

The Effects of
Hurricane Irma
on FL
Agriculture



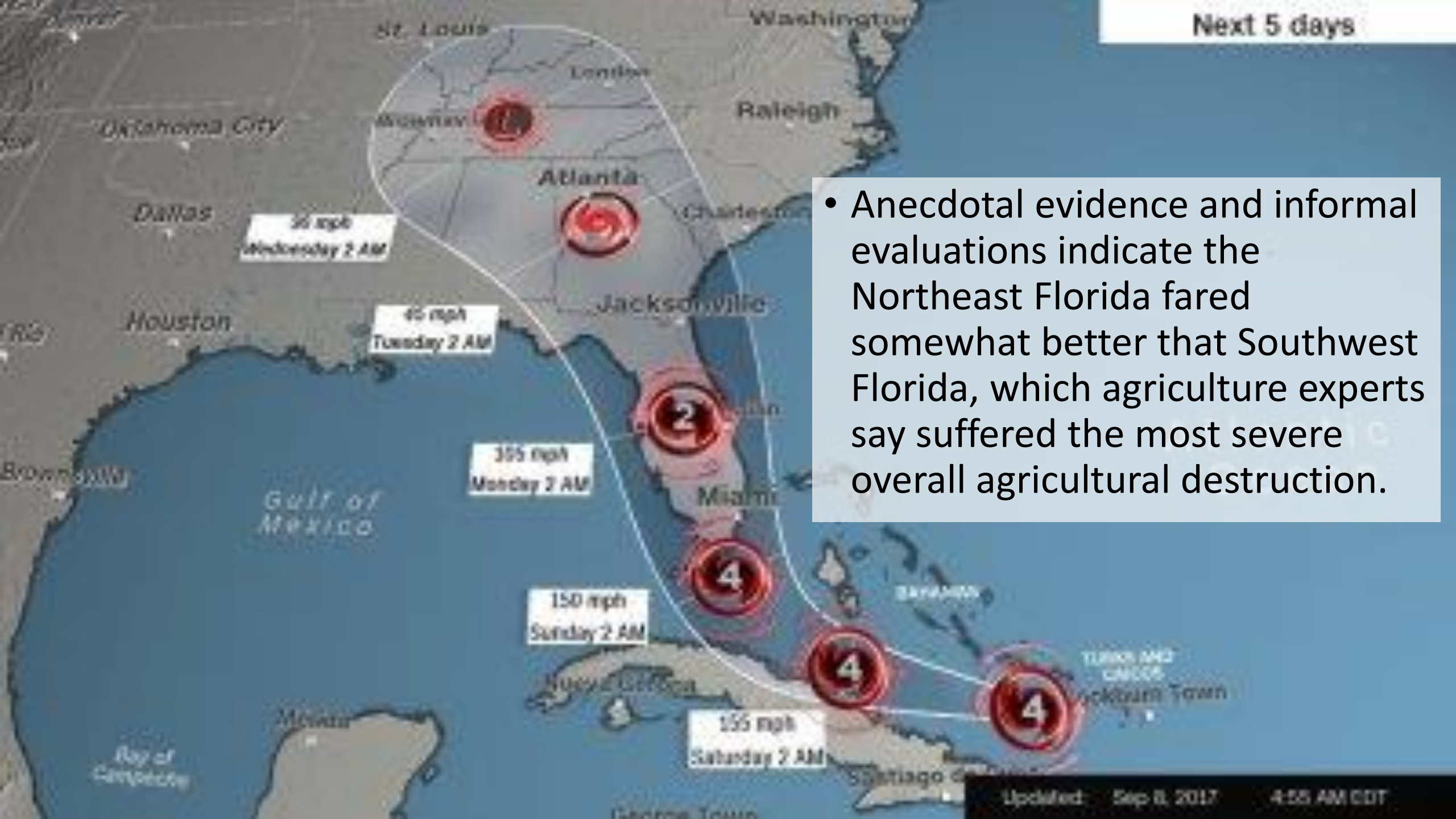
A photograph of an orange grove with several ripe oranges hanging from the branches. The background is a clear blue sky. The text is overlaid on a semi-transparent white box in the center of the image.

**Florida Commissioner of
Agriculture Adam H.
Putnam said the
preliminary agricultural
damages caused by
Hurricane Irma in Florida
total more than \$2.5
billion.**



The full impact of Hurricane Irma on Florida's agriculture is still undetermined, but early informal estimates place the cost of farm losses in the billions of dollars, according to Florida Farm Bureau Federation .

Next 5 days



- Anecdotal evidence and informal evaluations indicate the Northeast Florida fared somewhat better than Southwest Florida, which agriculture experts say suffered the most severe overall agricultural destruction.

An aerial photograph of agricultural fields, likely citrus groves, with a semi-transparent green rectangular overlay containing white text. The text lists estimated economic agricultural damages for Florida, broken down by sector.

The estimated economic agricultural damages :

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

Citrus: \$760,816,600

Beef Cattle: \$237,476,562

Dairy: \$11,811,695

Aquaculture: \$36,850,000

Fruits and Vegetables (excluding citrus): \$180,193,096

Greenhouse, Nursery and Floriculture: \$624,819,895

Sugar: \$382,603,397

Field Crops: \$62,747,058

Forestry: \$261,280,000



Florida Citrus Hit Hard

- The projected losses to citrus producers was the worst of any sector, at \$760 million.

Florida Citrus Hit Hard

Andrew Meadows, a spokesman for Florida Citrus Mutual

- “When a tree sits in water for two, three, four days, it destroys the root system and kills the tree,” Meadows said. “We won’t know the true effects of Irma until a year or two from now. So that \$760 million is expected to grow. And if we don’t receive a relief-rebuild package, there’s going to be a mass exodus from the industry.”
- 450,000 Acres of Citrus in FL

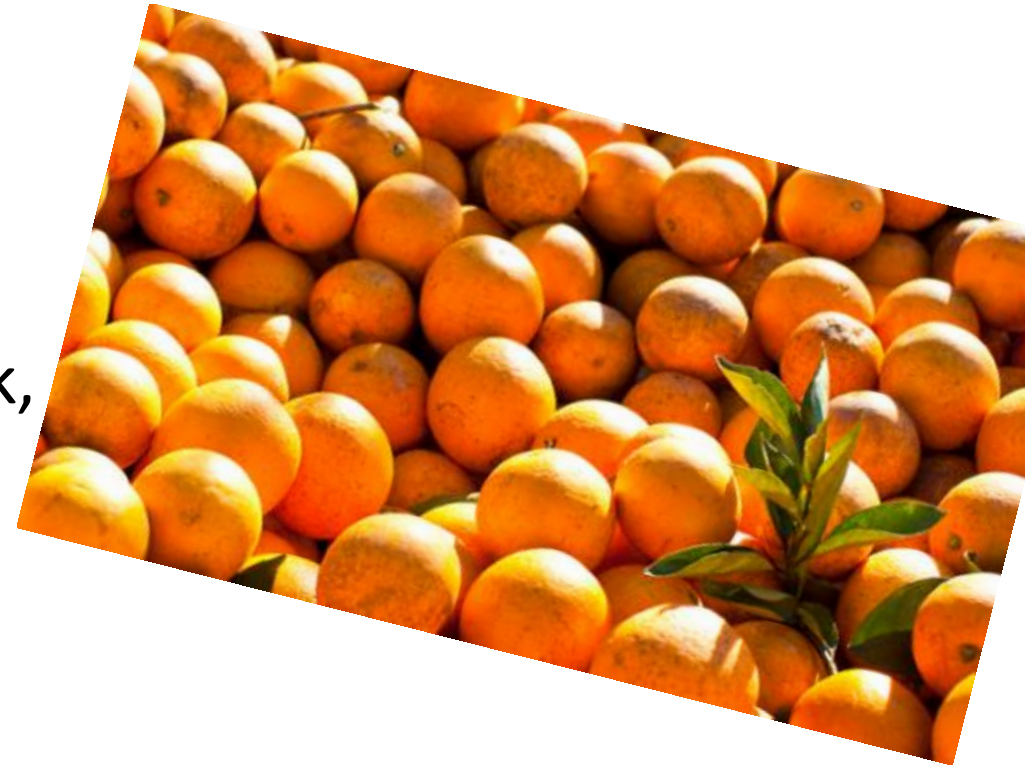


- After the storm passed, 50-60% of citrus fruit was on the ground and trees were surrounded by standing water, putting their roots — and entire orchards — in jeopardy.

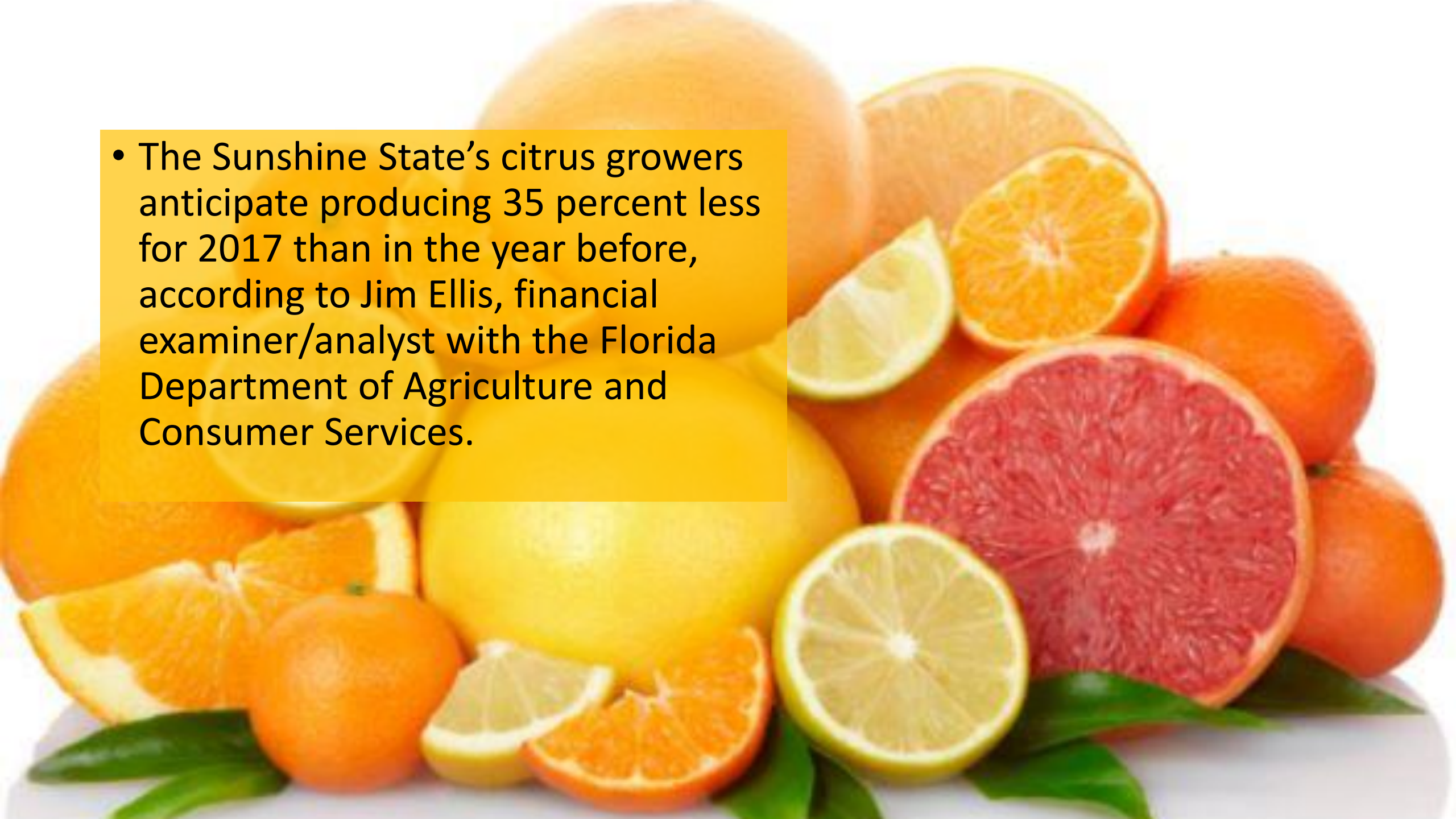


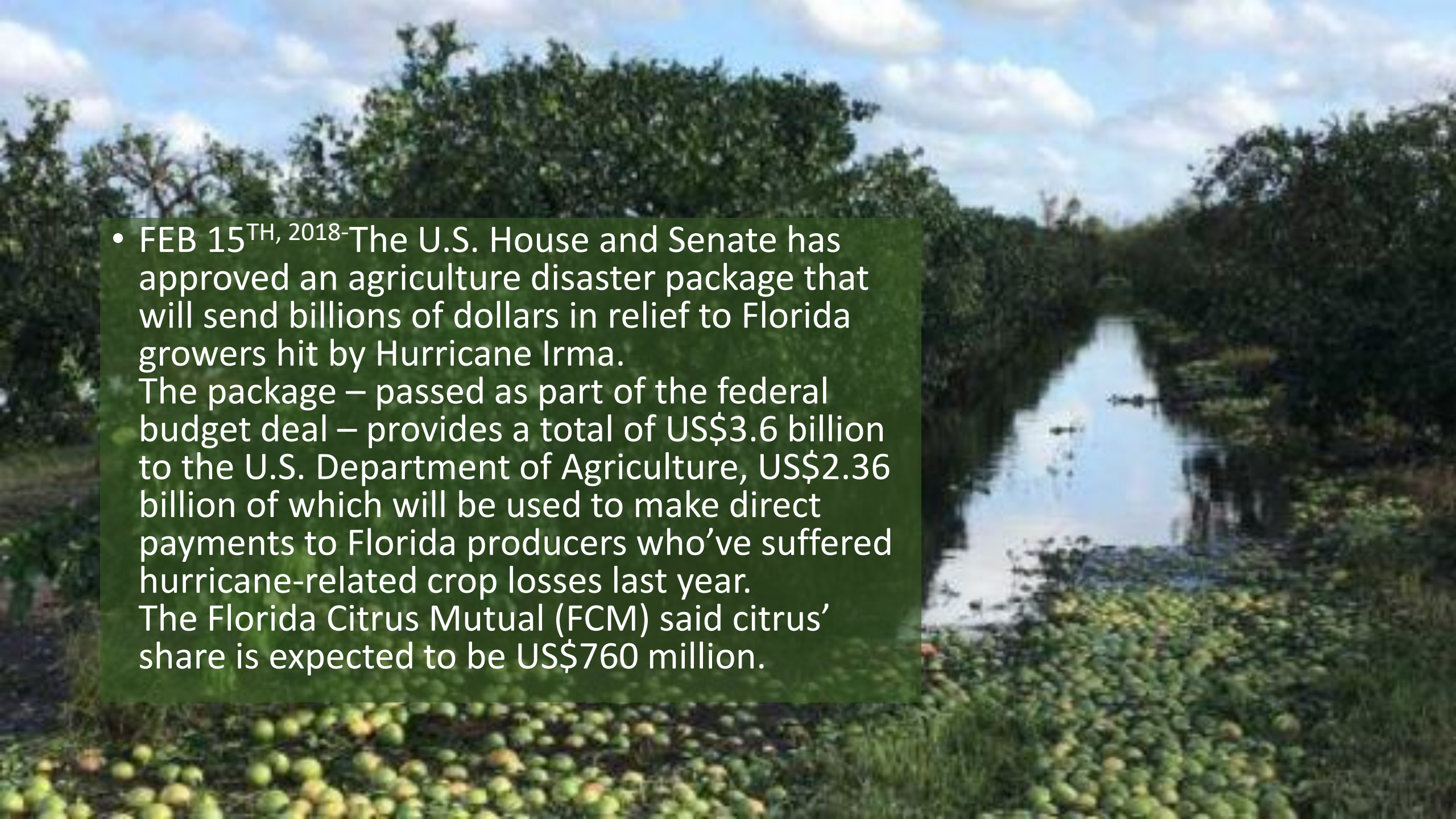
Florida Citrus Hit Hard


- The huge storm proceeded straight up the peninsula, raking citrus groves in Florida's top-producing citrus counties: DeSoto, Polk, Hendry, Highlands, Hardee and Collier.



- The Sunshine State's citrus growers anticipate producing 35 percent less for 2017 than in the year before, according to Jim Ellis, financial examiner/analyst with the Florida Department of Agriculture and Consumer Services.



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- FEB 15TH, 2018-The U.S. House and Senate has approved an agriculture disaster package that will send billions of dollars in relief to Florida growers hit by Hurricane Irma. The package – passed as part of the federal budget deal – provides a total of US\$3.6 billion to the U.S. Department of Agriculture, US\$2.36 billion of which will be used to make direct payments to Florida producers who’ve suffered hurricane-related crop losses last year. The Florida Citrus Mutual (FCM) said citrus’ share is expected to be US\$760 million.

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- Florida is home to 18 fruit packing houses. In 2016, the industry packed 12 million 4/5-bushel cartons. The state's fruit processors will pack an estimated 50 million boxes this year —down by 20 million boxes from 2016.

Grapefruit

The background of the slide is a photograph of a grapefruit orchard. In the foreground, there are two grapefruits: one whole and one sliced in half, showing its pinkish-red segments. The orchard behind them consists of neat rows of green trees with small yellow fruits, and a path leads through the center of the rows.

- Early damage estimates for grapefruit were running at 25% lost and could rise from there, said Kevin Spooner, managing member of Vero Beach, Fla.-based Southland Citrus LLC.

Grapefruit



- Production may only reach 4.65 million boxes in the current crop year, which would be the lowest output since 1919, according to a U.S. Department of Agriculture forecast earlier this week. Texas is aiming to shore up some lost output and next year could surpass Florida as the top grapefruit producer for the first time, according to USDA data. Still, the nationwide crop of 14.15 million boxes will be the smallest since 1930, less than half the harvest as recently as 2013.

Strawberry minimum effects

- Kenneth Parker, executive director of the Florida Strawberry Growers Association, says that the storm destroyed some of the plastic that's been laid down on strawberry fields in advance of planting, but growers will be able to make repairs and plant on schedule. About 10,000 acres of strawberries are expected to be planted this year, similar to last year.



Vegetable Growers were not all hit

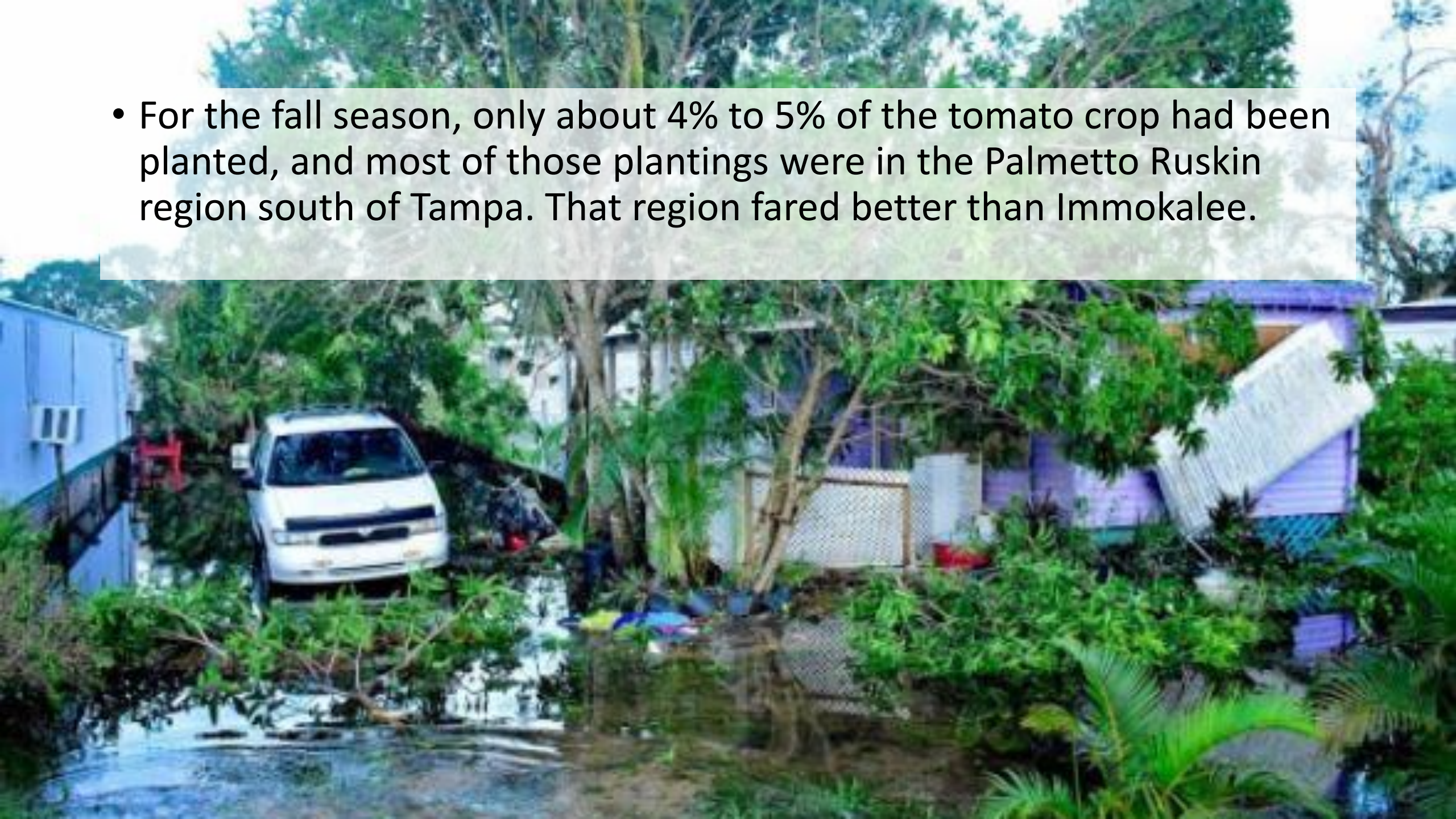
- While tomato growers in Florida's Immokalee region were hard hit, South Florida's Homestead growers had not yet planted tomatoes when Irma hit.





- Southwest Florida farmers who had already planted fall vegetables, including tomatoes, report a near-total loss, according to the state Farm Bureau Federation.

- For the fall season, only about 4% to 5% of the tomato crop had been planted, and most of those plantings were in the Palmetto Ruskin region south of Tampa. That region fared better than Immokalee.



Tomato Production AFTER IRMA

- Tomato production was still way down in December 2017. The state's growers have packed 3 million boxes of tomatoes year-to-date, compared to 6.5 million in the same months a year ago, down more than 50 percent.



Dairies

- An estimated 40 dairies incurred significant damage from Irma to barns, equipment, fences and other structures. No official number is released, but estimates include:
- \$4,000 per farm in debris cleanup and rebuilding fences: \$160,000.
- \$50,000 per farm in damage to barns, sheds, milk parlors, and other infrastructure: \$2,000,000.
- \$5,000 per farm in equipment damage: \$200,000.
- “We’re likely to see even greater economic losses as we account for loss of future production and the cost to rebuild infrastructure,” Putnam says.
- Total losses, including crop losses, to dairy producers in the state are estimated to be \$11,811,695.

Sugar Cane




- In Hendry and Glades counties, hundreds of sugarcane plants were submerged in water, buried in sediment or blown away. Palm Beach County sugarcane appears to be shredded, but farmers there say that new growth is possible and along with it a partial harvest.

An aerial photograph of a nursery. A dirt path runs along the left side. A tractor with a white cover is moving along the path. Several workers wearing hats are visible in the rows of plants. The plants are in black plastic mulch.

Nurseries

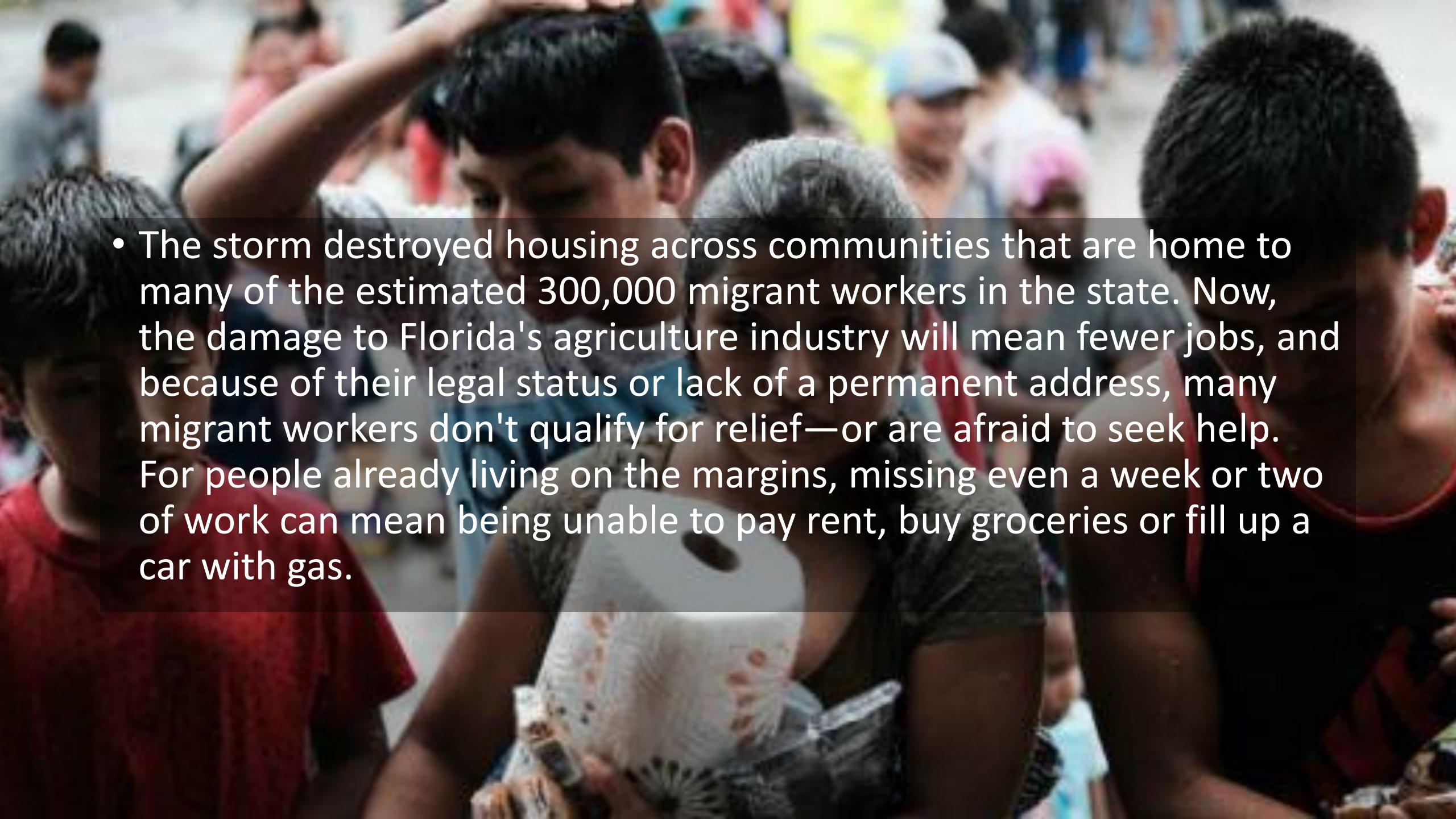
- Some Florida nursery owners reported having less than 50 percent of their plants in marketable condition, according to the state Farm Bureau Federation.

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- An aerial photograph of a nursery or farm. A dirt path runs vertically through the center. On the left side of the path, a cart is covered with a white tarp, with several buckets and containers visible underneath. On the right side, there are rows of young plants in black plastic mulch. Several workers wearing hats are visible in the upper portion of the image, some standing on the path and others near the plants. A semi-transparent green box with white text is overlaid on the middle of the image.
- Scattered assessments among Florida ornamental plant growers including some in Northeast Florida indicate that many greenhouses and shade covers either were demolished, left partially standing or sustained other damage making them un-usable

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- Zulaika Quintero, advocacy support assistant at the Redlands Christian Migrant Association said Irma, severely damaged farmworkers' homes and also destroyed a large percentage of the crops in that area of the state.



- Cruz Salucio Perez, a farmworkers' leader and member of the coalition, lamented that the hurricane had wiped out everything "just when the workers were to start collecting the harvest" (the tomato harvest runs from November until May) and predicted that the consequences of the damage would be felt nationwide.

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- A photograph showing a diverse group of people, including children and adults, gathered together. They are looking down at items in their hands, such as a roll of paper towels and some packaged goods. The background is slightly blurred, showing more people in a crowded setting. The overall tone is one of concern and seeking assistance.
- The storm destroyed housing across communities that are home to many of the estimated 300,000 migrant workers in the state. Now, the damage to Florida's agriculture industry will mean fewer jobs, and because of their legal status or lack of a permanent address, many migrant workers don't qualify for relief—or are afraid to seek help. For people already living on the margins, missing even a week or two of work can mean being unable to pay rent, buy groceries or fill up a car with gas.



Workers hit hard

- Florida is the country's second-largest producer of vegetables and top citrus producer, and its \$8 billion agricultural economy depends on migrant workers. Unlike other parts of the country, where the agricultural economy is supported by mechanization, almost all of the crops grown in Florida, from asparagus to zucchini, require a human to pick them. Many are migrant workers—some in the country legally, and some not—who are especially vulnerable to the danger and economic hardship that accompany a monster storm like Irma.

Frosts affect farms in January 2018

- Steve Veneziano, vice president of Oakes Farms in Immokalee, FL, said that on Thursday night, Jan. 4, there was widespread frost after 2 a.m., with a low of around 29 degrees. Widespread frost continued into Friday and Saturday.
- “We lost 90 percent of our squashes and cucumbers, and almost 75 percent of all peppers — sweet and specialty — that were set on the bush were damaged,” said Veneziano.
- He added that neighboring farmers in the Immokalee and surrounding regions were reporting similar crop losses, and that damage and loss assessments were ongoing.
- Calvert Cullen, president of Northampton Growers Produce Sales Inc., headquartered in Cheriton, VA, said the company’s Florida crops suffered some frost damage including a tremendous amount of bloom damage.

Frosts affect farms in January 2018

- “Usually we’re warmer on the eastern side of the state, but this time we were actually a few degrees colder,” he explained. “Fortunately, we were finished with cucumbers before the freeze hit. But other crops didn’t fare well, and we expect to be down about 50 percent overall.”
- He noted that yellow squash, which has very thin skin, was so badly damaged that it is not worth even trying to harvest the current crop, but that new plantings are under way.
- “Zucchini is a little tougher, so we will have some to harvest,” he added. “Peppers had about a 50 percent bloom drop. We’ll continue to monitor so figures could change in the coming days and weeks.”