



# ProHort Fact Sheet

## Solutions For Commercial Horticulture Professionals

### Protect Yourself From Mosquito-Borne Disease

Chikungunya (pronounced chicken gen-ya) is a virus that can be transmitted by mosquitoes to humans and cause illness or disease. The illness and virus was reported and discovered in Africa, Asia and Thailand in the 1950s. Translated chikungunya means "illness of bended walker," "that which bends up" or "bended walker." All these meanings refer to an arthritic condition resulting in a stooped posture that occurs in some patients.

Chikungunya virus is new to Florida. In mid July 2014, cases of this illness have been reported in people in Florida who did not travel to areas outside of the United States where outbreaks have been reported. Previously, there have been about 100 imported cases reported in Florida in people who did travel to areas with outbreaks. This summer there have been major outbreaks in the Caribbean with over 300,000 cases reported. Outbreaks have also been reported in Africa, South-east Asia, Reunion Island, India, Malaysia and Thailand.

#### How is this Virus Transmitted?

The virus is transmitted from mosquitoes to humans and back to mosquitoes. An infected female mosquito bites and feeds on a human host. During that feeding the virus is transmitted to the human host. Once the virus is present in the human host, the virus can be transferred to an uninfected female mosquito. The newly infected mosquito can then further spread the virus to unsuspecting human hosts.

There are two species of mosquitoes in Florida that can transmit this virus: *Aedes aegypti*, known as the Yellow Fever Mosquito and *Aedes albopictus*, known as the Asian Tiger Mosquito. Both of these mosquitoes reproduce in standing water or water holding containers.

#### What are the Symptoms of Illness?

The symptoms are typically described as flu-like and appear within 1-12 days after a bite by an infected mosquito. The symptoms typically present with fever and joint pain. Other symptoms may include chills, headache, nausea, vomiting, muscle pain, and/or a rash that may develop lesions. The rash usually occurs over the face and chest. In more severe cases joint pain may persist for months or years.

Persons at risk for more severe disease include babies exposed before birth, adults over 65 years of age, and those with underlying medical conditions such as hypertension, diabetes or cardiovascular disease.

#### How is the Illness Diagnosed?

The only way to definitively diagnose Chikungunya is by a physician and with a laboratory blood test. Testing is performed at the Centers for Disease Control (CDC), a few state health departments and one commercial laboratory. Contact your medical provider for testing.



*Aedes aegypti*



*Aedes albopictus*

## What is the Cure for the Illness?

The illness is treated with supportive care and rest. There is no specific cure and no preventative vaccine or medicine that will kill the virus. Physicians may recommend non-steroidal anti-inflammatory drugs (NSAIDS) to reduce fever and acute pain, however, aspirin should be avoided. Other therapy may be recommended to help with persistent joint pain. Dengue fever is another mosquito-borne virus that is transmitted by the same mosquitoes and has similar symptoms. Ruling out Dengue fever is important as the Dengue illness may be more severe and clinical management is different.



## How can it be Prevented?

The best preventative measure is to control the mosquito vector. Since the mosquito vectors lay their eggs in water holding containers to complete larval development, emptying or removal of all standing water is imperative.

- Empty, remove and/or turn over all water holding sources including: flower pots with saucer bases, tires, bottles, bottle caps, cans and lawn equipment such as wheel barrows. Hillsborough County Community Collection Centers accept up to 12 tires per tax paying household; additional tires must be taken to a landfill location and disposal fee paid. For information call: (813) 744-5533.
- Flush and replace water several times a week in bird baths and pet dishes.
- Cover water harvesting containers, such as rain barrels, with netting to prevent mosquitoes from entering.
- Keep gutters clean.
- Use mosquito dunks or bits in rain barrels and vase plants such as Bromeliads. These products contain *Bacillus thuringiensis* subspecies *israelensis* which is safe in fish habitats

and standing water near households, but not in water for human consumption. Always read and use according to labeled instructions.

- Inspect yards once per week and remove sources of any standing water.
- Educate your neighbors and clients on the importance of removing water holding containers.

## Protect Yourself from Mosquito Bites

- Use air conditioning or window/door screens.
- Wear protective clothing that covers as much of the body as possible.
- Use mosquito repellents that have been shown to be effective on exposed skin, products containing DEET or Citronella. Check the label to make sure the repellent has been EPA approved and always use the product according to labeled instructions. Do not allow young children to apply.
- Do not rely on products that have not been found to be effective, such as: devices that emit sound, bracelets, bug zappers, bug patches or consumption of garlic, bananas or Vitamin B.

People infected with chikungunya or dengue virus should avoid exposure to further mosquito bites during the first week of infection. Staying indoors or using repellents after infection will reduce the threat of further local transmission.

Be an informed traveler by consulting the CDC website prior to travel. People at risk should avoid traveling to areas with ongoing outbreaks. The CDC website has current information about the status of mosquito-borne disease transmission around the world: <http://www.cdc.gov/travel/>.

## More Information:

Container Mosquitoes: <http://edis.ifas.ufl.edu/in851>

UF/IFAS Mosquito Information Website: <http://mosquito.ifas.ufl.edu>

How to use Repellents Correctly: <http://cfpub.epa.gov/oppref/insect/index.cfm>

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