



California Department of Food and Agriculture

Invasive Fruit Fly

Frequently Asked Questions

Background: California is experiencing an unusually high number of invasive fruit fly detections this season. The California Department of Food and Agriculture (CDFA), in cooperation with the United States Department of Agriculture (USDA) and the County Agricultural Commissioners, has initiated local regulatory measures to eradicate and prevent the statewide spread of Queensland fruit fly, Tau fruit fly, Mediterranean fruit fly and Oriental fruit fly.

Counties Currently Impacted by Invasive Fruit Fly Quarantines:

- **Oriental fruit fly:** None currently
- **Mediterranean fruit fly:** Alameda County
- **Tau fruit fly:** None currently
- **Queensland fruit fly:** None currently

We Need Your Help!

- Now is a critical time for residents in fruit fly quarantine areas to protect their backyard fruits and vegetables from invasive fruit flies.
- To prevent the spread of invasive fruit flies through homegrown fruits and vegetables, residents living in the invasive fruit fly quarantine areas are urged not to move any fruits and vegetables from their properties.
- Fruits and vegetables may be consumed or processed (i.e., juiced, frozen, cooked, or ground in the garbage disposal) at the property where they were picked.
- If they are not consumed or processed, please dispose of them by double-bagging in plastic bags and putting the bags in the garbage bin for collection, not green waste.
- If you are in an established quarantine area:
 - Please do not compost fruit or vegetables. Double bag and dispose of them in the regular waste bin, not the green waste bins.
 - Don't let ripened homegrown produce fall to the ground. Remove mature produce that has fallen to the ground by double bagging and disposing in the regular waste bin, not the green waste bins.
- Before entering the United States from another country, declare agricultural products — including fruits or vegetables — to U.S. Customs and Border Protection. Help us protect our agricultural, natural resources, and unique biodiversity from invasive fruit flies – please Don't Pack a Pest (www.dontpackapest.com) when traveling or mailing/receiving packages.
- Buy fruit trees and vegetable plants from licensed California nurseries, as receiving agricultural goods from uncertified sources can spread invasive pests.

Source your plants locally and responsibly. To search for a licensed nursery near you, visit [CDFA's Directory of Licensed Nurseries](#).

- Inspect your garden for signs of invasive fruit flies or maggots and report any findings to CDFA at [1-800-491-1899](tel:1-800-491-1899), www.cdfa.ca.gov/plant/ReportaPest/, or your [local county agricultural commissioner's office](#).
- Please cooperate with agriculture officials and allow them access to your garden to inspect plants.

Q. What are the CDFA, the USDA, and County Agricultural Commissioners doing about this?

- The USDA has announced \$103.5 million in additional funding to address invasive fruit fly programs in California and elsewhere.
- County, state, and federal agencies are cooperating in conducting trapping, treatment and quarantine efforts to address the increased number of fruit fly introductions.
- Additionally, the USDA has deployed trapping staff from throughout the United States to assist with fruit fly projects in California because of the unprecedented number of fruit fly infestations.
- USDA has also deployed an Incident Management Team to assist with planning, logistics and outreach efforts for the Oriental Fruit Fly project in San Bernardino and Riverside counties.
- County Agricultural Commissioners continue to support fruit fly projects and are providing additional staff to help with trapping, treatment and quarantine activities.
- CDFA has partnered with the California Conservation Corps, Cooperative Agricultural Support Services, and private contractors to help with trapping, larval surveys, and fruit removal. Fruit removal in key areas is necessary to prevent the further spread of invasive fruit flies, as infested fruit can host hundreds of maggots.

More information, including the most up-to-date quarantine maps, regulatory information, and pest profile information for the various fruit flies, may be found here: <https://www.cdfa.ca.gov/plant/PDEP/treatment/index.html>

Residents – Q&A

Q. Why are invasive fruit flies so dangerous?

- Invasive fruit flies are non-native pests that attack over 300 crops, including citrus and other fruits, nuts, vegetables and berries. Fruit flies can damage fruits and vegetables when they lay their eggs under the skin of the produce, where the developing larvae (maggots) tunnel and feed, making it unfit for human consumption. Infested produce does not always look damaged from the outside but may take on a brown, mottled appearance as the maggots feed from the inside.

- These harmful pests can not only destroy produce in backyard gardens but can also have a significant negative impact on the agricultural products grown throughout California.
- Many growers – large and small – rely on their harvest yields to support their livelihoods. If invasive fruit flies were to become established throughout California, it could cause a significant negative impact to the agricultural community and ultimately the state’s economy.

Q. Why are there so many fruit fly infestations this year?

- A complete pathway analysis will be needed to fully understand all the factors contributing to this year’s increased fruit fly findings. CDFA has initiated a ‘Comprehensive Pest Prevention Program Analysis,’ in cooperation with the University of California, California State University, and other scientists to evaluate factors such as increased international air travel, consumer shifts toward online purchases and climate change that may be impacting the spread of invasive species, some of which have never been seen before in California or the U.S.

Q. What type of treatments are being used?

The treatments described below all follow the principles of Integrated Pest Management.

- **Oriental fruit fly** – Agricultural officials use the “Male Attractant” technique as the mainstay of the eradication effort for this invasive species. This approach has successfully eliminated dozens of fruit fly infestations in California over many decades. Trained workers apply a small amount of fruit fly attractant mixed with a very small dose of a naturally derived organic-approved material known as *Spinosad* (GF-120 NF Naturalyte), approximately 8-10 feet off the ground on street trees and similar surfaces. Male fruit flies are attracted to the mixture and perish after consuming it. The Male Attractant technique is being carried out over an area that extends 1.5 miles from each site where oriental fruit flies were trapped. Agricultural officials may also apply foliar applications of *Spinosad* (GF-120 NF Naturalyte) to reduce known populations of fruit flies and may require the removal of any existing fruit or produce. On properties within 200 meters of detections, staff cut host fruit and vegetables to inspect for any fruit fly larvae that may be present. Finally, host fruit removal will occur within 100 meters of properties with larval detections and/or mated female detections. In areas where dense Oriental fruit fly populations are detected, host fruit from all properties within a 0.5-mile radius around detection sites.
- **Mediterranean fruit fly (Medfly)** – The sterile insect technique is used to eradicate Medflies. Sterile male medflies are released via specialized aircraft and trucks in the project area to disrupt the natural Medfly mating cycle, sterile males mate with wild females which results in no viable offspring. Upon release of sterile male medflies, residents may see fruit flies around their property. While it

is encouraged to remain vigilant and continue reporting fruit fly detections, residents should be aware this may be due to the approved treatment program. Properties within 200 meters of detections are being treated with a naturally derived organic-approved material known as *Spinosad* (GF-120 NF Naturalyte) to remove any female medflies and reduce the density of the population. Staff are also inspecting host fruits and vegetables in these areas for the presence of larvae. Finally, host fruit removal will occur within 100 meters of properties with larval detections and/or mated female detections.

- **Tau and Queensland fruit flies** – CDFA, working in cooperation with the USDA and the Los Angeles and Ventura County Agricultural Commissioners, utilize a multi-tiered approach to try to eliminate the Queensland and Tau fruit flies and prevent their spread to new areas. On properties within 200 meters of detections, staff cut host fruit and vegetables to inspect for any fruit fly larvae that may be present. Additionally, properties within 200 meters of detections are treated with a naturally derived organic-approved material known as *Spinosad* (GF-120 NF Naturalyte), which will help remove any live adult fruit flies and reduce the population densities. Finally, fruit fly traps that incorporate a pheromone lure and a minute amount of pesticide are used in the treatment area.

Q. Are *Spinosad* (GF-120 NF Naturalyte) treatments toxic to bees?

- GF-120 NF Naturalyte Fruit Fly Bait is formulated to attract fruit flies; bees are not attracted to the bait. Bait stations made with GF-120 NF Naturalyte Fruit Fly Bait contain 0.02% Spinosad and are not expected to harm bees.

Q. Are *Spinosad* (GF-120 NF Naturalyte) treatments harmful to animals (pets, birds, or feral cats)?

- No, the treatment is formulated for fruit flies and is not harmful to non-target animals.

Q. I don't have any fruit trees, do you still need to treat my property?

- It may be necessary. Agricultural crews are treating both fruit and ornamental trees six feet tall and higher. Additionally, bushes and hedges over 6 feet tall are treated, as fruit flies rest on the foliage.
- Agricultural crews visiting your property will have a badge or uniform indicating their affiliation with the agriculture departments. They will never ask to access the inside of your home, never ask for payment for services and will respect your personal property. They will only focus their work on applicable plants and trees that may be impacted by invasive fruit flies.

Q. Are you also treating commercial groves, vineyards and fields?

- Operators of commercial groves, vineyards and fields work in cooperation with the eradication program. Any required host fruit removal or treatment of commercial host trees and other produce commodities is the responsibility of the

grower; however, CDFA and County Agricultural Commissioners oversee all treatment applications.

Q. Can these infestations be successfully eradicated?

- Yes. The eradication approaches used in these projects are the safest, most effective, and efficient response programs available. The response strategies are approved by the USDA. CDFA has successfully eradicated every Oriental, Mexican and Mediterranean fruit fly infestation in California history, dating back more than 50 years. Incursions of Queensland fruit fly have been successfully eradicated in New Zealand.

Q. I live in the quarantine area – can I take my homegrown fruit from my property to share with family and friends?

- No. To prevent the spread of fruit flies, residents living in the fruit fly quarantine area are urged not to move any homegrown fruits and vegetables from their properties. Fruits and vegetables may be consumed or processed (i.e. juiced, frozen, cooked or ground in the garbage disposal) at the property where they were picked. If they are not consumed or processed, please dispose of them by double-bagging in plastic bags and putting the bags in the garbage bin for collection, not green waste.

Q. Can I give some of my fruit to my neighbor down the street?

- No, if you live in the quarantine area backyard fruit and vegetables can spread invasive plant pests and diseases and may not be moved from the premises where they are grown.

Q. May I consume it on my property?

- Yes. Fruits and vegetables may be consumed or processed (i.e. juiced, frozen, cooked or ground in the garbage disposal) at the property where they were picked. If they are not consumed or processed, please dispose of fruit and vegetables by double-bagging and disposing of it in plastic bags and putting the bags in the garbage bin for collection, not green waste.

Q. How should I dispose of fruit or vegetables from my backyard?

- If fruit or vegetables are not consumed or processed, please dispose of them by double-bagging in plastic bags and putting the bags in the garbage bin for collection, not green waste.

Q. How long will the quarantines remain in place?

- The quarantine will be lifted if no additional life stages are detected by trapping or visual surveys for three life cycles after the last detection within a quarantine area. Life cycles are weather/temperature dependent.

Q. How are invasive fruit flies spread?

- The most common pathway for these invasive species to enter our state is by “hitchhiking” in fruits and vegetables brought back or shipped illegally from countries where the flies are native, or from the movement of infested homegrown produce into California. The vast majority of invasive species infestations in California occur not on farms, but in our urban and suburban residential areas. While a care package of homegrown goods might be assembled with the best of intentions, you could inadvertently mail a hidden pest with your homegrown fruit, plants, or vegetables.
- Consumers are encouraged to refrain from transporting or mailing fruit, vegetables or other agricultural products into the United States of America and California – Help us protect our agricultural, natural resources, and unique biodiversity from invasive fruit flies – Please Don’t Pack a Pest (www.DontPackAPest.com) when traveling or mailing/receiving packages.
- Residents are encouraged to spread the word and share information about invasive fruit flies with their neighbors and local community. Learn more about how to prevent the spread of invasive pests at www.HungryPests.com.

Q. Can homeowners request a fruit fly trap to be placed on their property to help with detection? If so, how?

- If you have a host plant on your property and would like a fruit fly trap to be placed, please contact the CDFA pest hotline at [1-800-491-1899](tel:1-800-491-1899).

Q. What should residents look for in their gardens?

- Residents are critical to the fight against invasive fruit flies and should follow these guidelines:
- Cooperate with agriculture officials and allow them access to your garden to inspect plants.
- If you are in an established quarantine area, do not move homegrown fruit, vegetables or soil from your property. If you reside outside of a quarantine area, do not move these homegrown items through quarantine areas, across state lines or into California over an international border.
- Inspect your garden for signs of invasive fruit flies or maggots and report any findings to the CDFA at 1-800-491-1899, www.cdfa.ca.gov/plant/reportapest/, or your local county agricultural commissioner’s office.
- Buy fruit trees and vegetable plants from licensed California nurseries.
- If you are in a quarantine area, avoid putting produce in green waste bins for composting. Instead, double bag these perishables before disposal in the regular waste bins.
- While local compost practices can be beneficial, it is encouraged to only compost non-host fruit perishables that are not carriers of invasive pests. If you are in a quarantine area for invasive fruit flies, it is important to double bag and dispose of the produce in a waste bin to avoid further spread and infestation.

Q. What time is treatment starting?

- Residential treatments generally start at about 8 a.m. and end at about 3:30 p.m.; however, working with residents, CDFA can accommodate 2-hour appointment windows. If you received a treatment notice and would like to schedule an appointment or have any questions, please contact the CDFA pest hotline at 1-800-491-1899.

Q. Is *Spinosad* (GF-120 NF Naturalyte) treatment a mist or aerosol spray?

- *Spinosad* (GF-120 NF Naturalyte) is mixed so it's very viscous like syrup, and not every leaf is treated. A small amount is applied to the canopy of the tree as a bait station 8 feet or higher above the ground.

Q. Are you treating grass or potted plants?

- No, only fruit trees and ornamental trees and bushes 6 feet and above.

Q. Are there any trees you don't treat?

- Yes. We do not treat palms, pines, magnolias or hibiscus trees.

Q. Will my fruit still be organic?

- Yes, *Spinosad* (GF-120 NF Naturalyte) Fruit Fly Bait is an organic insecticide, so your fruit tree will remain organic.

Q. You treated me last week, why did I get another treatment notice today?

- Since the treatment is naturally derived organic-approved material, known as *Spinosad* (GF-120 NF Naturalyte), it breaks down rapidly in the environment and treatment is necessary at regular intervals to eradicate invasive fruit flies. The number of times a property may be treated will vary.

Q. Is it safe to water after treatment?

- It's recommended to wait 4 hours after treatment has dried. After that, you can water like you normally would.

Q. Can I eat produce from trees that were treated with *Spinosad* (GF-120 NF Naturalyte)?

- Yes, produce can be harvested and consumed after *Spinosad* (GF-120 NF Naturalyte) has dried (after 4 hours). All fruits and vegetables should be washed before they are eaten or cooked.