BEGINNING FARMERS

Produce Safety

Activity 2: Cross Contamination

Using UV fluorescent powder applied to hands, produce and food contact surfaces, participants will visualize how contamination can spread on the farm.

KEY WORDS

Bacteria: Single-celled microorganisms that can multiply in environments outside or inside a host organism, such as a person, farm animal or wild animal. Most can multiply very quickly, reaching high numbers in a short period of time if they are in the right environment.

Cross contamination: The transfer of harmful microorganisms called pathogens or germs from one person, object or place to another.

Microorganisms: Organisms including yeasts, molds, bacteria, viruses, protozoa and parasites that are so small they can only be viewed through a microscope.

Pathogens: Commonly called "germs," pathogens are microorganisms capable of causing disease or illness; examples include bacteria, viruses and parasites.

Parasites: A parasite may be a protozoa or intestinal worm that can multiply only in a host animal, which may be a human. Though they cannot reproduce outside of the host, they can survive outside the host for long periods of time, and a host can be affected for a long time without producing any symptoms.

Protozoa: Single-celled microscopic animals.

Viruses: Small living particles that can multiply only in a host animal, which may be a human. Though they cannot reproduce outside of the host, they can survive outside the host of long periods of time.

How Do You Do This?

SUPPLIES NEEDED

- UV fluorescent powder, gel or lotion, which is sold under brand names such as “Glo Germ” or “GlitterBug” for the purpose of food safety education.
- UV light
- Room that can be darkened by turning off lights or viewing box **(see instructional diagram on page 4)**
- A few pieces of produce (any type will do) and a few produce contact surfaces (e.g., harvest knife, harvest bin, countertop)

PROCEDURE

UV fluorescent powder is a commonly used tool in health care and food service industries to teach how germs can spread. We will use it in this activity to show how germs can spread in a farm setting.

1. The faciltator will ask for volunteers to perform some farm activities after the powder is sprinkled on their hands.
2. Darken the room or retrieve the viewing box.
3. Shine the UV light on the produce, produce contact surfaces and any other surfaces, including hands, that were touched by the volunteers' hands in the farm activities to see how the powder “germs” have spread.

What Does it Mean for My Farm?

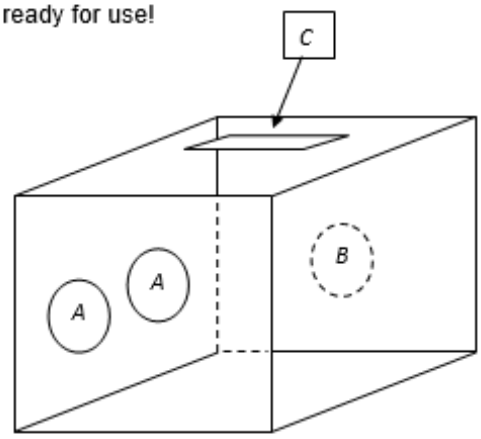
- What are some aspects of your farm's operation that could pose a cross contamination risk?
- Discuss how worker hygiene and sanitation practices can reduce the risk of bacteria being present on food or food contact surfaces on the farm.
- Come up with a list of the various food contact surfaces on a farm that could pose a cross contamination risk.
- What preventative measures can you take on your farm to prevent cross contamination?

RESOURCES FOR ADDITIONAL LEARNING

- Cleaning vs. Sanitizing Infographic (included on page 5 of this packet)

Instructions for preparing a dark box

1. You will need to have: used cardboard or a medium sized box, craft knife/cutter or scissors, and duct tape.
2. Close and tape all the exposed parts of the cardboard into a box shape, or tape the corners of the box to make it strong.
3. Make two circular holes with diameter of approximately 15cm on one side of the box so that the hands of the participants can go through (positions A).
4. On one end of the box (position B) make a circular hole with diameter of approximately 15cm so that the facilitator can place the UV light inside to illuminate the box.
5. On the top of the box (position C) make a square hole approximately 10 -15cm x 20cm long, so that participants can look inside the box.
6. The dark box is ready for use!



Another example:

Glo-germ Activity Instructions: Hygiene Promotion Box

Source Link: https://watsanmissionassistant.org/?mdocs-file=10108

Cleaning vs. Sanitizing Infographic

CLEANING

The physical removal of dirt from surfaces, using a detergent

USING A DETERGENT:

- Needs to be food grade
- Must be approved for use on food surfaces to clean harvest implements
- Any dish soap is a good choice

VS.

You cannot sanitize a dirty surface. Cleaning must always come first.

SANITIZING

Treating a cleaned surface surface with an antimicrobial product in order to reduce or eliminate microorganisms

READY TO USE SANITIZERS:

(Approved for use on food contact surfaces)

- Purell Fragrance Free Food Service Surface sanitizer
- Clorox Anywhere Daily Disinfectant and Sanitizer
- SaniDate Ready to use Hard Surface Sanitizer

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Use of trade names is purely for example and is not an endorsement or condemnation on the part of MSU or any partnering organizations.

Source: Produce Safety Alliance Grower Training Module 6