on the east coast.

Now there's too much water in Lake Okeechobee, with levels approaching 16.2 feet above sea level.

Army Corps of Engineers protocols say the surface of the lake should be kept between 12.5 and 15.5 feet above sea level to provide flood protection for thousands living south of the lake while also providing drinking water for homes and irrigation water for farms.

Heavy rains in June, along with Hurricane Irma dumped several feet of rain on lands south of Lake Okeechobee. That means it's impossible to send more lake water south, so the Caloosahatchee River is likely to continue seeing releases from Lake Okeechobee.

"As a result of all the accumulated water in the system, we're not able to move water south from the lake into the water conservation areas because of their levels,"Mitnik said.

http://www.news-press.com/story/news/2017/09/25/you-bet-its-wet-yearly-rain-total-nearing-6-feet/699477001/

Lake O hits highest level since 2005, raising concerns its dike could fail

Craig Pittman
Tampa Bay Times
October 5, 2017

Lake Okeechobee is seen from its northern shoreline in July 2016. As of Tuesday, the lake had hit 16.56 feet, the highest level since 2005. Officials fear if it gets much higher it will increase seepage through the lake's dike, causing it to fail.

A 2006 photo of the Herbert Hoover Dike in Port Mayaca on Lake Okeechobee. The dike around the lake is classified as one of the most vulnerable in the nation. The earthen embankment on the south end is older, and thus more in danger of being breached, officials say.

As a result, the U.S. Army Corps of Engineers is dumping large volumes of lake water out into coastal estuaries — exactly as it did last year, when those releases caused a massive toxic algae bloom that closed Atlantic coast beaches over the Fourth of July weekend.

Meanwhile, Corps officials have stepped up inspections of the dike to three to four times a week to make sure its continuing leaks don't grow to the point of endangering people living near it.

"We recognize that as the water level continues to rise, there is an increased risk of failure," Corps spokesman John Campbell said.

The dike around the lake is classified as one of the most vulnerable in the nation. The earthen embankment on the south end of the lake is older, and thus more in danger of being breached, he said.

That puts the communities south of the lake — Pahokee, Belle Glade, South Bay and Clewiston among them — at the greater risk for both property damage and loss of life.

"If the dike fails, it would be catastrophic for our communities," a south-of-the-lake group called the Everglades Agricultural Area Farmers said in a news release this week.

As of Tuesday, the lake had hit 16.56 feet, exceeding last year's high of 16.4. That put it at the highest level since Hurricane Wilma hit 12 years ago, when it topped 17 feet. By Wednesday it had crept up to 16.67 feet.

"The rate of rise has accelerated," Campbell said Thursday.

The lake's highest recorded level was nearly 18½ feet in 1947, the result of an unnamed Category 4 hurricane that slammed into Fort Lauderdale.

Lake water has for years slowly seeped through the earthen embankment. But once the water level reaches a certain point, the pressure inside the dike begins forcing even more water out at the bottom, often carrying sand and debris with it, a dangerous situation.

"Any time we get above 17½ or 18 feet, we have seen issues with increased seepage," Campbell said.

That's why the Corps has to step up its inspections, to watch for any sign of a breach.

"The seepage can cause a weak spot and it could cause a chain reaction that could cause a collapse of the dike," explained Tommy Strowd, an engineer who held a variety of top positions at the South Florida Water Management District from 1996 to 2014.

The situation gets worse if the winds from a tropical storm or hurricane whip up waves on the lake too, Strowd said.

"As the water storage in the lake gets higher and then the wind comes, then you've got a problem where it sloshes, and those sloshes can chew into the walls of the dike," he said.

So take a 17 feet or more lake level that's pushing seepage through the bottom of the embankment, add a wind-driven storm surge that damages and overtops the embankment, he said, "then you're really in trouble."

The Corps has been trying to lower the lake level over the past month, but it's been hampered by weather events beyond its control, Campbell said. Hurricane Maria pushed higher tides into the St. Lucie River so the releases couldn't go out as fast. Meanwhile, the Corps had to time its releases into the Caloosahatchee and St. Lucie rivers so as not to worsen the flooding already occurring along those waterways.

Until the 1920s, Lake Okeechobee overflowed regularly — and naturally. Rain south of Orlando would swell the twisting Kissimmee River, which fed the lake. When the lake overflowed, it would send water rolling into the Everglades, forming the River of Grass, which would flow in a vast, shallow sheet all the way down to Florida Bay.

But ranchers persuaded the Corps of Engineers to straighten the Kissimmee so they could have bigger, drier pastures. That sent more polluted water shooting into the lake. To attract settlers to the lake, the state also built a pair of canals that turned the St. Lucie and the Caloosahatchee into drains for the lake's bathtub.

A 1928 hurricane caused the lake to overflow, killing thousands, an event that inspired the climax of Zora Neale Hurston's classic novel Their Eyes Were Watching God. President Herbert Hoover ordered a dike built around the lake to ensure it never happened again — although that cut off the flow of water for the Everglades. The dike construction did not include a spillway to dump out excess water automatically.

With the River of Grass sequestered at its source, developers moved in, carving out space for homes and stores and offices and schools from the drying muck. The Everglades as it exists today is half the size of the original.

Meanwhile, whenever heavy rains hit South Florida, the water in Lake Okeechobee has nowhere to go other than up. When that happens, the Corps opens its floodgates to send millions of gallons to the east and west.

Over the years, those releases of lake water have repeatedly led to toxic algae blooms and other woes in the estuaries attached to the Caloosahatchee and St. Lucie rivers. In 1998, for instance, mullet in the St. Lucie were found with half their flesh eaten away.

The releases have become an environmental and economic disaster for the fishing and tourism industries in both places, particularly with last year's toxic algae bloom. So far this year no bloom has been spotted in the lake, Campbell said.

"We all share a desire for a flood protection system that would be more environmentally friendly than the one we have now," Campbell said. "The system we have does have some flaws in terms of its environmental impact — but it does a great job of flood protection."

http://www.tampabay.com/news/environment/water/lake-o-hits-highest-level-since-2005-raising-concerns-its-dike-could-fail/2339994

Equivalent Testing Methodologies for Agricultural Water

For growers that that fall under the Produce Safety Rule, there is big news from FDA related to Ag water testing (the EPA method 1603). The link below lists several methods FDA has determined are "equivalent". While this may not address all issues related to water testing in the rule, it does provide sorely-needed options pertaining to the method of analysis.

FDA has determined that the following methods are "scientifically valid" and "at least equivalent to the method of analysis in § 112.151(a) in accuracy, precision, and sensitivity:

1. Method 1103.1 disclaimer icon - Escherichia coli (E. coli) in Water by Membrane Filtration Using membrane-Thermotolerant Escherichia coli Agar (mTEC) (March 2010). U.S. Environmental Protection Agency. EPA-821-R-10-002.

2. Method 1604 disclaimer icon – Total Coliforms and Escherichia coli in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium) (September 2002). U.S. Environmental Protection Agency. EPA-821-R-02-024.

3. 9213 D – Natural Bathing Beaches (2007). In: Standard Methods for the Examination of Water and Wastewater, 22nd Edition (Rice E.W., et al., Ed.), 9-46 – 9-48. Washington, DC: American Public Health Association. (2012).

4. 9222 B – Standard Total Coliform Membrane Filter Procedure (1997), followed by 9222 G – MF Partition Procedures (1997) using NA-MUG media. In: Standard Methods for the Examination of Water and Wastewater, 21st Edition (Eaton A.D., et al., Ed.), 9-60 – 9-65, and 9-70 – 9-71, respectively. Washington, DC: American Public Health Association. (2005).

5. D 5392-93 – Standard Test Method for Isolation and Enumeration of Escherichia coli in Water by the Two-Step Membrane Filter Procedure. In: Annual Book of ASTM Standards, Volume 11.02. ASTM International. (1996, 1999, 2000).

6. Hach Method 10029 for Coliforms – Total and E. coli disclaimer icon, using m-ColiBlue24® Broth PourRite Ampules.

7. IDEXX Colilert® Test Kit disclaimer icon, but only if using IDEXX Quanti-Tray/2000 for quantification.

8. IDEXX Colilert-18® Test Kit disclaimer icon, but only if using IDEXX Quanti-Tray/2000 for quantification.

See https://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm575251.htm

In addition:

The FDA has pushed back its timeline for water testing compliance for the largest farms until 2022.

The FSMA Produce Safety Rule Inspections will now begin in 2019 (and not 2018).

Operation Cleansweep

Operation Cleansweep has been funded for 2016-2017.

Operation Cleansweep provides farmers, nursery operators, golf course operators, and pest control services a one-time safe and economical way to dispose of their cancelled, suspended, and unusable pesticides. Some of these materials are very old and in containers that are deteriorating.

Some, such as chlordane and DDT, are so toxic to humans and hazardous to the environment that they are no longer allowed to be used. Proper disposal can be costly and a regulatory burden for small farmers and other pesticide users.

Operation Cleansweep offers an opportunity to avoid these formidable barriers and to promote safe and environmentally sound pesticide use, handling and disposal. Operation Cleansweep began in 1995 with a statewide collection of more than 70,000 pounds of lead arsenate, a widely used pesticide for citrus operations which was banned from use by the EPA. Through July 2016, Operation Cleansweep collected and disposed of more than 1,660,000 pounds (830 tons) of cancelled, suspended and unusable pesticides from almost 2400 participants in all 67 counties.

Pesticide collection will be done at the participant's site by a hazardous waste contractor according to a pick-up plan that will be developed as approved participants' locations are mapped.

For more information, contact Shannon Turner with Operation Cleansweep by phone at 877.851.5285.

Up Coming Meetings

October 11, 2017 CCA Fall Session Multiple Locations

Statewide FL CCA CEU sessions are conducted by IFAS and videocast to five locations in the state, twice a year- Spring and Fall. Each session offers 10 CEUs in Soil & Water and Crop Management (Fall session) and Nutrient and Pest Management (Spring session) during a 10-hr session, starting at 7:45AM to 6:45PM. These sessions are generally scheduled for the second Wednesday of April and October every year. Over 80 CCAs participate in these sessions from Gainesville, Balm, Lake Alfred, Immokalee and Ft. If you have not yet registered, below is the link to the registration website:

https://www.eventbrite.com/e/certified-crop-advisor-training-oct-11-2017-tickets-36898206529

Walk-in registrations will be charged at $120. Only checks will be accepted. Checks should be written to-
'University of Florida

October 12, 2017 Produce Safety Alliance Grower Training Course Immokalee, FL

This one-day course is for fruit and vegetable growers and packers. The course will provide a foundation of GAPs and co-management information, FSMA Produce Safety Rule requirements, and details on how to develop a farm food safety plan.

The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule training requirement which requires that every farm have at least one produce food safety trained individual on staff.

Register on-line at http://psa101217.eventbrite.com

October 25, 2017 Vegetable Growers Meeting – Fertilizers and fertilizer sources 6:00 PM

UF/IFAS SW Florida Research and Education Center
SR 29
Immokalee Florida

November 1, 2017 **WPS Train the Trainer Program** **8:30 AM - 3:30 PM**

Clayton Hutcheson Ag. Center
Exhibit Hall A
Palm Beach County Cooperative Extension Service
559 N. Military Trail
West Palm Beach, FL 33415

Call for details at 561.233.1725 or email at EEScott@pbcgov.org

Websites

Cover Crop Options for Hot and Humid Areas - Cover crops can be better adapted to some regions than others. This publication discusses the characteristics of cover crops that are better suited for areas with hot, humid summers, like the southern portions of Texas and Florida and along the Gulf Coast, the Caribbean, Hawaii, and points beyond with similar climatic conditions. It includes a table that will allow you to make the best decision for your situation about which cover crops may suit your individual needs.
https://attra.ncat.org/attra-pub/summaries/summary.php?pub=570

ATTRA Sustainable Agriculture Program - ATTRA is a program developed and managed by the National Center for Appropriate Technology (NCAT). ATTRA is committed to providing high value information and technical assistance to farmers, ranchers, Extension agents, educators, and others involved in sustainable agriculture in the United States. - https://attra.ncat.org/index.php

Arkema's Paladin® Soil Fumigant Calculator phone app is a tool that enables soil fumigant applicators and growers to quickly calculate buffer zone distance and flow meter rate settings for applications of Paladin® soil fumigant in the United States.

You can download the app at
Google Play: https://play.google.com/store/apps/details?id=com.arkema.paladin
ITunes: https://itunes.apple.com/mx/app/paladin-soil-fumigant-calculator/id492567718?l=en&mt=8

Check out Southwest Florida Vegetable Grower on Facebook
https://www.facebook.com/pages/South-Florida-Vegetable-Grower/149291468443385 **or follow me on Twitter @SWFLVegMan** - https://twitter.com/SWFLVegMan

Quotable Quotes

Do all the good you can, by all the means you can, in all the ways you can, in all the places you can, at all the times you can, to all the people you can, as long as ever you can. - John Wesley

Hard work beats talent when talent fails to work hard. - Kevin Durant

Tomorrow is the most important thing in life. Comes into us at midnight very clean. It's perfect when it arrives and it puts itself in our hands. It hopes we've learnt something from yesterday. – John Wayne

If a man is called to be a street sweeper, he should sweep streets even as Michelangelo painted, or Beethoven played music, or Shakespeare wrote poetry. He should sweep streets so well that all the hosts of heaven and earth will pause to say, here lived a great street sweeper who did his job well. - Martin Luther King Jr.

It's not the load that breaks you down, it's the way you carry it. – Lou Holtz

On the Lighter Side

The Chicken Gun.

Scientists at NASA built a gun specifically to launch standard 4 pound dead chickens at the windshields of airliners, military jets and the space shuttle, all traveling at maximum velocity.

The idea is to simulate the frequent incidents of collisions with airborne fowl to test the strength of the windshields.

British engineers heard about the gun and were eager to test it on the windshields of their new high speed trains. Arrangements were made, and a gun was sent to the British engineers.

When the gun was fired, the engineers stood shocked as the chicken hurled out of the barrel, crashed into the shatterproof shield, smashed it to smithereens, blasted through the control console, snapped the engineer's back-rest in two, and embedded itself in the back wall of the cabin, like an arrow shot from a bow.

The horrified Brits sent NASA the disastrous results of the experiment, along with the designs of the windshield and begged the U.S scientists for suggestions.

NASA responded with a one-line memo - "Defrost the chicken."

Monkeys

You start with a cage containing four monkeys, and inside the cage, you hang a banana on a string, and then you place a set of stairs under the banana.

Before long a monkey will go to the stairs and climb toward the banana.

You then spray ALL the monkeys with cold water. After a while, another monkey makes an attempt. As soon as he touches the stairs, you spray ALL the monkeys with cold water. Pretty soon, when another monkey tries to climb the stairs, the other monkeys will try to prevent it.

Now, put away the cold water. Remove one monkey from the cage and replace it with a new monkey. The new monkey sees the banana and attempts to climb the stairs. To his shock, ALL of the other monkeys beat the crap out of him. After another attempt and attack, he knows that if he tries to climb the stairs, he will be assaulted.

Next, remove another of the original four monkeys, replacing it with a new monkey. The newcomer goes to the stairs and is attacked. The previous newcomer takes part in the punishment - with enthusiasm - because he is now part of the "team."

Then, replace a third original monkey with a new monkey, followed by the Fourth. Every time the newest monkey takes to the stairs, he is attacked.

Now, the monkeys that are beating him up have no idea why they were not permitted to climb the stairs.

Neither do they know why they are participating in the beating of the newest monkey?

Having replaced all of the original monkeys, none of the remaining monkeys will have ever been sprayed with cold water. Nevertheless, not one of the monkeys will try to climb the stairway for the Banana.

Why you ask? Because in their minds, that is the way it has always been!

This is how today governments operate, and this is why, from time to time, ALL of the monkeys need to be replaced at the same time!

Disclaimer: This is meant as no disrespect to monkeys.

10 Ways to Love

1. Listen without interrupting.
2. Speak without accusing.
3. Give without sparing.
4. Pray without ceasing.
5. Answer without arguing.
6. Share without pretending.
7. Enjoy without complaint.
8. Trust without wavering.
9. Forgive without punishing.
10. Promise without forgetting.

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