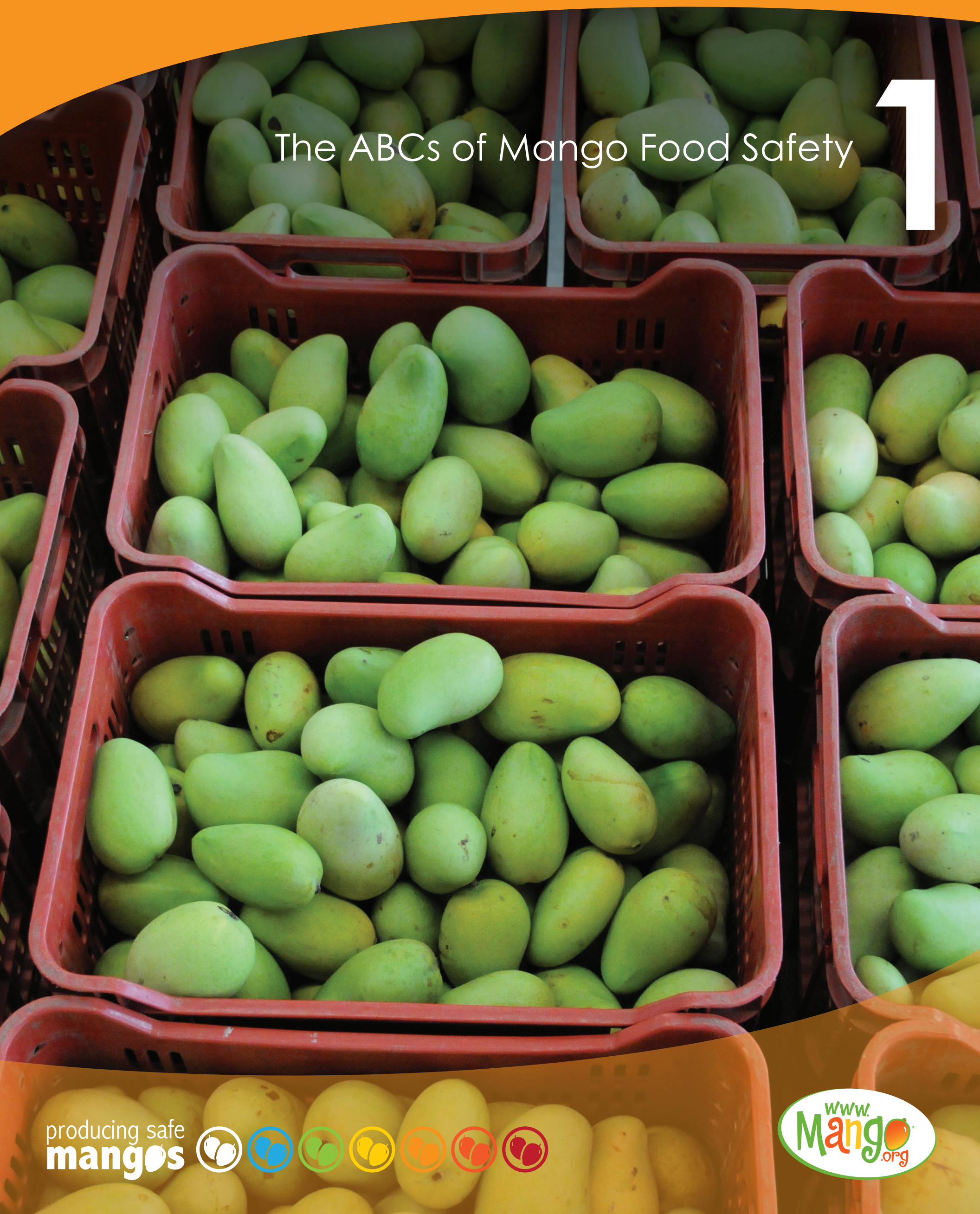
The Mango Industry Food Safety Training Kit

Warehouse/Cold Storage



The ABCs of Mango Food Safety

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producing safe mangos

www.Mango.org

Why Are We Here?

Today, we are here to receive food safety training for our work at the farm/packinghouse/warehouse. As many of you know, our company is implementing or has already implemented a Good Agricultural Practices Program or a Food Safety and Quality Program, whichever the case may be. Each of us plays an important role in this program.

Our clients and the people who inspect our company operations require ALL employees working in the mango production, packing, and/or warehouse areas to receive food safety training.

[The first lesson is designed for farms, packinghouses, and warehouses. The text mentions farms/packinghouses/warehouses; use the term that corresponds to your operation.]

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¿Why Are We Here?

What is Food Safety?

To start this course, it is important to understand the meaning of "food safety." We have heard these words in our job many times.

Food safety means that the food will not harm the people who eat it, and we can guarantee that the food will not make the consumer sick.

It is our job and, above all, our responsibility, to grow, pack and distribute mangos that are safe for human consumption.

In the training we will receive today, we will learn how food can become contaminated, how we can help protect mangos from contamination, and how we can help the farm/packinghouse/warehouse to pass its Good Agricultural Practices or Food Safety and Quality inspection.

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¿What is Food Safety?

Mango and Dishes Made with Mangos

What do you think of the food in these pictures?

What food do they have in common?

These dishes look good and probably smell and taste good as well.

Do you think any of these dishes can make us sick? If so, why? [*Give participants time to answer.*]

Any food, regardless of where it was produced, packaged or prepared such as a processing plant, at home, or in a restaurant, can become contaminated and cause illness in people who eat it.

Contaminated food can taste good, smell good, and even look good—and still make you sick.

When we get sick from eating contaminated food, it is called a foodborne illness. This illness is different than the feeling you get when you eat too much—that's called indigestion.

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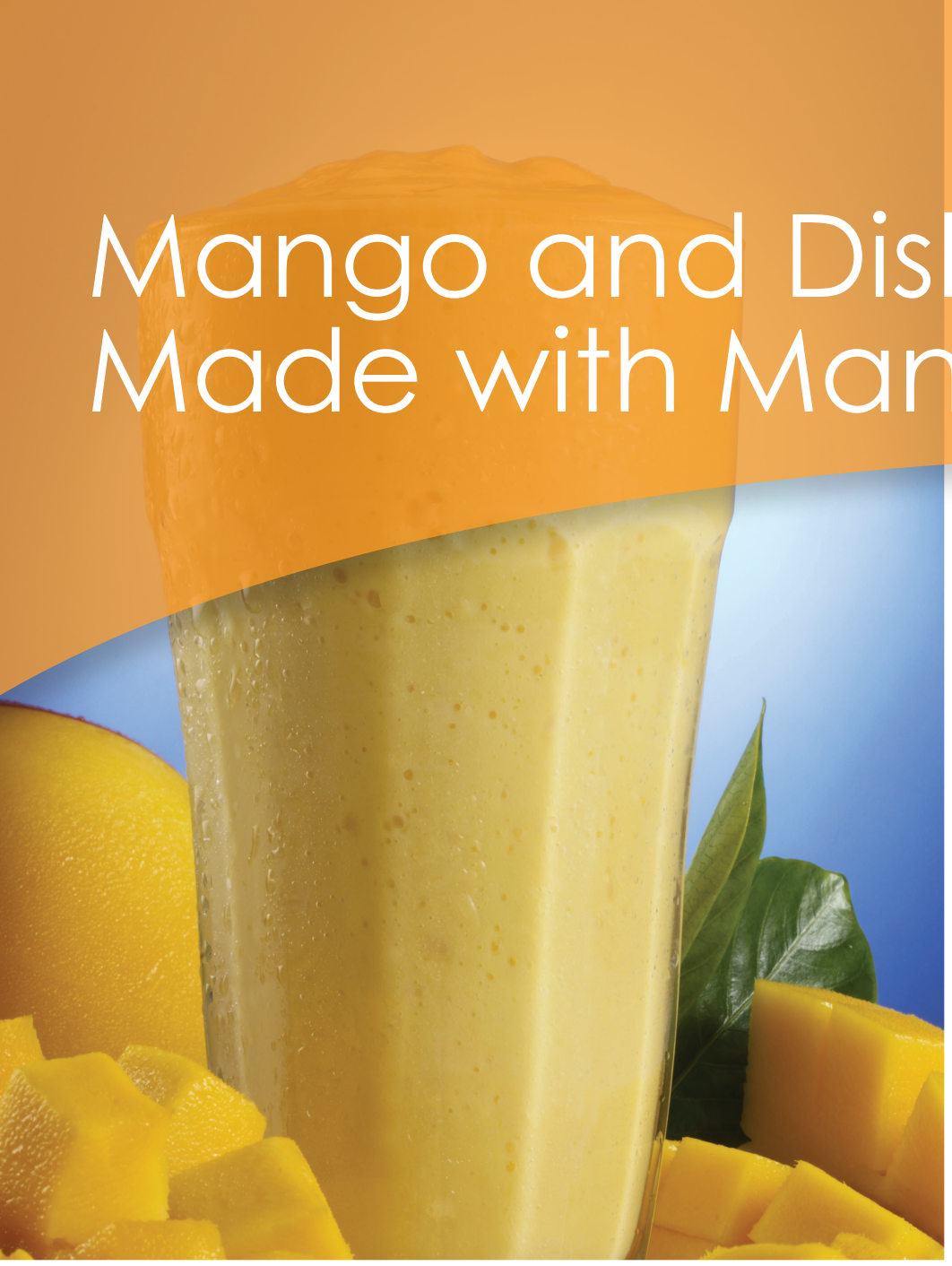
Mango and Dishes Made with Mangos



Foodborne Illnesses

Foodborne illnesses are caused by the consumption of water or food contaminated by different types of microbes and represents a major health problem worldwide.

Symptoms of foodborne illnesses may include diarrhea, vomit, or dehydration. In some cases, these symptoms can be severe and may be deadly.

A key part of your job is to protect the mangos that you work with from contamination, so that they do not become the source of a foodborne illness.

A foodborne outbreak occurs when two or more people become sick from eating the same contaminated food.

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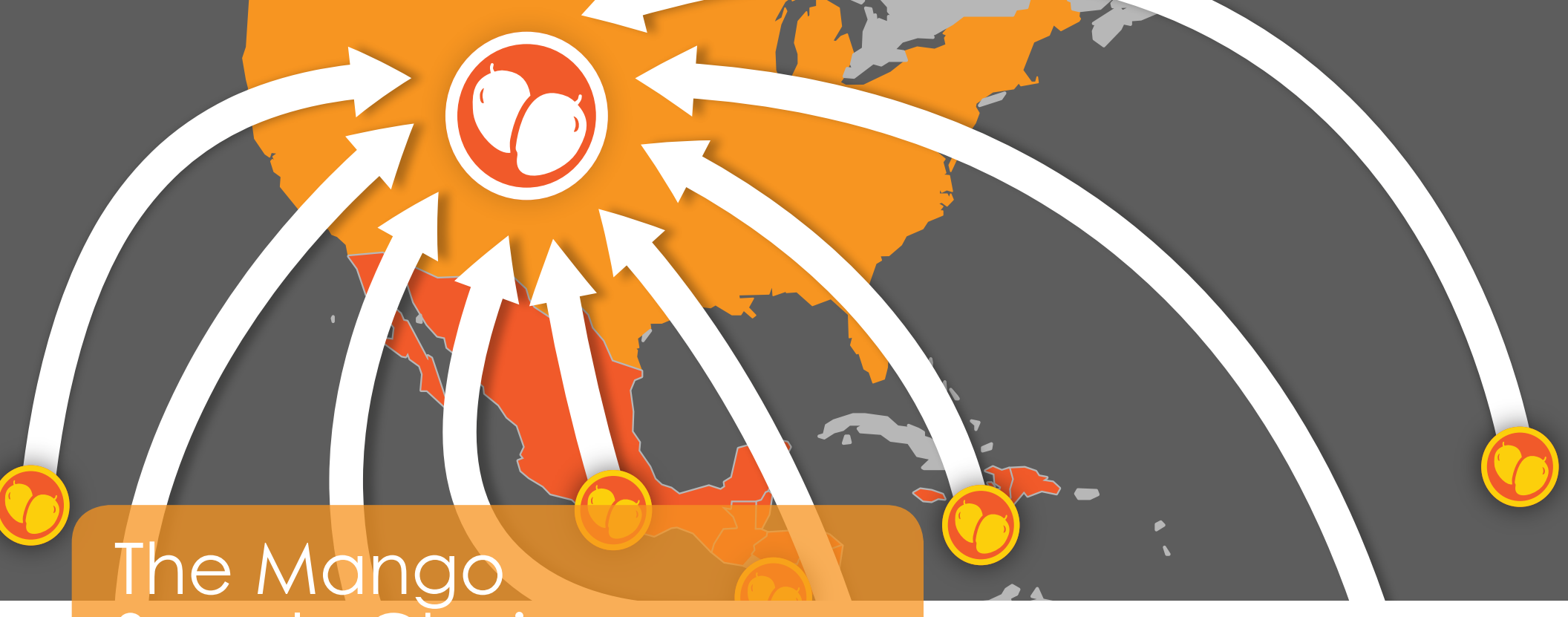
Foodborne Illnesses



The Mango Supply Chain

Foodborne illnesses may have serious consequences for a mango farm/packinghouse/warehouse and its employees.

If contaminated mangos are distributed to several clients, self-service stores, packinghouses, distributors, or restaurants, illness may occur in different places and at different times.

The mangos that we grow and pack are distributed and consumed by people in several countries, including the United States, Canada, Europe and the producing country's local market.

Foodborne illnesses can have serious consequences for a food company, including its employees.

Let's talk about a real situation where people got sick and may have died because they ate contaminated food.

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The Mango Supply Chain

producing safe mangos

The 2011 Cantaloupe Story

Foodborne illnesses are a serious issue that can have serious consequences for a mango farm/packinghouse/warehouse and its employees. Let's talk about a real situation that happened in 2011, where a great number of consumers got sick after eating contaminated fresh produce. During 2011, 33 people died and a pregnant woman had a miscarriage from eating cantaloupes contaminated with Listeria monocytogenes. The Centers for Disease Control and Prevention (CDC) reported a total of 147 people infected with this microbe, which caused foodborne illnesses in 28 states.

After an investigation, the Food and Drug Administration (FDA) announced that the Jensen Farms in Colorado had issued a product recall for Rocky Ford cantaloupes after they were linked to the listeriosis outbreak. These melons were the cause of the foodborne outbreak. This incident illustrates the importance of hygiene and sanitation practices at the farm/packinghouse/warehouse.

The FDA determined that the foodborne outbreak might have been caused, among other things, by the use of equipment in unsanitary or unhygienic conditions. This is an example of how small issues or simple oversights can cause things to go terribly wrong if proper procedures are not followed. Always keep in mind that simple things can mean a lot for food safety.

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The 2011 Cantaloupe Story

What Would Happen if…? A Food-borne Outbreak Caused by Mangos

Let's think for a moment about what would happen if the news reported several people getting ill from eating contaminated mangos.

Do you think that a similar problem, a foodborne outbreak, could happen in the mango industry?

If something like this happened, what would happen with this farm/packinghouse/warehouse and your job?

If a foodborne outbreak caused by contaminated mangos occurred, people would most likely stop buying and eating them.

The market would collapse, the mango farms/ packinghouses/warehouses would be forced to close, and the mango industry employees would probably lose their jobs since consumers would stop buying mangos.

So even if you don't get sick, you and your family would be directly affected if a situation like this ever happens.

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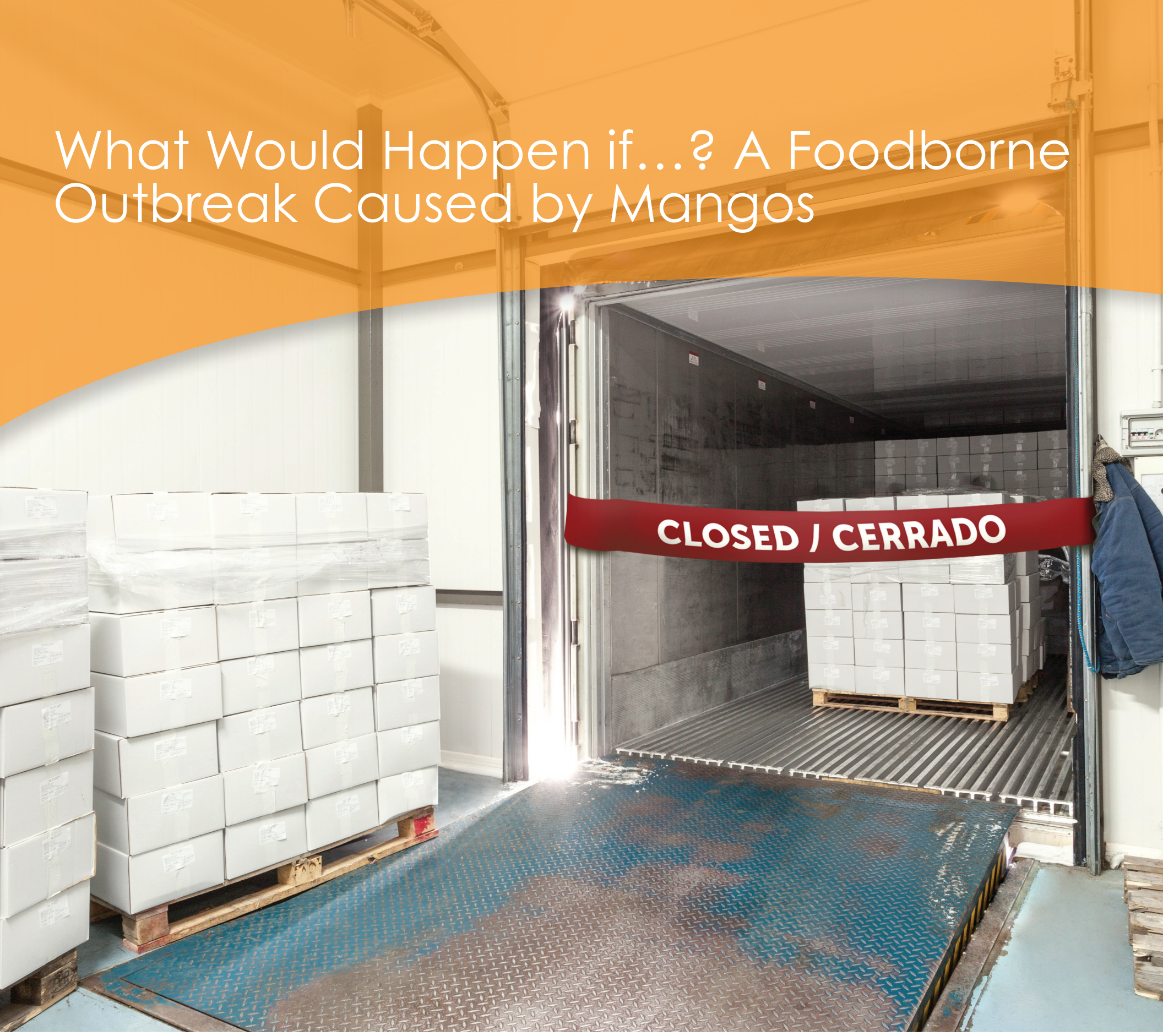
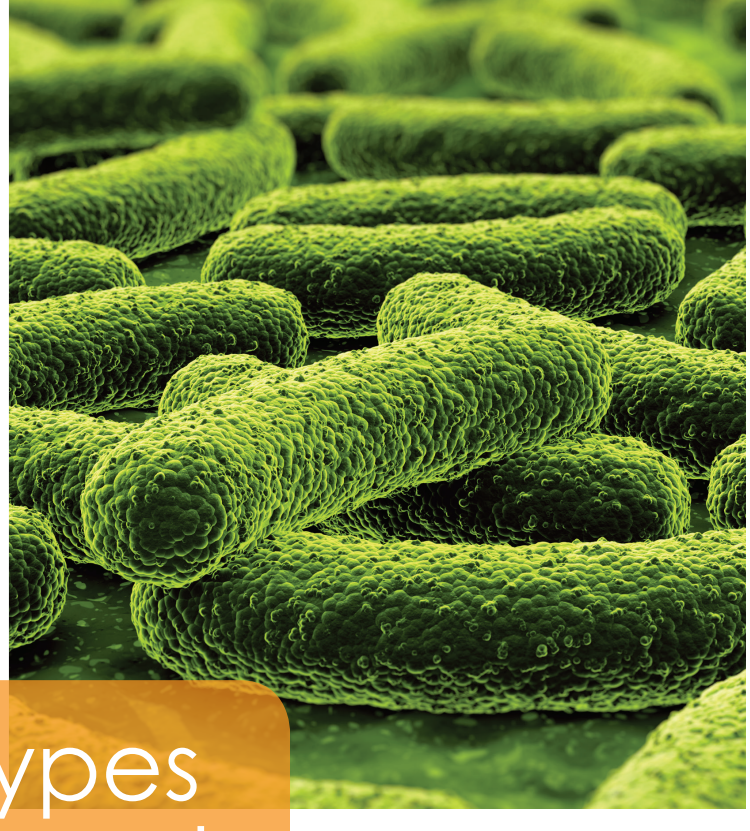
What Would Happen if…? A Foodborne Outbreak Caused by Mangos





The Three Types of Contaminants

We have heard the word contamination many times. Let´s discuss what it is and how we can prevent the mangos we work with from becoming contaminated. Any material or item added intentionally or accidentally during the harvest, packing, storage, or distribution process of mangos can become a contaminant and can cause harm or a foodborne illness in consumers.

Three types of contaminants could reach mangos at the farm/packinghouse/warehouse:

- Physical contaminants
- Chemical contaminants
- Biological contaminants

Food safety programs seek to reduce the risk of mango contamination.

It is the responsibility of each worker to prevent mangos from becoming contaminated during their harvest, packing, storage, and distribution and keep them from becoming the source of a foodborne illness.

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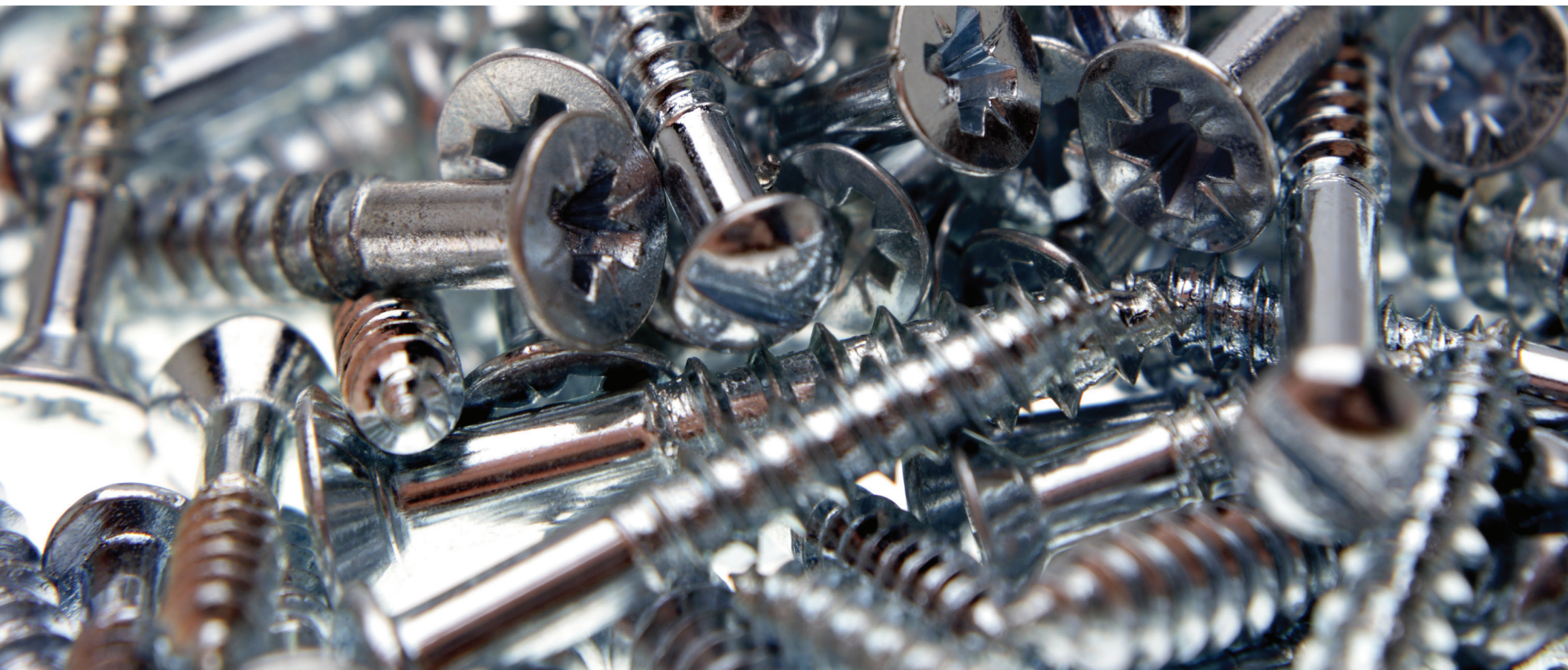
The Three Types of Contaminants








Physical Contaminants

A physical contaminant is a hard or soft material that is incorporated to the mangos during handling, usually by accident or by an oversight of an employee. Physical contaminants can come from different places, such as office supplies used in reports or logs, glass, metal structures, wooden pallets, and plastic crates and bad practices that may occur during harvesting, packaging, or distribution. Some physical contaminants can seriously harm consumers since they may cause an obstruction in the throat, lacerations/cuts in the mouth, or tooth breakage.

Physical contaminants include:

- False nails
- Hair
- Band–Aids
- Candy wrappers
- Clips
- Staples
- Pencils and/or pens
- Pieces of bone
- Jewelry and piercings
- Screws and tools
- Pieces of glass or plastic
- Wood chips or splinters.

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Physical Contaminants

Prevention and Control of Physical Contaminants

Some controls can be used in the work area to prevent physical contaminants from reaching the mangos:

- Do not use glass on the farm/packinghouse/ warehouse.
- Smoke and eat only in designated areas.
- Do not wear jewelry or piercings.
- Use work equipment, such as grates, scissors, baskets, pallets, etc., properly
- Clean up tools, screws, or loose parts of machinery.
- Report deterioration in the tools or work equipment to your supervisor before a contamination incident may occur.

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Prevention and Control of Physical Contaminants

Chemical Contaminants

Chemical contaminants occur when the mangos come into contact with dangerous chemical compounds during their growth, harvest, packing, and/or distribution.

There are several potential sources for chemical contaminats to mangos:

- Pesticides
- Cleaning and sanitation chemical products
- Oil and lubricants
- Water sanitizers.

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Chemical Contaminants

Prevention and Control of Chemical Contaminants

Some controls can be used in the work area to prevent chemical contamination from reaching the mangos. Whenever you use chemical products, remember:

- ALWAYS follow the manufacturer's instructions and ALWAYS use the dose indicated by the manufacturer or the product's label.
- Do not store or apply chemical products in inappropriate containers.
- Report leakage or spillage of equipment and machines.
- Use the appropriate handling procedures.
- Never use soaps or disinfectants in excess and always follow the supplier's instructions.
- Remember that whenever you handle chemical products, you must use protective equipment as instructed by your supervisor.
- Water used for chemical products applications must ALWAYS come from a trusted source and have an acceptable microbiological quality.

Inform your supervisor immediately if you see any chemical that is used incorrectly or if any of these products are not properly labeled or stored.

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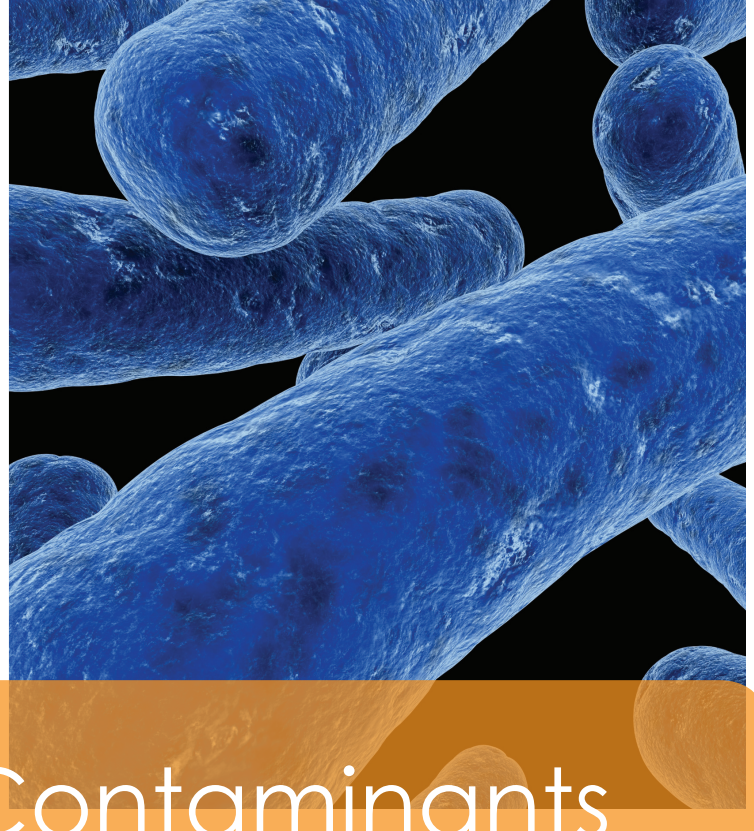
Prevention and Control of Chemical Contaminants



Biological Contaminants

The third and last type of contaminant that can affect mangos are biological contaminants. This category includes microorganisms or microbes.

Microbes are living organisms so small that they cannot be seen with the naked eye; they can only be seen with a microscope. To give you a better idea of how small microbes are: if a microbe was 1 centimeter in length, then a human adult would measure about 17 kilometers (10 miles) in height.

Microbes are everywhere: in the air, water, dirt, ground, our bodies, the environment, and even the food that we eat. Not all microbes cause illness. Only a small group of microbes can cause foodborne illnesses. It is necessary to keep bad microbes from reaching the mangos.

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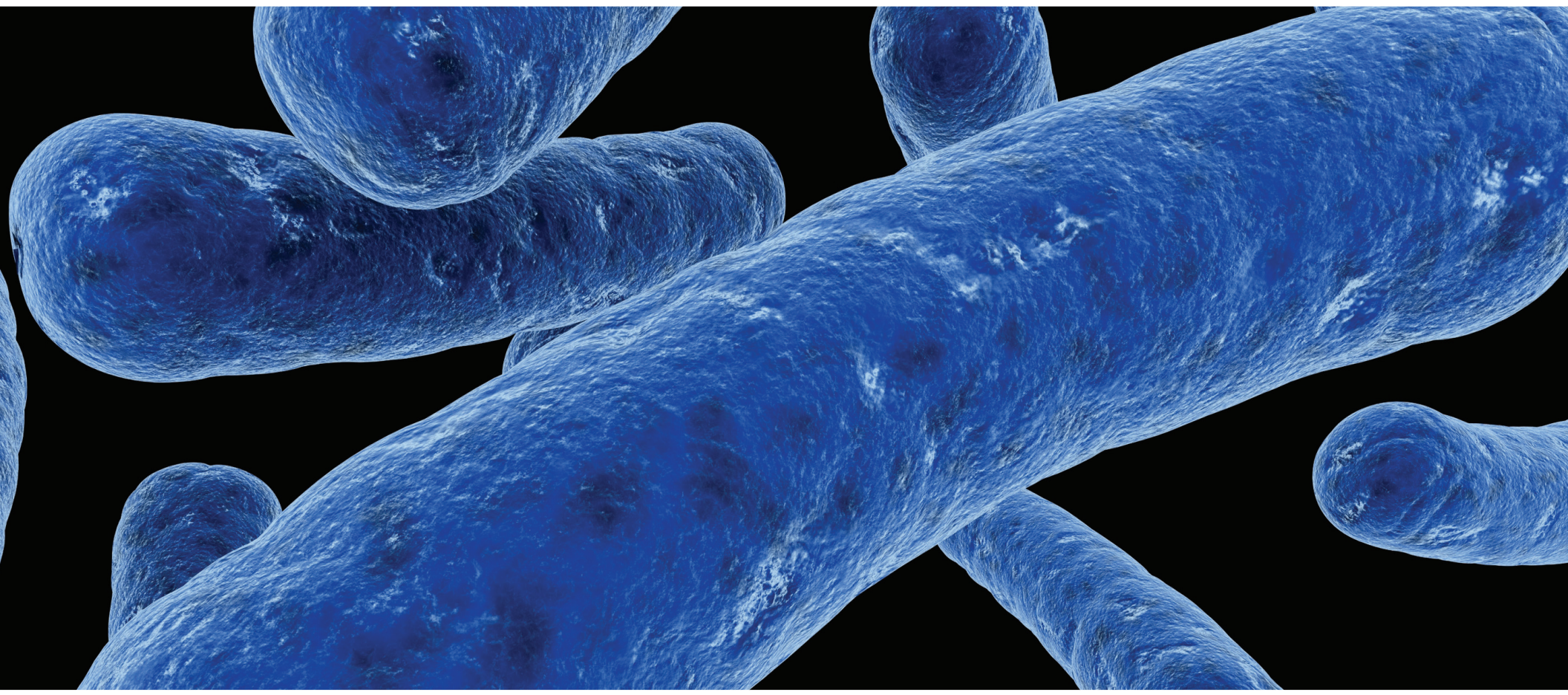
Biological Contaminants



Prevention and Control of Biological Contaminants

Microbes that cause illness are called pathogens, but you don't have to remember that name. What you must remember is that preventing this contaminant from reaching the mangos is very important and can be accomplished by doing the following:

- Follow the company's hygiene rules.
- Wash your hands after eating, using the restroom, taking a break, before handling mangos or entering the work area, and whenever your hands have been contaminated.
- Inform the supervisor if you're sick.
- Properly wash and sanitize your work utensils.
- Maintain baskets and keep crates clean.
- Follow the instructions provided by the company's food safety manager.

Remember that food safety programs are designed to help reduce the risk of physical, chemical, and biological contamination of mangos.

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Prevention and Control of Biological Contaminants

What is your Job?

Your job is to handle the mangos in the safest way to prevent contamination and cause illness or injury to consumers. During this lesson, you learned:

- What foodborne illnesses are and the impact that a foodborne outbreak can have on your work, safety, and family income.
- The three types of mango contamination.
- How to avoid mango contamination by following good hygiene practices.
- Your job is to ALWAYS follow the food safety policies and procedures of your company in order to protect the mangos from contamination. Following the company's rules is a critical part of your job.
- You must not make up your own rules. If you are not sure about something, ask your supervisor.
- If you see anything that seems wrong or abnormal, notify your supervisor immediately.
- You play a key role in protecting the mangos with which you work.

This is the end of our training on the ABCs of food safety. Are there any questions? Thank you for your participation. Please sign the attendance sheet.

Notas: _____

What is your Job?