



SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

November 20, 2018

A cold front moved across the region last week bring a few cool days with nighttime lows in the 40's and 50's. Growers are welcoming cooler conditions as hot dry conditions over the past few weeks has stressed plants and workers alike.

Conditions have been relatively dry with a few scattered showers accompanying fronts over the past few weeks. Most locations reported between 1 – 2 inches of rain for the period.

FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
Balm					
10/28 -11/19/18	42.56	89.71	1.96	82	0.08
Belle Glade					
10/28 -11/19/18	54.09	90.82	1.76	86	0.09
Clewiston					
10/28 -11/19/18	50.68	90.19	1.45	83	0.09
Ft Lauderdale					
10/28 -11/19/18	59.77	90.28	1.96	86	0.1
Homestead					
10/28 -11/19/18	55.15	88.56	1.46	83	0.09
Immokalee					
10/28 -11/19/18	47.52	92.03	1.40	83	0.09
Okeechobee					
10/28 -11/19/18	43.43	90.61	1.07	85	0.09
Wellington					
10/28 -11/19/18	54.21	91.35	1.02	83	0.09

“Remember, when in doubt - scout.”

Growers are busy harvesting a wide variety of produce for the Thanksgiving Holiday. Prices are favorable for most commodities.

The National Weather Service reports that overall, the week will see a slight chance to a chance of showers for South Florida. The Atlantic waters may see a few thunderstorms later this week.

No significant change in temperatures is forecast through the week, with highs generally in the 80s, and lows in the 60s and 70s. A weak cold front could bring some upper 50s into the western Lake region by Wednesday morning, and for the remainder of the week.

By the weekend, a strong low develops over the Great Plains. This low will quickly move eastward, and push a cold front into the Florida peninsula over the weekend. But alas, it looks like an Okeechobee teaser, basically a cold front stalling out in the lake region, and never making it quite into South Florida. But it will be enough to keep showers in the forecast through the beginning of next week.

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

Insects

Worms

Worms have been an increasing issue around South Florida over the past few weeks, perhaps finally being pushed south by a series of cold fronts.

In the EAA, worm pressure in corn has been consistent with both fall armyworm and corn ear worm causing problems. Growers have responded by increasing spray frequency.

Growers are also continuing to report some issues with beet armyworms in early leaf and lettuce plantings.

On the East Coast, growers and scouts indicate that worm pressure remain moderate to low with a few loopers and beet armyworm showing up in scouting reports.

Respondents indicate that worms have been persistent in the Manatee Ruskin area

Around Immokalee, reports indicate that worm activity is picking up in a number of locations.

Growers and scouts report finding a mixed bag of species. Scouts report finding unusually high levels of hornworms in some locations. Southern and yellow stripe armyworm have been active in tomatoes and eggplants in Immokalee area, and both beet armyworm and corn earworm are being found in bell and specialty peppers.

In pepper, reports indicate that in a number of cases, beet armyworms are placing egg masses around the calyx of immature pepper pods and worms are hatching out and burrowing into the fruit rendering it unmarketable. In such cases, growers are advised to include a Bt in every spray tank. Growers are also reminded that there is a 24c Special Local Need label for Lorsban 75 WG in pepper only within Florida to control beet armyworm infesting pepper, which may provide relief in extreme cases. This label can be found at <http://www.cdms.net/LDat/ld6N3002.pdf>

Growers and scouts are also finding some loopers and fruitworms as well as melonworms in squash and cukes.

Tomato pinworm has been reported in some grape tomatoes.

Fall armyworms are showing up in some corn around Homestead. Melonworms have been active in cucurbits.

Many excellent worm materials are present on the market so growers have a number of options available. Consult UF/IFAS recommendations for currently labeled insecticides for worm control in Florida vegetables.

Leafminer

Growers and scouts in the Manatee Ruskin area report that they continue to battle leafminers and report pressure remains relentless.

Around Southwest Florida, leafminers are increasing and respondents indicate that pressure is high in some locations.

In Palm Beach, County, reports indicate that leafminer pressure is building a little but generally not a problem for most growers at this time.

Reports from Homestead indicate that leafminer are present in susceptible crops.

The two major species of leafminer that cause problems in vegetables in Florida are the vegetable leafminer (*Liriomyza sativae*) and the American serpentine leafminer (*L. trifolii*).

Leafminers are particularly damaging on celery, crucifers, cucurbits, okra, potato and tomato. In south Florida, populations peak between October and March while in central Florida they are a problem in both spring and fall.

The adults are small yellow and black flies about the size of a gnat. The female punctures or "stipples" the leaves with her ovipositor to lay eggs in the leaf tissue or to feed on sap.

Leafminer damage is easily recognized by the irregular serpentine mines in leaves. The tunnel is clear with a trail of black fecal material left behind as the maggot feeds.

Leafminers have a relatively short life cycle. The time required for a complete life cycle in warm environments such as Florida is often 21 to 28 days, so numerous generations can occur annually.

An integrated pest management program that stresses conservation of natural enemies is important for the successful control of leafminer.

Several parasites for this insect have been recorded in Florida, but parasitic wasps are most common. Up to 90% parasitism in non-sprayed tomatoes has been observed in Florida. Insecticides that specifically target the leafminer are recommended as use of broad-spectrum materials may decimate beneficial insects including those that attack leafminer. This often results in a larger leafminer problem if the pesticide reduces numbers of leafminer parasites.

To determine whether leafminer larvae are dead or alive, leaflets can be held up to the sun and examined with a hand lens. Living larvae are a pale yellow and flush with the end of the mine. The back and forth

feeding movements are readily visible, although movement may cease when larvae are disturbed or molting. Dead larvae do not show movement and are usually discolored and removed from the ends of mines.

Therefore, it is important that the scouting program include not only an assessment of the number of leafminers present but also the natural enemies.

Cyromazine (Trigard) alternated with abamectin (Agrimek) are effective against leafminer in tomato. Both of these products have limited crop registrations and must not be used on unregistered crops. Dow Radiant (Spintoram) has also given good results and is labeled on a wide range of crops. Some other materials that may be used to conserve beneficials include azadirachtin (Neemix) and insecticidal oils. Both products are approved for use by organic growers as is Conserve (spinosad).

The newest additions to the grower's arsenal of control are Coragen (chlorantraniprole) and Exirel/Verimark (cyantraniliprole) which have shown good results. Consult UF/IFAS recommendations for currently labeled insecticides for leafminer control in Florida.

Whiteflies

Reports from the East Coast indicate that whitefly pressure is building and numbers are at moderate levels in some eggplant. Whiteflies remain mostly low in other crops.

Respondents in the Manatee/Hillsborough area report that whitefly numbers are building with immatures present in some locations.

Around Immokalee, whitefly adults are starting to build in eggplant, tomatoes and in cucurbits in Immokalee area. Scouts report finding some eggs and immatures in the older tomato plantings.

Around Homestead, whiteflies are present on various ornamental and a range of vegetables. While populations remain low, 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 cyantraniliprole 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, 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
Dinotefuran	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
Flupyradifuron	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		
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	fenpyroximate	G		G		
4A	clothianidin	F**				

Efficacy Ratings for Insecticides and Miticides on Tomato

		Whiteflies	Other pests controlled			
MOA	Active Ingredient	Whiteflies	Southern Armyworm	Spider mites	Stinkbugs	Leafminer
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>

Broad Mite

Respondents on the east coast report that broad mites remain a persistent problem in pepper and eggplant. Pressure ranges from low to moderate depending on location.

Around Southwest Florida, broad mite activity is increasing in peppers and eggplants and some fields have been treated.

Around Hillsborough County, broad mites are present in pepper.

Respondents in Miami Dade County report problems with broad mite in some places.

Spider Mites

Spider mites are starting to show up in some eggplant on the East Coast.

Pepper Weevils

A few pepper weevils have been found on farms in St Lucie and Palm Beach Co.

Around Immokalee, scouts are beginning to find low numbers of weevils in some pepper fields.

Respondents in Homestead, note that they are beginning to find pepper weevils in some specialty peppers.

Aphids

A few aphids are showing up on lettuce in the EAA.

On the East Coast, aphid pressure is building in crops like cilantro and arugula.

A few winged aphids are also being reported showing up around SW Florida.

Thrips

Around SW Florida, reports indicate that thrips numbers are picking up in any crop that is blooming, especially peppers and tomatoes, with eggplants coming in third for numbers.

On the East Coast, scouts report that Florida flower thrips are becoming more prevalent in pepper and other crops.

Thrips are present in some tomatoes around Homestead especially those planted close to ornamentals.

Stinkbug

Higher than normal numbers of stinkbug are causing problems in tomato and pepper in a number of locations around South Florida.

Corn silkfly

Low numbers of corn silkfly are present on corn in the EAA and around Homestead.

Vertebrate Pests

Iguanas

Reports from Palm Beach County indicate that iguanas (some up to 5 feet long) are causing problems in squash as well as in young pepper and eggplant. Growers report that they can mow down a young planting as efficiently as deer. In some locations, growers have turned to iguana removal services for assistance.

Respondents indicate they have been moving north from Broward County for years and have now made it up to about West Palm Beach.

Diseases

Bacterial Spot

Growers and scouts in the Manatee Ruskin area report that bacterial spot is increasing but remains mostly low on the bush.

Around SW Florida, showers and some fog has led to an increase in bacterial spot in tomato and also in susceptible pepper which continues to keep abreast of some very vigorous growth in some locations.,

Some bacteria is showing up in some East Coast tomatoes, but respondents report that peppers including susceptible varieties remain clean.

Target spot

Reports indicate that target spot is increasing on tomato around Hillsborough County.

Around Immokalee, target spot is increasing in tomato and has really flared up in some mature plantings. Scouts report that some new infections are starting in exited leaf miner mines in some tomatoes.

Currently, target spot is controlled primarily by applications of protectant fungicides. It should be noted that tank-mix sprays of copper fungicides and maneb do not provide acceptable levels of target spot control.

Widespread resistance has been documented to QoI fungicides including both strobilurins and non-strobilurin fungicides in FRAC Group 11 and their use is not recommended for target spot control.

In addition, moderate resistance has been documented in the SDHI fungicides FRAC Group 7 which includes boscalid, penthiopyrad, fluopyram and fluxapyroxad. These should be used with caution and attention paid to rotating with alternative modes of action.

In recent efficacy trials, at the University of Florida – Approvia Top, Inspire Super, Luna Tranquility, Revus Top, Rhyme, and Scala are top performers. Contact protectant fungicides like mancozeb and Bravo are effective and should be used early in the crop cycle switching to more efficacious materials once disease is present.

Consult UF/IFAS recommendations for currently labeled fungicides for target spot control in Florida vegetables.

Early Blight

Low levels of early blight are starting to show up on tomato in a couple of locations around South Florida.

Choanephora

Around Southwest Florida, growers are reporting problems with choanephora in a number of varieties of both summer and winter squash, in some fields up to 50% of the blooms are showing signs of infection.

On the East Coast, respondents indicate that Choanephora in squash has become pretty common.

The fungus *Choanephora cucurbitarum* is a plant pathogen that causes fruit and blossom rot of various cucurbits. It can also affect okra, green beans, and southern pea.

Wet weather, high temperature and high humidity favor disease development from inoculum that is typically soil-borne. Signs of infection on fruits or leaves include water-soaked, necrotic lesions, which progress rapidly under ideal conditions. As the fungus begins to produce spores, affected tissues become dark grey-brown and hairy as a result of the superficial sporangia.

No fungicides are specifically labeled for control but fungicides applied for other diseases may help suppress the disease.

Phytophthora

On the East Coast, a little Phytophthora is being reported in pepper and eggplant. Some hot spots are present in some squash.

Around Immokalee, fairly high levels of Phytophthora continues to plague some squash growers.

Pythium

With the drier conditions, Pythium on beans has backed off in the EAA, but the disease is being reported on young cabbage seedlings as damping off.

Rhizoctonia

Respondents report that rhizoctonia is causing problems on radishes on both muck and sand.

Gummy stem blight

Low levels of gummy stem blight continue to be reported on watermelons and is slowly increasing in a few places around South Florida.

Downy Mildew

In the Manatee Ruskin area, downy mildew pressure has greatly increased as night temperatures dip down to into the 50's and 60s.

Downy mildew has also fired up in squash, cucumber and melons around SW Florida.

Leaf symptoms can be used to diagnose downy mildew in the field in some cases. On cucurbits other than watermelon, small yellowish spots occur on the upper leaf surface initially away from the leaf margin. Later, a

more brilliant yellow coloration occurs with the internal part of the lesion turning brown. Lesions are usually angular as leaf veins restrict their expansion. When the leaves are moist, a downy grayish fungal growth may be seen on the underside of lesions.

On watermelons, yellow leaf spots may or may not be angular and later turn brown to black in color. On watermelons an exaggerated upward leaf curling occurs that growers sometimes liken to a dead man's hand.

Since nighttime temperatures between 55° and 75°F and relative humidity above 90%, provide ideal conditions for infection, cucurbits planted in South Florida are always at risk from downy mildew .

Control of downy mildew on cucurbits is achieved primarily by the use of fungicide spray programs. Fungicide sprays are recommended for all cucurbits.

Squash, pumpkin, cantaloupe, and non-resistant cucumber varieties are very susceptible and should be sprayed every five to seven days. If cucurbits are planted close to established fields infected with downy mildew, a spray program should be initiated as soon as the first true leaves are present.

Spray programs for downy mildew are most effective when initiated prior to the first sign of disease since once a planting becomes infected; it becomes more and more difficult for fungicides to control downy mildew.

A range of fungicides is available for the control of downy mildew depending on the crop. Use of Bravo should be avoided on watermelon after fruit set as it may increase the risk of sunburn. Consult UF/IFAS recommendations for currently labeled fungicides for downy mildew control in Florida.

To date we have not seen downy mildew yet on cabbage or kale, but this usually shows up in Dec, so growers should be on guard.

No lettuce downy mildew reported yet.

Powdery Mildew

Powdery mildew is beginning to show up widely in squash in the Immokalee area. It is also being reported on watermelons around SW Florida.

Growers and scouts on the East Coast report that powdery mildew remains mostly low in some older squash.

Fusarium crown rot

Around the Manatee Ruskin area, fusarium crown rot is starting to show up in some blocks with a history of the disease.

Some fusarium is also starting to show up around Immokalee.

Fusarium crown rot is caused by the fungus *Fusarium oxysporum f. sp. radicis-lycopersici*, a close relative of the Fusarium wilt pathogen.

FCR is becoming more common and widespread in Florida. The disease causes significant yield losses and yield reductions of 15 to 65% have been reported.

Symptoms typically begin to show when plants are nearing the mature-green fruit stage. On more mature plants, the initial symptoms include a yellowing of the oldest leaves. The yellowing gradually progresses up the

plant to the younger leaves as the disease develops, and symptoms may be restricted to a single branch of the plant. Affected leaves may wilt during the heat of the day but recover overnight, and in some cases, flowers may wilt and die. These symptoms are similar to those associated with Fusarium wilt.

Prominent lesions develop on the hypocotyl (lower stem) and on the tap- and lateral-roots. These lesions are typically round in shape and chocolate brown in color. A brown discoloration in the cortex can extend beyond the externally visible lesions, up to 10 inches above the soil-line, but the discoloration will not move up into the upper parts of the plant as is seen with Fusarium wilt.

Adventitious roots may proliferate above the affected stem tissues, and sometimes-white mats of fungal growth with pink spore masses will develop on dead tissues. Plants can be killed when the disease is severe.

The pathogen survives in the soil as spores and on the roots of alternate hosts including eggplant, peppers, some legumes and cucurbits, beets, spinach, carrot, cabbage, and several weed species. The pathogen can spread by infected transplants and through the movement of infested soil and equipment.

The FCR pathogen infects tomato root systems through wounds created by emerging lateral roots. The disease develops best in areas with low soil pH levels, high chlorine salt levels, applications of ammonia forms of nitrogen, and waterlogged soils. The pathogen can spread from plant to plant during the season through root contact. The pathogen can also spread through wind-blown spores to re-infest fumigated soils.

Management strategies focus on preventing infection and limiting the spread of the pathogen. Growers should plant only pathogen-free seed and transplants.

In the field, maintain soil pH levels in the 6 to 7 range, and avoid the use of ammonia-based fertilizers. Minimize plant stress throughout the growing season. Incorporate crop debris promptly after harvest to promote rapid decomposition. Long-term rotation to non-host crops, such as corn and other monocots, can help prevent the buildup of inoculum in the soil. Soil fumigation is usually not effective for controlling FCRR because the fungus can quickly recolonize fumigated soil.

A single dominant gene for resistance to FCR (Fr1) has been identified, and it is used in some tomato varieties. However, most commercial tomato varieties are susceptible to this disease.

Tomato Yellow Leaf Curl Virus

Low levels of TYLCV – mostly a few plants here and there in a scattered locations - are being reported on tomato around South Florida – both Manatee Ruskin and SW Florida.

Tomato Chlorotic Spot Virus

Around Homestead, respondents report that symptoms of tospoviruses (believed to be primarily Tomato Chlorotic Spot Virus) have started to show up in in some early planted tomato fields (4-6 weeks after transplanting). 5 – 10% of the plants in some locations are displaying symptoms.

Southern Corn Leaf blight

Southern corn leaf blight continues to be a problem in sweet corn, due to unusually warm temperatures for this time of year. A little southern corn rust has also been reported on fall corn but SCLB remains the main issue.

Southern Blight

Southern blight is being seen in some older tomato and watermelon around South Florida especially in fields that have been repeatedly planted to these crops.

In the EAA, Southern blight, caused by *Sclerotium rolfsii* has shown up in fall grown lettuce, again being favored by the unusually warm temperatures.

Southern blight is especially destructive on crops such as tomato, pepper, eggplant, beans and melons. The disease has a wide host range and many other plants including annual ornamentals are also susceptible.

Sclerotia serve as the main survival structures and source of inoculum for disease. Since *S. rolfsii* does not produce spores, dissemination depends on movement of infested soil and infected plant material. Use of contaminated equipment and machinery may spread sclerotia to uninfested fields.

The fungus develops rapidly during hot weather when temperatures are over 85° F. *Sclerotium rolfsii* grows on living and non-living organic matter and becomes most severe when dead leaves or other types of organic matter are present around the base of the plant. This decaying organic matter provides the fungus with energy and allows it to grow quickly and rapidly kill the host plant.

High temperatures and moist conditions are associated with germination of sclerotia. Conditions in Florida's early fall favor disease development, a good rule of thumb is that the first moisture event (either rainfall or irrigation) following the first sustained 3-5 day period when temperatures exceed 95 ° F will signal the first severe outbreak of the disease.

High soil moisture, dense planting, and frequent irrigation are all-favorable to disease development.

Soil fumigation with methyl bromide alternatives containing chloropicrin and or Vapam can help reduce the incidence of southern blight.

Cucurbit crumple leaf virus.

Scouts around SW Florida continue to report finding crumple leaf on watermelon plants in a few locations causing vines to decline prematurely.

News You Can Use

FFVA's Stuart to trade commission: Florida growers still suffering

Farmers in Florida will continue to go out of business if the U.S. government fails to provide critical trade relief to combat cheap Mexican produce imports flooding the market, Florida Fruit & Vegetable Association CEO Mike Stuart told members of the International Trade Commission on Thursday.

Stuart's testimony in Washington, D.C., was part of the ITC's investigation to assess the likely impact of the U.S.-Mexico-Canada Agreement (USMCA). Under federal law, the trade commission must prepare a report that outlines the potential effects of the agreement on the U.S. economy as a whole and on specific industry sectors. According to FFVA, the USMCA does not include trade remedies that Southeastern produce growers need.

Also testifying on Thursday were Florida Agriculture Commissioner Adam Putnam and Kenneth Parker, president of the Florida Strawberry Growers Association. Georgia Agriculture Commissioner Gary Black also spoke on the dire need for trade relief.

U.S. imports of Mexican tomatoes have tripled since 2000, Stuart said. During that time Florida tomato production has dropped by almost 50 percent. Mexican bell pepper shipments to the United States also have tripled since 2000, while U.S. production has declined by 35 percent.

"In less than two decades, unfair subsidies by the Mexican government for its fruit and vegetable producers have empowered that industry to overtake the U.S. market," the association stated. Citing a University of Florida study, Stuart said the Mexican government's investments in protected agriculture – crops such as tomatoes, cucumbers, strawberries and peppers -- have increased that industry by a multiple of 52 since 2000, putting extreme pressure on U.S. producers of those same crops.

"As Mexican fruits and vegetables have swamped our market from one year to the next, they have systematically decimated our prices and market shares," Stuart said. "To a growing extent, the farmers in the Southeast are finding it impossible to keep pace with rising costs and are folding their tents."

He urged the commission to consider those consequences in its final report on the impacts of the USMCA.

"No U.S. interest is served if the Southeast produce industry suffers further irrevocable decline under the USMCA's watch," Stuart said. "My colleagues and I therefore respectfully urge that the commission highlight in its forthcoming report, with as much priority as possible, that effective near-term relief has become a survival imperative for the Southeast industry."

Putnam Testifies Before U.S. International Trade Commission

November 15, 2018

Florida Commissioner of Agriculture Adam Putnam testified before the U.S. International Trade Commission in Washington, D.C. to voice concerns about the United States-Mexico-Canada Agreement's potential negative economic impact on Florida's produce industry. Excerpts from Commissioner Putnam's remarks are below:

"I'd like to address how the United States-Mexico-Canada Agreement could further impact vital US farm sectors in the absence of measures that can provide effective, near-term relief against unfairly traded Mexican fruits and vegetables.

"As Florida's Commissioner of Agriculture and Consumer Services, I represent the Florida agriculture industry, which generates more than \$120 billion in total economic impact, supports more than 1.5 million jobs in Florida, and produces more than 300 agricultural commodities.

"As an industry that depends on fair trade agreements, the proposed United States-Mexico-Canada Agreement will directly affect the livelihood of Florida's farmers and ranchers.

"Florida and Mexico produce many of the same agricultural products during the winter months of the year and have overlapping harvests of other commodities in other seasons.

"Imports of agricultural products from Mexico have a disproportionately negative impact on Florida's producers. Since the turn of the millennium, imports of many agricultural products from Mexico have increased dramatically, proving particularly injurious to Florida Agriculture's specialty crop sector.

"I believe that many of these commodities are unfairly subsidized and are pouring into the U.S. market in high volumes at prices significantly below the cost of production, resulting in negative repercussions on U.S. producers and causing disproportionate economic injury to Florida's specialty crop industry.

"Unfortunately, the trade environment created under NAFTA, and the trade environment that will be created under USMCA is anything but a fair and level playing field for Florida's producers.

“For this reason, I am disappointed that this new agreement has no new protections for Florida fruit and vegetable producers, who for too long have suffered from Mexico’s unfair trade practices – despite our best efforts.

“Our department, Florida’s Congressional delegation and industry groups have fought hard to protect our specialty crop industry since the inception of NAFTA, and we will continue to do so as this new agreement moves forward.

“We’re seeking commitment to work with the Administration toward a viable, effective tool to address unfair trading practices and ensure the future sustainability of fruit and vegetable production in the United States.”

Source: Florida Department of Agriculture and Consumer Services

GFVGA Warns of Potential Elimination of the SE Produce Industry if USMCA (NAFTA 2.0) is Approved

The Georgia Fruit and Vegetable Growers Association has filed comments with the International Trade Commission regarding the damage NAFTA has done to Georgia’s produce industry. Speaking on behalf of GFVGA, GA Commissioner of Agriculture Gary Black outlined the unprecedented growth of Mexico imports into the United States during a hearing on Thursday, November 15, 2018 in Washington, DC.

During his testimony, Commissioner Black stated, “Based on the current level of Mexican fruit and vegetable imports and the potential for additional exponential unrestrained growth of Mexican imports if the new USMCA Agreement is approved, it will be tantamount to distributing U.S. government printed “going out of business” signs across a substantial part of rural Georgia and the Southeast. . . . market windows continue to shrink for our producers while produce streams across our southern border arriving from a country known for an inconsistent regulatory environment.”

The hearing was being held for the International Trade Commission to gather information on the likely impact of the United States-Mexico-Canada Agreement (USMCA) if approved by Congress. This agreement will replace the current NAFTA agreement. Also presenting testimony at the hearing was Florida Commissioner of Agriculture Adam Putnam, Florida Fruit and Vegetable Association President Mike Stuart and the Florida Strawberry Commission Executive Director Kenneth Parker.

GFVGA has strongly opposed USMCA as it will cause further harm to Georgia and southeastern growers in absence of any measures that can provide effective near-term relief against unfairly traded Mexican fruits and vegetables. Pre-hearing testimony filed by GFVGA outlined the surge in US imports of unfairly traded Mexican fruits and vegetables that have devastated markets and is economically destroying Georgia growers. Since Southeastern growers have no recourse to stop Mexico from dumping unfairly traded produce into US markets, imports have grown uncontrolled:

- The value of Mexican tomato imports have grown from \$552M in 2002 to \$1,842M in 2017, a 233% increase.
- Bell peppers imports have tripled – 339M pounds in 2000 to 909M pounds in 2017, a 168% increase.
- Blueberries imports has seen the largest increase, going from 1M pounds in 2007 to 48M pounds in 2017, a 1,619% increase!!
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https://cdn.ymaws.com/www.gfvga.org/resource/resmgr/gfvga_itc_usmca_pre-hearing_.pdf

Florida’s Minimum Wage - (Updated October 15, 2018)

The 2019 Florida minimum wage is \$8.46 per hour, effective January 1, 2019.

Florida law requires the Florida Department of Economic Opportunity to calculate a minimum wage rate each year. The annual calculation is based on the percentage increase in the federal Consumer Price Index for Urban Wage Earners and Clerical Workers in the South Region for the 12-month period prior to September 1, 2018.

On November 2, 2004, Florida voters approved a constitutional amendment which created Florida's minimum wage. The minimum wage applies to all employees in the state who are covered by the federal minimum wage.

Employers must pay their employees the hourly state minimum wage for all hours worked in Florida. The definitions of employer, employee, and wage for state purposes are the same as those established under the federal Fair Labor Standards Act (FLSA) and its implementing regulations. Employers of tipped employees, who meet eligibility requirements for the tip credit under the FLSA, may credit towards satisfaction of the minimum wage tips up to the amount of the allowable FLSA tip credit in 2003. However, the employer must pay tipped employees a direct wage.

The direct wage is calculated as equal to the minimum wage (\$8.46) minus the 2003 tip credit (\$3.02), or a direct hourly wage of \$5.44 as of January 1, 2019.

Employees who are not paid the minimum wage may bring a civil action against the employer or any person violating Florida's minimum wage law. The state attorney general may also bring an enforcement action to enforce the minimum wage. FLSA information and compliance assistance can be found at: www.dol.gov/whd/flsa/.

Florida Statutes require employers who must pay their employees the Florida minimum wage to post a minimum wage notice in a conspicuous and accessible place in each establishment where these employees work. This poster requirement is in addition to the federal requirement to post a notice of the federal minimum wage. Florida's minimum wage poster is available for downloading in English, Spanish, and Creole from the Florida Department of Economic Opportunity's website at: www.floridajobs.org.

The federal poster can be downloaded from the U.S. Department of Labor's website at: www.dol.gov/whd/regs/compliance/posters/flsa.htm.

The First Thanksgiving

Hate to upend a beloved Thanksgiving tradition, but throw out the turkey and forget the Pilgrims.

Strong evidence exists that America's first formal prayers of gratitude for good fortune, followed by a feast of thanks, took place at St. Augustine in 1565 – 56 years earlier than the traditionally accepted first Thanksgiving at Plymouth Rock and more than 1,000 miles south of it.

The Spanish founded America's first permanent settlement in 1565, and Spanish explorers celebrated the first Thanksgiving of Europeans in America on Sept. 8 of that year.

Archaeologists and historians have been able to locate the approximate site, which visitors can view today at the Mission Nombre de Dios and Shrine of Our Lady of La Leche in St. Augustine. A 208-foot tall stainless steel cross both celebrates the founding of the city and marks the approximate location of the inaugural feast of thanks.

Instead of Pilgrims in tall black hats and broad white collars, robed Spanish priests and armor-clad explorers held a Catholic Mass, then shared a Thanksgiving meal with Native Americans – the tattooed, seashell-adorned Timucuan of Florida. The Spanish doffed their armor and the Timucuan dropped their stone-tipped spears for the occasion, and each group shared food and fellowship.

What brought about Florida's earlier celebration?

On Sept. 8, 1565, Spanish admiral Pedro Menendez de Aviles landed at the St. Augustine site with about 1,000 soldiers, sailors, farmers, clergy and artisans. He led an expedition to claim the territory for his king, Spain's Philip II. On a makeshift altar, Father Francisco Lopez celebrated a mass of Thanksgiving for the party's safe journey.

A replica of the altar sits next to the shore in the general area where archaeologists believe the Mass was held.

Eminent Florida historian Michael V. Gannon, history professor emeritus at the University of Florida, wrote about the occasion in his heavily researched 1965 book, *The Cross in the Sand*. The Admiral had the Indians fed and then dined himself, Gannon said.

Turkey was not on the menu.

Instead, the first Thanksgiving's main dish was a garlic stew called *cocina*, made from pork, garbanzo beans and olive oil that the Spanish brought from their ships. They dipped hardtack in the stew and washed it all down with red wine.

The Timucuan likely contributed a variety of wild game and fish – perhaps deer, mullet, catfish, tortoise, oysters and clams. According to historians, side dishes might have included pumpkins, squash, beans and a variety of fruits and nuts. The Indians did not touch wine or rum. They probably drank only water; although, they did imbibe a strong non-intoxicating herbal beverage made from a coastal weed.

Today, more than 200,000 visitors annually come to the mission and the shrine to stroll the grounds, to worship, to reflect and to experience a new window into history. A large part of the attraction is the chapel that houses a replica of the statue of Our Lady of La Leche, the first shrine dedicated to Mary, mother of Jesus, in the United States. The original casket of Pedro Menendez de Aviles is on view at the mission museum, which tells the story of Catholicism in Florida.

And annually, the city's founding on Sept. 8 is celebrated with pageantry, cannon fire, a mayor's proclamation, speeches and a Mass at the replicated altar.

Up Coming Meetings

Produce Food Safety Workshops: Fall 2018 (& Winter 2019)

Produce Safety Alliance Grower Training

This is the one-day course for fruit and vegetable growers and packers who fall under FSMA's Produce Safety Rule. FDA and PSA are very sensitive about how this course is advertised and promoted as the standardized curriculum. Even though there are currently no other recognized alternative courses to satisfy the training requirements of the Produce Safety Rule, they do not want us to say the course is required or mandated or anything like that...even though, by default, it kind of is. This is the "approved" advertising language from PSA:

WHO SHOULD ATTEND

Fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA) Produce Safety Rule, Good Agricultural Practices (GAPs), and co-management of natural resources and food safety are encouraged to attend. The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement.

WHAT TO EXPECT

The trainers will spend approximately seven hours of instruction time covering content contained in these seven modules:

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training
- Soil Amendments
- Wildlife, Domesticated Animals, and Land Use
- Agricultural Water (Part I: Production Water; Part II: Postharvest Water)
- Postharvest Handling and Sanitation
- How to Develop a Farm Food Safety Plan

In addition to learning about produce safety best practices, key parts of the FSMA Produce Safety Rule requirements are outlined within each module. There will be time for questions and discussion, so participants should come prepared to share their experiences and produce safety questions.

BENEFITS OF ATTENDING

The course will provide a foundation of Good Agricultural Practices (GAPs) and co-management information, FSMA Produce Safety Rule requirements, and details on how to develop a farm food safety plan.

After attending the entire course, participants will be eligible to receive a certificate from the Association of Food and Drug Officials (AFDO) that verifies they have completed the training course.

Here's the list of upcoming PSA courses.

- 11/27/18 – Homestead - <https://psa112718.eventbrite.com>
- 12/13/18 – Immokalee - <https://psa121318.eventbrite.com>
- 12/17/18 – St Augustine - <https://psa121718.eventbrite.com>
- 1/30/19 – West Palm Beach - *coming soon*

Fall 2018 - Farm Labor Supervisor Training Schedule

November 27 – 28, 2018 - Immokalee

UF/IFAS Southwest Florida Research and Education Center
2685 SR 29 North
Immokalee, FL 34142

Register: <https://fls2018immokalee.eventbrite.com>

For more information, contact: Barbara Hyman 239-658-3461 or hymanb@ufl.edu

November 26, 2018 Pesticide Applicators Core Examination Class. 7:45 am

This examination is required for any and all categories of Pesticide Applicators licenses.

November 26, 2018	Private Agricultural Pest Control Category Class	1:00 pm\
November 27, 2018	Aquatic Weed Control Category class	8:00 am
November 27, 2018	Natural Areas Weed Control Category class	1:00 pm

November 28, 2018 Right of Way Weed Control Category class

8:00 am

Each of these programs will be held at the Dallas B. Townsend Agricultural Center in LaBelle, Florida.

A Registration Fee of \$20.00 will be charged to all participants for each class. Lunch will be provided on Monday. As a result, it is essential that we have an accurate count of the program participants. Call (863) 674-4092 or e-mail drouks@ufl.edu to register.

November 29th, 2018 Vegetable Field Day / “Risks in Technology Adoption” 9 a.m. – 3 pm

UF/IFAS Southwest Florida Research and Education Center
2685 SR 29 North
Immokalee, FL 34142

Includes field demonstrations and indoor presentations that feature five SWFREC programs. For a detailed agenda and registration information, click here: https://swfrec.ifas.ufl.edu/docs/pdf/events-agendas/2018-11-29_VegetableFieldDay-Flyer-Agenda.pdf

Please call Barbara Hyman at 239-658-3461 or send an email to hymanb@ufl.edu to register.

December 18, 2018

Localecopia Meet & Greet

2:00p.m. – 4:00p.m.

The Breakers Palm Beach

One South County Road
Palm Beach, FL 33480

Please RSVP for this free event at info@localecopia.org. Attend to meet local growers and enjoy free samples.

December 18 - 20, 2018

PrimusGFS v3.0 Training Course

8:30a.m. – 5:30p.m.

UF/IFAS Palm Beach County Clayton Hutchingson Agricultural Complex – Exhibit Hall A
559 N Military Trail
West Palm Beach, FL 33415

Please contact Chris Miller at cmiller@pbcgov.org for more information.

Websites

Here is How America uses its Land - There are many statistical measures that show how productive the U.S. is. Its economy is the largest in the world and grew at a rate of 4.1 percent last quarter, its fastest pace since 2014.

What can be harder to decipher is how Americans use their land to create wealth. The 48 contiguous states alone are a 1.9 billion-acre jigsaw puzzle of cities, farms, forests and pastures that Americans use to feed themselves, power their economy and extract value for business and pleasure. Great look at how we use our land.

<https://bloom.bg/2KdtmaO>

Food Safety Modernization Act – draft guidance issued. FDA will call for comments.

Draft Guidance for Industry: Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption

<https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ucm606284.htm>

Guide To Minimize Food Safety Hazards of Fresh-Cut Produce: Draft Guidance for Industry

<https://www.federalregister.gov/documents/2018/10/22/2018-23005/guide-to-minimize-food-safety-hazards-of-fresh-cut-produce-draft-guidance-for-industry-availability>

PERC is the **Pesticide Educational Resources Collaborative** – the website provides a wealth of resources to help you understand and comply with the 2015 Revised WPS including training materials, the “new” WPS poster, handouts and WPS respiratory guide. <http://pesticideresources.org//index.html>

PERC - WPS Compliance Suite — Training Materials

Under the newly revised Worker Protection Standard (WPS), training materials must be EPA-approved when officially training workers, handlers, and trainers. At present, the only EPA approved materials available can be found at the PERC website

- Expanded training concepts will be required starting January 2, 2018.
- Training must be delivered in a manner that can be understood, in a location relatively free from distractions.
- When training workers or handlers, the trainer must remain present at all times to be available to answer questions, even when showing a video.
- Trainers must be qualified, most often by holding a pesticide applicator's license or by completing an EPA-approved Train-the-Trainer course.

Training Materials for Workers and Handlers - <http://pesticideresources.org/wps/temp/training/index.html>

Need CORE CEU's? – here is an easy way to obtain CORE CEU's on-line by reading an article and answering questions regarding the online. A passing score obtains one Core CEU.

CEU Series: Mix and Load Pesticides Safely

CEU Series: Protect Crops and the Environment

CEU Series: Make Sure to Stow Your Pesticides before You Go

CEU Series: Avoid Mishaps When Handling Pesticides

CEU Series: Be Aware of Bees When Applying Pesticides

CEU Series: Place Priority on Preventing Pesticide Poisoning

CEU Series: Learning about Pesticide Resistance Is Anything but Futile

Go to <http://www.growingproduce.com/?s=CORE+CEUs>

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>

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Wishing you and your families all the best for a Happy and Blessed Thanksgiving.

The **South Florida Pest and Disease Hotline** is compiled by **Gene McAvoy** and is issued on a biweekly basis by the **Hendry County Cooperative Extension Office** as a service to the vegetable industry.

Gene McAvoy

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