

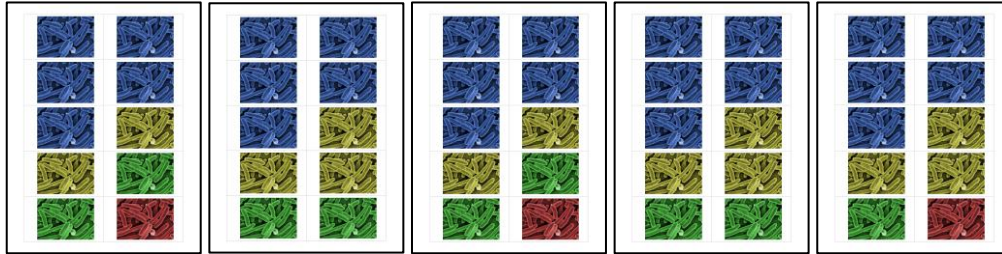
Coliform Activity Instructions

Objective:

To help PSA Grower Training attendees understand how the presence of generic *E. coli* in a water sample is an indication of the presence of feces, a risk factor for the presence of pathogens.

Prior to teaching Module 5-1:

1. Print the [Coliform-Activity.pdf](#) on Avery 5371 business cards, separate into individual cards, and laminate. (You could also print on plain paper, cut into rectangles, and laminate and/or skip the lamination for disposable cards.)



When teaching Module 5-1, slide 20, Generic *E. coli* is an Established Indicator:

2. Pass out a card to each Grower Training participant.
3. Ask participants to stand up and tell them they all represent coliforms. Coliforms are bacteria that are found in the environment, soil, and intestines of warm-blooded animals. Most coliforms are not harmful and some perform beneficial functions, such as aiding in digestion.
4. Ask participants with blue cards to sit down. Tell those that are still standing that they represent fecal coliforms. Fecal coliforms are a type of coliform that are more likely to be associated with human or animal fecal material and are a more accurate indication of the presence of feces than total coliforms.
5. Ask participants with yellow cards to sit down. Tell those that are standing that they represent generic *E. coli*. When we send a water sample for a microbial test for generic *E. coli*, this is what the test is measuring. Testing for generic *E. coli* is not an indicator of the presence of other bacteria like *Salmonella*, parasites like *Cryptosporidium*, or viruses like Hepatitis A.
6. Ask participants with green cards to sit down. Tell those that are standing (red cards) that they represent pathogenic *E. coli*. These are specific kinds of *E. coli*, like O157:H7, that can make people sick.
7. Ask participants why we do not test for specific pathogens like *E. coli*, *Salmonella*, *Cryptosporidium*, or Hepatitis A. After allowing participants to discuss possibilities, let them know that testing for specific pathogens is possible, but would be extremely expensive. Additionally, new pathogens are emerging and the list of pathogens to test for would be ever increasing in length.

Credit: This activity was adapted from an activity originated by Michelle Danyluk, University of Florida and improved upon by Janice Hall, Alabama Cooperative Extension System

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Produced by the National Institute of Allergy and Infectious Diseases (NIAID), this digitally-colored scanning electron micrograph (SEM) depicts numbers of *Escherichia coli*, rod-shaped bacteria, which were grown in a culture, and shown here attached to a coverslip.