Spring Webinar Series
2 P.M. CST
Zoom Controls

Meeting Topic: Field2Fork - Tom Kalb Growing Vegetables
Host: Extension FCW
Invitation URL: https://zoom.us/j/609371435
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• **Acknowledgement:** This project was supported by the U.S. Department of Agriculture’s (USDA) Agricultural Marketing Service through grant 14-SCBGP-ND-0038.
Food Safety in Times of Coronavirus: Resources to Help with Food Safety, Meal Planning and Food Storage

Julie Garden-Robinson Ph.D., R.D., L.R.D.
Professor, North Dakota State University

Special thanks to Alexandra Lee, NDSU Dietetic Intern, for helping compile information and create PowerPoint
Outline

• Review of COVID-19

• How to protect yourself
  Sanitizing vs. Disinfecting
  Proper food handling

Preparing food at home
• NDSU Extension Resources such as:
• Pinching Pennies in the Kitchen, Now Serving
• Cooking 101
CORONAVIRUS DISEASE (COVID-19) (SARS-COV-2)
What Is COVID-19?

• COVID-19 is a respiratory illness that can spread from person to person.
• The virus that cause COVID-19 is a novel coronavirus, first identified in Wuhan, China.

Source: CDC, NIH, WHO,
More About Microbes

- Respiratory viruses (novel coronavirus) attach to cells in the lungs.

- Salmonella (bacteria) and norovirus (virus) can survive stomach acid and multiply in the gut.

- No evidence that COVID-19 sickens people through their digestive systems. The virus has been detected in feces but unknown if it can sicken anyone. More reason to wash hands!
How does COVID-19 spread?

- Speculation that COVID-19 emerged from animal source
- Currently spreading person to person mainly from respiratory droplets
- Droplets produced when an infected person:
  - Coughs
  - Sneezes
  - Touches a surface and that surface is not disinfected

Source: CDC
How Does it Spread?

- People who are within roughly 6 feet of each other when the droplets can land in the mouth or nose
- Touching a surface that a previous infected person touched then proceeding to touch their eyes, nose or mouth
- Might also occur before people show symptoms (asymptomatic) however, it is not thought to be the main reason.

Source: CDC
What is the Potential Lifespan?

COVID-19 may be stable for hours to days in aerosols and on surfaces, according to unpublished data reported in an editorial to the New England Journal of Medicine and not peer-reviewed to date:

- Aerosols up to 3 hours
- Copper up to 4 hours
- Cardboard up to 24 hours
- Plastic and stainless steel up to 2-3 days

Source: NIH New Coronavirus Stable for Hours on Surfaces
*Remember*

- Food delivery is thriving to support local businesses
- Be mindful what the food is delivered in
- If desired, take extra precaution
  - Remove the food, discard the delivery packaging and use personal plates and utensils.
  - Wash your hands before eating.

Source: Cornell.edu
PROTECT YOURSELF AND LOVED ONES

Covid-19
Protect Yourself and Others

• At this time there is no specific vaccine or treatments for COVID-19.

• Of the food safety steps in helping to mitigate coronavirus, **cleaning (hands and surfaces)** is the most important

• **Avoid contact** with others while sick

Source: NIH, FDA
How to Protect Yourself

Wash your hands using the 5 steps

1. **Wet** your hands with clean water and apply soap

2. **Lather** the front and back of your hands, between your fingers and under your fingernails with soap
How to Protect Yourself

Wash your hands using the 5 steps

3. **Scrub** your hands for at least 20 seconds.

4. **Rinse** hands under clean water

5. **Dry** hands by using a clean towel or air dryer
Let’s Practice…
Protect Yourself and Others

• Washing your hands is the **best defense** against the flu and other contagious illnesses.

• How often should you wash your hands?
When to Wash Your Hands

• Before and after eating food or putting your hands to your mouth or face
• Before, during and after preparing food for yourself and others
• Before and after caring for someone who is sick
• After coughing, sneezing or blowing your nose
• After using the toilet or assisting others in the bathroom
• After changing diapers or helping a child with toilet or personal hygiene
• After touching garbage
• After touching an animal or animal waste
What about hand sanitizer?

- Hand sanitizer is a good **back-up** if running water is not available.
  - Must be at least 60% alcohol content

- Apply then rub hands together for 20 sec until surfaces (top of hand and palms) and fingers are **dry**.

- **Remember:** sanitizers can quickly reduce the number of germs, however it does not get rid of all types of germs
NOTE

• The Food and Drug Administration does not recommend preparing homemade hand sanitizers.

• Chemical burns have occurred.
WASHING PRODUCE
Should you clean firm-skinned fruits and vegetables even if you don’t consume the skin? (Indicate yes or no)
Yes! Rinse all fresh produce under running tap water. Prewashed bagged salad is OK.
NEVER

• **Never** use detergent or bleach to wash fresh fruits or vegetables. These products are **not intended for consumption** and can cause negative side effects.

• Follow the **7 tips** for cleaning fruits and vegetables.
7 Steps for Washing Produce

1. **Wash** your hands for 20 seconds with warm water and soap before and after preparing fresh produce.
2. If damage or bruising occurs before eating or handling, cut away the damaged or bruised areas before preparing or eating.
3. **Rinse** produce BEFORE you peel it, so dirt and bacteria aren’t transferred from the knife onto the fruit or vegetable.
4. **Remove** the outermost leaves of a head of lettuce or cabbage.

Source: fda.gov
7 Steps for Washing Produce

5. Gently **rub** produce while holding under plain running water. There’s no need to use soap or a produce wash.

6. Use a clean vegetable brush to **scrub** firm produce, such as melons and cucumbers.

7. **Dry** produce with a clean cloth or paper towel to further reduce bacteria that may be present.

Source: FDA.gov
CLEAN, SEPARATE, COOK, CHILL
Questions – Reply in chat box

How long is perishable food safe at room temperature?

What are the three ways to thaw food safely?
Clean

• Remember: Germs can spread around the kitchen.

• Wash your hands

• Wash:
  – Utensils, cutting boards and countertops
  – Rinse fresh fruits and vegetables under clean running water.
    • If needed, use a clean vegetable brush to lightly scrub firm-skinned fruits and vegetables under running tap water.
Separate - Use Social Distancing Concepts!

• Don’t Cross-contaminate.
  – Raw meat, poultry, seafood and eggs can spread bacteria and viruses to ready-to-eat food.
  – Keep them separated from the time you buy them until you’ve cooked them.

• Grocery Shopping/Storing
  – Wipe the cart handle with sanitizing wipe
  – Keep raw meat, poultry, seafood and their juices away from other foods.
  – When storing raw meat, poultry, seafood and eggs, keep them separate from all other foods in the fridge.
Separate

• Preparing meals
  – Use separate cutting boards for raw meat, poultry and seafood.
    • Try color-coded cutting boards (example, red for raw meats and yellow for fresh fruits and vegetables).
  – Do not place cooked foods on a plate/cutting board that held raw items without washing the plate or cutting board first.
Cook

- Always cook foods to the safe internal temperature to kill germs and bacteria that can make you sick.

- Use a food thermometer.
  - Checking the color and texture of the food is not the correct or safe way to tell if food is cooked safely.
Cook

• Key temperatures
  – 145 degrees for whole cuts of beef, pork, veal and lamb (then allow the meat to rest for three minutes before carving or eating)
  – 145 degrees for fresh ham (raw) *
  – 145 degrees for fin fish or cooked until flesh is opaque
  – 160 degrees for ground meats such as beef and pork
  – 165 degrees for all poultry, including ground chicken and turkey
  – 165 degrees for leftover casseroles
  – Cook egg dishes to 160 degrees.

• When cooking in a microwave oven, be sure to cover the food, stir and rotate for even cooking.
Chill

• Keep refrigerator at 40 degrees or below.

• Low temperatures slow the growth of bacteria.
  – Don’t overstuff your refrigerator
  – Use an appliance thermometer

• Refrigerate perishable foods within two hours of cooking or preparing them
  – within one hour if outdoor temps reach 90 degrees and you are dining outdoors

Source: CDC
• Never defrost food at room temperature
  – Food must be kept at a safe temperature even when thawing

• Three ways you can thaw food safely:
  – In the refrigerator
  – In cold water
  – In the microwave followed by immediate cooking
Safe Food Handling

- In every step of food preparation, follow the **four main steps** of the Fight BAC campaign to keep food safe.

  1. **Clean** – Wash hands and surfaces before, during and after cooking
  2. **Separate** – Don’t cross contaminate fresh and raw foods
  3. **Cook** – Cook all food to the safe temperatures
  4. **Chill** – Refrigerate promptly, refrigerators should maintain food at 40 degrees or below

- See [www.ag.ndsu.edu/food](http://www.ag.ndsu.edu/food) for more information.
CLEANING, SANITIZING AND DISINFECTING
Question

What are the differences among cleaning, sanitizing and disinfecting?
Cleaning

• Cleaning removes germs, dirt and impurities from surfaces or objects.

• Works by using soap (or detergent) and water to physically remove germs from surfaces.

• This process does not necessarily kill germs.
  • By removing them, it lowers their numbers and the risk of spreading infection.
Sanitizing

- **Sanitizing lowers the number of germs** on surfaces or objects to a safe level but not at the level of disinfecting.
- Implemented with **hot water** (171°F) or **chemical agents** at the safe concentration of chlorine bleach or other sanitizing agents (Iodine, Quats).
  - The common *kitchen* concentration is 1 Tbsp unscented chlorine bleach/gallon to avoid having a chemical hazard introduced.
  - Example: Flood cutting board with solution, allow to stand for several minutes, rinse with clear water and air dry or pat dry.

Source: CDC
Disinfecting

- Disinfecting **kills germs** on surfaces or objects
  - This process *does not* clean dirty surfaces or remove germs.
  - By killing germs on a surface **after** cleaning, it can further lower the risk of spreading infection.

[https://www.cdc.gov/flu/school/cleaning.htm](https://www.cdc.gov/flu/school/cleaning.htm)
Sanitizing vs Disinfecting

- Follow the CDC guidelines for cleaning and disinfecting.

- Sanitizing and disinfecting are two different actions

- **Disinfection** uses a **higher concentration** of bleach than sanitizing

- Always clean surfaces with soap and water before disinfecting.
Disinfectants (continued)

• Disinfectant
  – Use diluted household bleach solutions.
    • 4 teaspoons per quart of water
  – Alcohol solutions with at least 70% alcohol
  – Most common EPA-registered household disinfectants (Clorox, Lysol wipes, etc.)
Disinfecting (continued)

- Clean and disinfect frequently touched surfaces that include:
  - Tables
  - Doorknobs
  - Light switches
  - Countertops
  - Handles
  - Desks
  - Phones (disinfecting wipe)
  - Keyboards
  - Toilets
  - Faucets
  - Sinks
LET’S SHOP AT HOME

NDSU Extension Resources
• Pinching Pennies
• Now Serving
• And much more!
NDSU Extension Resources

- NDSU Extension has many resources at the fingertips to help anyone in need for extra guidance.
- Here are a few options!
Pinching Pennies

- 7 Steps to Creating a Soup (FN1648)
- 7 Steps to Creating a Stir-fry (FN1649)
- 7 Steps to Creating an Omelet (FN1650)
- 7 Steps to Using Dry Beans (FN1701)
- What's in Your Home Food Pantry? (FN1706)
- 7 Steps to Making a Quesadilla (FN1717)
- 4 Ways to Use Day-old Bread (FN1743)
- 7 Steps to Making Your Own Meal in a Bowl (FN1757)
Pinching Pennies

• 4 Everyday Uses for Extra Cereal in Your Cupboard (FN1760)
• 5 Tips for Building a Healthful Lunch (FN1774)
• 7 Steps to Making Your Own Pizza (FN1890)
Now Serving Series

- Now Serving: Shopping for Family Meals (FN693)
- Now Serving: Meals with Help from Kids! (FN705)
- Now Serving: Meals with Help from Teens! (FN706)
- Now Serving: Tasty, Healthful Meals on a Budget
Now Serving

- Now Serving: Tasty, Healthful Meals on a Budget Week 1: Meal Planning Tips, Menus and Recipes (FN1383)
- Now Serving: Tasty Healthful Meals on a Budget Week 2: Grocery Shopping Tips, Menus and Recipes (FN1384)
- Now Serving: Tasty Healthful Meals on a Budget Week 3: Cost-saving Tips, Menus and Recipes (FN1385)
- Now Serving: Tasty Healthful Meals on a Budget Week 4: Planned-over Food Tips, Menus and Recipes (FN1386)
- Now Serving: Tasty, Healthful Meals on a Budget Week 5: Time-saving Tips, Menus and Recipes (FN1387)
Running Out of Things to Say?

• Check out our conversation starters (along with the newsletter and Facebook page with daily tips at):
  • www.ag.ndsu.edu/familytable
  • www.ag.ndsu.edu/food

• Example conversation starters at dinner:
  – “What’s your super power?”
  – “What was your pit (low point) and peach (high point) of the day?”
Pinching Pennies Examples

7 Steps to Creating a Soup

A steaming bowl of soup is a hearty, healthful meal. You can use food from your pantry, freezer or leftovers from your refrigerator to make a tasty soup in about 30 minutes following these easy steps. Each pot of soup serves about four adults. The nutritional value varies depending on the ingredients you choose.

1. Choose one fat.
   - 2 Tbsp. canola, sunflower, olive or other oil
   - OR 2 Tbsp. butter OR 2 Tbsp. margarine
   - Heat in large pot on stove

2. Rinse and chop one medium onion.
   - Add to pot and cook over medium heat until tender.

3. Choose one broth. Add to pot.
   - 2 (16-ounce) cans chicken, beef or vegetable broth
   - 4 c. water plus chicken, beef or vegetable bullion or soup base prepared according to manufacturer’s directions

4. Choose one protein. Add to pot.
   - 1 (16-ounce) can crushed or diced tomatoes and 3 cups water
   - 4 c. milk and chicken bullion or soup base prepared according to manufacturer’s directions

5. Choose one starch. Add to pot.
   - 3 to 4 c. diced potatoes
   - 4 ounces egg noodles, macaroni, pasta (or 1/2 c. leftover cooked noodles)
   - 1/2 c. uncooked rice (or 1/2 c. leftover cooked rice)

6. Cook the veggies.
   - Add 2 Tbsp. oil. Stir-fry onion until tender, add garlic and then remaining vegetables.
   - Cook the vegetables to the desired tenderness.

7. Combine the ingredients.
   - Return the meat to the pan with the veggies.
   - Add sauce and stir gently until everything is coated evenly.
   - Stir in “glass” and stir-fry until the sauce in the pan is glassy and thickened.
   - Serve immediately over rice or noodles.

Menu ideas:
- Stir-fry beef and broccoli over brown rice, fresh or canned pineapple and fat-free or low-fat milk

1. Choose a protein.
   - 1 pound chicken, beef or pork cut in small, bite-sized pieces, OR one package of firm tofu cut into 1/2-inch cubes. For uniform cooking, cut the protein into smaller-sized pieces.

2. Marinate protein in one of the following:
   - 3 to 4 Tbsp. soy sauce or teriyaki sauce, reduced-sodium
   - 3 to 4 Tbsp. chicken broth
   - 3 to 4 Tbsp. apple juice

3. Prepare produce.
   - 1 onion, cut into wedges
   - 1 to 2 cloves garlic, minced
   - 2 c. fresh vegetables (shredded carrots, shredded cabbage, sliced mushrooms, sliced celery, sliced peppers, zucchini, yellow squash, etc.) or substitute frozen stir-fry vegetables

4. Make a sauce and a glaze.
   - Sauce: 1/4 c. chicken broth, 1/4 c. soy sauce, 1 1/2 tsp. sugar, 2 to 4 tsp. vinegar
   - Glaze: 2 tsp. cornstarch plus 2 Tbsp. water or chicken broth

5. Cook the meat.
   - Turn skillet on high, add 1 Tbsp. oil and half of the protein. Stir-fry until fully cooked.

   about two to three minutes. Transfer to bowl and cover. Stir-fry the remaining protein.

6. Cook the veggies.
   - Add 2 Tbsp. oil. Stir-fry onion until tender, add garlic and then remaining vegetables.
   - Cook the vegetables to the desired tenderness.

7. Combine the ingredients.
   - Return the meat to the pan with the veggies.
   - Add sauce and stir gently until everything is coated evenly.
   - Stir in “glass” and stir-fry until the sauce in the pan is glassy and thickened.
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For more information about nutrition, food safety and health, visit this website:
www.ag.ndsu.edu/food
Stay well. (Read the sentiment on her shirt)
Resources

- http://agworkforce.cals.cornell.edu/2020/03/12/novel-coronavirus-prevention-control-for-farms/?fbclid=IwAR0i7v2BPEiL9VG-ON0UqvTtdek2ya0c0ZQYHVvqtf0u_8BtRnlm4h68fRql
- https://www.lsuagcenter.com/profiles/aiverson/articles/page1584982168555
- https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/frequently-asked-questions/#freezing
Questions?
www.ag.ndsu.edu/fieldtofork
Minimize Risk While Harvesting

- Provide cleaning supplies such as cleaning solutions, buckets, mops, brushes, etc for cleaning at work and for those living in employer-provided housing.

- Review your sick leave policy.

- Communicate with employees that they should stay home if they are sick.

- Prepare your disaster contingency plan. What will you do if 50% of your employees become sick and unable to work?

- For more detail view Cornell Agricultural Workforce Development
COVID-19 PREVENTION AND CONTROL FOR FARMS

Cornell University, FDA, USDA
“The Produce Safety Alliance (PSA) is a collaboration between Cornell University, FDA, and USDA to prepare fresh produce growers to meet the regulatory requirements included in the United States Food and Drug Administration’s Food Safety Modernization Act (FSMA) Produce Safety Rule.”

Visit FSMA Final Rule on Produce Safety for more information on standards for growing, harvesting, packing and holding for consumer consumption.
• Why is it Important?
  • Provides fundamental, science based, on-farm, food safety knowledge to fresh fruit and vegetable farmers, packers, regulatory personnel and others interested in the safety of fresh produce
• Cornell developed a document that outlines a draft checklist on COVID-19 risk management strategy implementation for food organizations
  • Visit Food Facility COVID-19 Strategy Checklist
Minimize Risk While Harvesting

• Your farm workforce is not immune to coronavirus, begin taking steps to protect yourself and your employees.
  • Review your farm’s health policies and procedures as written in your food safety plan
    • [Steps in Prevention and Control of Farms during COVID-19](#)

1. Inform your employees about COVID-19, how it spreads and how to prevent getting infected
2. Print the CDC factsheets and posters. Post throughout the workplace.
3. Provide guidance to employees on how to clean and disinfect homes.
4. Clean and disinfect any areas where employees congregate or routinely touch items such as doorknobs and computer keyboards. Set up daily and weekly cleaning schedules.