

# Safe Handling Practices for Fresh Produce in a Time of Coronavirus Disease 2019 (COVID-19)

Presentation for East Bay Urban Farm Network

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# Safe Handling Practices for Fresh Produce in a Time of Coronavirus Disease 19

1. What is understood about Coronavirus 2019 (Covid-19).
2. Best practices on the farm to minimize risk of exposure and spread
  1. Practice Good Health and Hygiene
  2. Clean and Sanitize Surfaces

# What is Understood about COVID-19

- Information is evolving but its clear...
  - Social distancing is critical. Need to “[flatten the curve](#)”
  - Virus can be passed even without symptoms.
  - Can last up to 37 days in people.
  - Can last on cardboard, plastic and stainless steel.
  - Can remain on cardboard for up to 24 hours
  - Can remain on plastic and stainless steel for 2-3 days.
  - Can remain as aerosol up to 3 hours.

## References:

- Preprint: medRxiv preprint doi: <https://doi.org/10.1101/2020.03.09.20033217>.
- <https://medium.com/@tomaspueyo/coronavirus-act-today-or-people-will-die-f4d3d9cd99ca>

# Shelter in Place Order from Alameda/Contra Costa County PHD - Can our farm stand stay open?

- For the purposes of this Order, “Essential Businesses” may remain open including:
- **Grocery stores, certified farmers’ markets, farm and produce stands**, supermarkets, food banks, convenience stores, and other establishments engaged in the retail sale of canned food, dry goods, fresh fruits and vegetables, pet supply, fresh meats, fish, and poultry, and any other household consumer products (such as cleaning and personal care products). This includes stores that sell groceries and also sell other non- grocery products, and products necessary to maintaining the safety, sanitation, and essential operation of residences;
- **Food cultivation, including farming, livestock**, and fishing;
- Businesses that provide food, shelter, and social services, and other necessities of life for economically disadvantaged or otherwise needy individuals;

<http://www.acphd.org>

<https://www.contracostahealth.org>

# What are Some Community Food Resources?

- City of Berkeley: [Berkeley Food Network](#), is an extra food resource if you are a Berkeley or Albany resident. BFN has an onsite pantry located at 1925 9th St.
  - Open Monday-Thursday 10 AM-2 PM,
  - Monday & Wednesday 5 PM-7 PM, &
  - 1ST & 3RD Saturdays 10AM-12PM
- Berkeley Food Pantry on Mon, Wed, and Fri afternoons at 1600 Sacramento: [Find more information at their website here.](#)
- Alameda County: [Foodnow.net](#)
- Contra Costa & Solano County: [Find Food In My City](#)
- SF & Marin County: [Find Food](#)

# Best Practices on the Farm to Minimize Risk of Exposure and Spread

Practice Good Hygiene  
Clean and Sanitize Surfaces

# Practice Good Health and Hygiene

# Avoid Handling Produce When You are Sick!

**Runny Nose**



**Cough, sneeze**



The average sneeze travels up to 8 feet!

Assign workers other duties while they are sick or send them home

# Food Safety Best Practices (Reminder)

- Take shower and wear clean clothes daily
- Wear clean, un-ripped gloves (nitrile are best)
- Take off gloves before using toilet & eating lunch
- Wash hands for 20 seconds after using toilet and before returning to work
- Do not eat, chew gum, smoke, use tobacco, spit, while in growing/processing/food handling area
- Use toilet and handwashing facilities regularly and properly.
- Keep clean, cut nails and remove rings.
- Avoid using product containers for personal use.

# Best Hygiene Practices During Covid-19

- **Stay home if you are feeling unwell, showing, or have been in direct contact** with someone showing COVID-19 symptoms.
- **Members of high risk populations** (i.e. older adults, or people who have serious chronic medical conditions like: heart disease, diabetes, lung disease) **should not attend farmers' markets.**
- **Limit close contact**, like hugging, kissing and sharing cups or utensils.
- **Wash your hands often with soap and water** for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol. Always wash hands with soap and water if your hands are visibly dirty.
- **Avoid touching your eyes, nose, and mouth** with unwashed hands.
- **Clean and disinfect frequently touched objects and surfaces** using a regular household cleaning spray or wipe.
- **Cover your cough or sneeze with a tissue**, then throw the tissue in the trash. If you do not have a tissue, use your sleeve (not your hands).



# Wash, Not Wipe

Hand sanitizer must be >60% alcohol.



Hand washing is best



# Provide Worker Hygiene Training

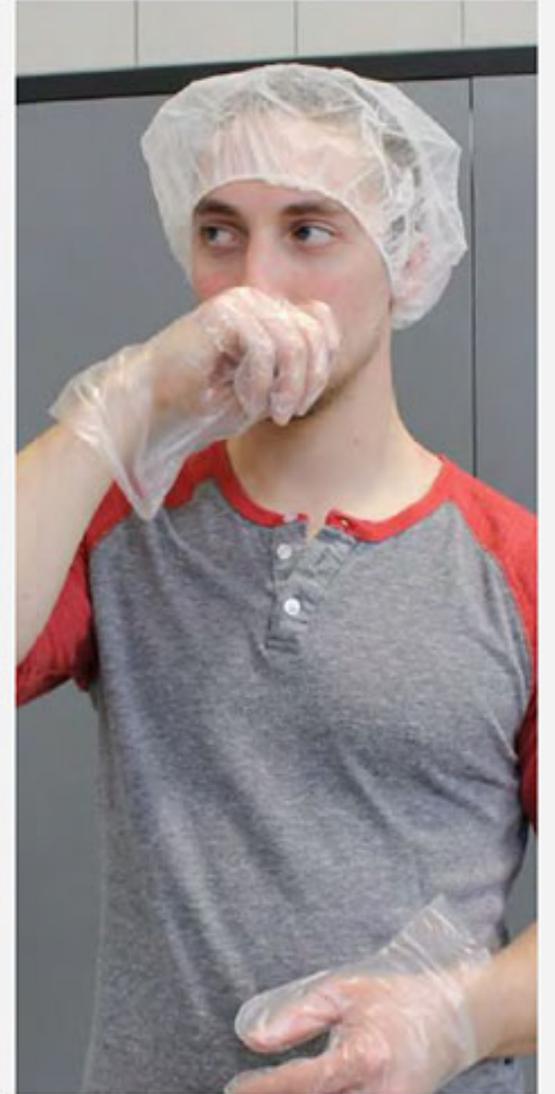


- All employees
- Temporary workers
- Relatives who help
- Wife, husband, children
- Volunteers
- Visitors/U-Pick customers
- **EVERYBODY!**

# Best Farm-Stand Practices (CDC/NC State)

- Consider putting fully stocked handwashing station at entrance to market/farm stand.
- Provide hand sanitizer at info booth for customers, vendors and the public.
- Cease food sampling at market; encourage activities such as pre-bagging to expedite purchasing
- Use non-porous tables that can be easily cleaned and sanitized.
- Think about high touch surfaces and disinfect surfaces including table-tops, door-knobs, regularly.
- Institute new precautionary procedures for market staff, including those handling money and other currencies.
- Increase the frequency that market staff disinfect market surfaces/objects;
- Suspend high touch activities at the market;
- Vendors should ideally hand sanitize after every transaction and **could consider wearing gloves??**;

# Gloves Can Provide a False Sense of Security

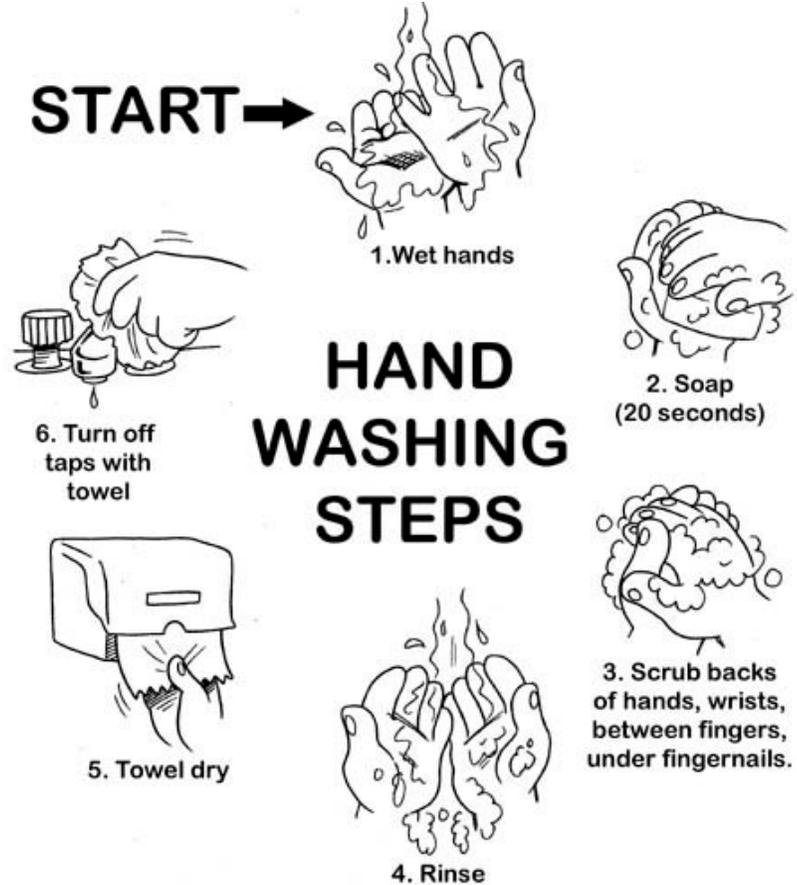


# Provide Clean Potable Drinking Water

- Clean drinking water is available always and water source documented.
- Single use cups, or designated personal water bottles



# Post Signs that Reinforce Good Hygiene in Field and Packing Area



# Create Separate Area for Personal Use

- Eating
- Breaks
- Smoking
- Storage of personal items

To avoid cross contamination in field and packing area!

# Provide Clean Field Sanitation Units

- Toilets & handwashing facilities are provided with TP, single use towels and garbage can with lid.
- Wash hands after EVERY use of toilet & apply new gloves if using.
- Everyone follows these rules.
- Clean and sanitize field sanitation units daily.



# Provide Additional Handwashing Stations

- Can be home-made (see photo and [link to UCANR video tutorial](#)).
- Increase number of handwashing stations including 1 next to toilet.
- Water for washing is drinking water quality.
- Soap, paper towel and trash can with lid required.
- Dispose of waste-water away from fields.
- Handwashing container, faucet is cleaned and sanitized daily.
- Cleaning and resupply record are maintained.



Red arrows point to high touch points that should be sanitized  
Water can carry virus and other pathogens, dispose of away from field

# Clean and Sanitize Surfaces

# Clean All High Touch Surfaces Every Day

- **Clean and disinfect:** Practice routine cleaning of high touch surfaces. High touch surfaces include counters, tabletops, doorknobs, refrigerator handle, bathroom fixtures, toilets, light switches, phones, keyboards, tablets, harvest buckets & trays.
- **Disinfect areas with bodily fluids:** Also, clean any surfaces that may have blood, stool, or body fluids on them.
- **Household cleaners:** Use a household cleaning spray or wipe, according to the label instructions. Labels contain instructions for safe and effective use of the cleaning product including precautions you should take when applying the product, such as wearing gloves and making sure you have good ventilation during use of the product.

# How to Disinfect/Sanitize

- If surfaces are dirty, they should be cleaned using a detergent and water **prior** to disinfection. For disinfection, a list of products with Environmental Protection Agency (EPA)-approved emerging viral pathogens claims, maintained by the American Chemistry Council Center for Biocide Chemistries (CBC), is available at [Novel Coronavirus \(COVID-19\) Fighting Productspdf iconexternal icon](#). Always follow the manufacturer's instructions for all cleaning and disinfection products.
- <https://www.americanchemistry.com/Novel-Coronavirus-Fighting-Products-List.pdf>
- <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

# How to Disinfect/Sanitize

(Rutgers: <https://www.rutgers.edu/news/best-ways-kill-coronavirus-your-home>)

- Whatever cleaning solution you use, let it remain in contact with the surface long enough to kill viruses and other pathogens. The time needed will depend on the chemical.
- Don't use different cleaning agents at the same time. Some household chemicals, if mixed, can create dangerous and poisonous gases.
- For disinfection, diluted household bleach solutions, alcohol solutions with at least 70% alcohol, and most common EPA-registered household disinfectants should be effective.

# Cleaning Products That Destroy Coronavirus

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/>

Consumer Reports: <https://www.consumerreports.org/cleaning/common-household-products-that-can-destroy-novel-coronavirus/>

- **Soap and Water:** Good old fashioned solution is the best for hands.
- **Bleach:** Prepare a bleach solution (sodium hypochlorite) by mixing:
  - 5 tablespoons (1/3<sup>rd</sup> cup) bleach per gallon of water or
  - 4 teaspoons bleach per quart of water
  - Wear gloves while using bleach, and never mix it with ammonia or anything, in fact, except water.
- **Isopropyl alcohol:** Alcohol solutions with at least 70 percent alcohol are effective against coronavirus. Do not dilute the alcohol solution.
- **Hydrogen peroxide** is typically sold in concentrations of about 3%. It can be used as is, or diluted to 0.5% concentration for effective use against coronaviruses on surfaces. It should be left on surfaces for one minute before wiping.

# What Not to Use Against Coronavirus

- Consumer Reports: <https://www.consumerreports.org/cleaning/common-household-products-that-can-destroy-novel-coronavirus/>

- **Home made hand sanitizer:** Concern over right proportions; may give false sense of security.
- **Vodka:** 80-proof product does not contain enough ethyl alcohol (40 percent compared with the 70 percent required) to kill the coronavirus.
- **Vinegar, tea tree oil and other natural products** are not recommended for fighting coronaviruses. A study on influenza virus found that cleaning with a 10% solution of malt vinegar was effective, but few other studies have found vinegar to be able to kill a significant fraction of viruses or other microbes. (Rutgers)

# Safe Handling of Fruits and Vegetables

# Can the Virus be Transmitted Through Food?

- There is currently no evidence to date that the SARS-CoV-2 is spread through food.
- Coronaviruses cannot grow (multiply) in food – they need a host (animal or human) for this to happen.
- Coronaviruses spread most commonly people to people or animal to people via droplet spread by a sneeze or cough. If droplets contact mucus membrane (mouth, nose, eyes) of another person either directly or indirectly (by touching a contaminated surface) it can lead to infection.
- Research with similar viruses (SARS) has demonstrated that typical cooking temperatures (30 minutes at 140°) will kill the virus in foods.
- Bottom line: Cooking food and observing good hygiene practices when handling and preparing food are effective at preventing contamination of the novel Coronavirus.
- Erin DiCaprio, UCANR. 2020: <https://drive.google.com/drive/u/0/folders/1oI5fRHg0k7cKRdF4oNWuiJTfYi51b7Vi>

# Safe Handling of Fresh Fruits and Vegetables

- Clean sink with hot, soapy water or cleanser before and after washing and preparing fresh fruits and vegetables.
- Always wash cutting boards and preparation areas before and after food preparation.
- Sanitize cutting boards and food preparation areas
  - Pour boiling water over the clean wood or plastic cutting boards for 20 seconds.
  - Rinse clean wood and plastic cutting boards with a solution of 1 teaspoon chlorine bleach in 1 quart (4 cups) of water.
  - Place plastic cutting boards in the dishwasher and run, using normal cleaning cycle.

# Safe Handling of Fresh Fruits and Vegetables

- Always wash hands with hot, soapy water for at least 20 seconds before and after handling fresh fruits and vegetables.
- Always wash fruits and vegetables, including those that are organically grown, come from a farmer's market, or were grown in your own garden.
- Wash fruits and vegetables just before cooking or eating.
- Do not use antibacterial soaps or dish detergents to wash fruits and vegetables because soap or detergent residues can remain on the produce. The FDA has not evaluated the safety of the residues that could be left from soaps and detergents.

# Safe Handling of Fresh Fruits and Vegetables

- Soaking fruits and vegetables in water is not recommended because of the potential for cross-contamination.
- Remove outer green leaves from items like lettuce or cauliflower before washing.
- Trim the hull or stem from items like tomatoes, strawberries, and peppers after washing.
- Research shows that cooking food for 30 minutes at 140 degrees kills the SARS coronavirus.

# Summary

- Practice social distancing and stay home if you are sick.
- Consider developing a cleaning and sanitizing checklist (if you don't have one yet)
- Wash hands (for 20 seconds) more frequently.
- Clean and sanitize all surfaces more frequently: restroom, handwashing stations, produce sinks, tabletops, harvest bins.
- Provide Training to all volunteers/workers in:
  - Good health and hygiene practices
  - Handwashing
  - Cleaning and disinfecting
- Put up signage for handwashing instructions



# Where to Find More Information About COVID-19.

Further information about COVID-19 including transmission, prevention and current status of the outbreak is available from multiple sources:

- U.S. Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov))
- California Department of Public Health ([www.cdph.ca.gov](http://www.cdph.ca.gov))
- World Health Organization (WHO) ([www.who.int](http://www.who.int))
- WHO Situation Reports (COVID-19 situation reports)
- WHO COVID-19 Situation Report – 32 (COVID-19 and food safety)
- Alameda County Public Health Dept: <http://www.acphd.org/2019-ncov.aspx>
- Contra Costa County Public Health Dept: <https://www.contracostahealth.org>

# Additional Information on Food Safety & COVID-19

- UC Davis: <https://ucfoodsafety.ucdavis.edu/covid19-food-safety-resources>
- Kali Feiereisel's (CAFF and CDFA Food Safety Expert) latest FAQ about food safety during COVID-19 response: <https://www.caff.org/covid19-foodsafety/>
- Here is the link to the CDPH/CDFA guidance for food and beverage service (including farmers markets, farmstands and restaurants) that was released yesterday:  
<https://plantingseedsblog.cdfa.ca.gov/wordpress/?p=20917>