I was visiting a client just the other day, to do a verification of a HACCP plan that was recently developed for their new wholesale operation. Their processing activities were now in full force, and with an impending visit by USDA, it was more important than ever that they had their preventive controls in place.

What we observed was a little startling, especially for the HACCP team. The onion chopping station was splattered with meat juices and fresh cut onions were being processed on a red cutting board. The worker himself was standing in meat trimmings and onion skins strewn all over the floor in puddles of water. On the other side of the room, poultry breading was in progress right next to the salad station. Raw chicken tenders were stacked on the table dangerously close to fresh cut salad greens, and breading crumbs surrounded the cutting board used to cut the vegetables. Dirty floor mats were stacked against clean equipment in the kitchen, ready to go into the 3 compartment sink for washing. Toxic chemicals were poised next to the exposed foods, and employees unconscientiously stacked unmarked white containers of various foods into the reach-in refrigerator. In short, cross-contamination was rampant.

Even if you have a HACCP plan in place, following through with correct procedures is critical to preventing cross-contamination and other hazards in a foodservice environment. Naturally present bacteria in raw animal proteins such as meats, poultry or fish can contain *Salmonella*, *E. coli*, and *Campylobacter* which can easily contaminate ready-to-eat foods and food contact surfaces if we are not careful.

Our goal is to prevent raw animal products and juices from touching or dripping onto ready to eat foods. Steps should be taken to prevent cross-contamination in the workplace at all steps in the flow of food, and protect cutting boards, slicers, utensils and work surfaces, even wiping cloths. One of the most powerful aids to help you protect your foods against cross-contamination is the concept of **COLOR CODING**. Let’s look at some of the benefits of using color coded equipment in a foodservice operation, starting with the most noted pinnacle of this concept ...Color-coded cutting boards.

Imagine a busy kitchen with multiple workers doing various tasks—slicing bread, cutting chicken, chopping lettuce on cutting boards of no particular color or type. Suddenly a food worker needs to slice bread for a table, runs into the kitchen,
grabs the nearest available knife and cutting board, and slices the bread. Unbeknownst to that person, a chef had just cut a piece of fish on that same white cutting board, imperceptible to the casual eye. But cross-contamination of bacteria from the raw fish has instantaneously occurred onto that bread, with risk of causing illness to an unsuspecting customer. Even the fish protein itself could be a danger if that customer had a fish allergy.

Now imagine this...a color-coded world where every cutting board is a different color, has an association with a particular food group, set by industry standards.

Red, for raw meats. Yellow, raw poultry. Green, fresh fruits and vegetables. Blue, seafood. White or Tan, Ready-to-eat foods (e.g., breads, pastries, cheese) Purple, for Allergen awareness.

These colors are not set in stone, and there is no magic imparted to their color designations to protect against cross-contamination. But as long as staff are trained in using the same color cutting board for the same food type in that operation, it helps to prevent cross-contamination between different foods. When a chef needs to cut an onion or lettuce for a sandwich, he will be looking for that green cutting board that everyone else is using for vegetables. And bread will be sliced on a tan board, not the yellow board that another worker is using to cut raw chicken.

Color coded cutting boards have set a food safety standard in the industry to help prevent cross-contamination, and they have been accepted as the most seamless way to minimize risks in this area. Food establishments overwhelmingly recognize the varied benefits to using color coded cutting boards.

**Color coding:**

- Helps to discourage use of raw foods on same cutting boards used for ready to eat foods
- Helps to train and remind workers on preventing cross-contamination
- Makes it easy to follow proper methods, as colors are distinctive and recognizable for various foods
- Crosses over language barriers in the kitchen

Says one chef, “Color coding is critical in our kitchen. When
my staff is preparing foods for their mise en place, it’s a no-brainer about which cutting board to use. It really eliminates mistakes and with a quick scan of my kitchen, I know that we have cross-contamination under control.”

And cutting boards have progressed in development, with even more innovations and benefits.

**Slip resistant pads**
- Eliminate the need for damp towels underneath, another source of food contamination
- Chefs can cut foods quickly, with confidence and safety

“It’s a pleasure to use this type of a board,” says one chef. “I know that I have a stable platform for cutting and will have more uniform cuts and I don’t have to worry that the board is going to slip away from me. Especially since health departments are now citing violations from having wet towels underneath cutting boards, for cross-contamination reasons.”

Handles and hooks on cutting boards make for convenient hanging and storage, which help them dry more thoroughly and stay cleaner in storage. Also, these holders make them easier to carry, especially larger boards. And ruler markings on cutting boards help food workers to achieve more precise food cuts and portion control.

**COLOR CODED EXPANSION**
As Walt Disney was a pioneer in television with his “Wonderful World of Color” (the first TV color show that many remember from childhood) so have color coded cutting boards paved the way for other innovative equipment, helping to protect foods through their use of colors and define the food types to be used with them.

**PREPARATION**
If we are not careful, foods, equipment and kitchen tools can easily be cross-contaminated. Bacteria transferring from one surface or food to the next poses an increased risk when handling raw foods in proximity to ready-to-eat foods.

**Helpful tools**
- Color-coded cutting boards, knives, tongs, spatulas, plastic scale protectors, wiping cloths help prevent cross-contamination
- Color-coded labels for easy identification of different food types
- Color-coded peg boards for organizing kitchen tools

**ALLERGEN SAFETY**
Allergies are a growing concern in the foodservice industry. One goal is to prevent cross contact with the food of concern onto dishes for an allergic individual, using clean or separate cutting boards, pans and utensils for the allergic individual’s order.

**Helpful tools**
- Purple cutting board, knife handle and utensils help alert food preparer that extra caution is needed for this dish
**STORAGE**
Microorganisms survive refrigeration and freezing, so even foods in storage must be protected from contamination by other foods, especially raw foods. Good industry practices include storing raw foods below ready-to-eat (RTE,) with tight-fitting lids to prevent leakage. Color coding takes out the guesswork here as well.

**Helpful tools**
- Color-coded lids, plastic wraps, food containers for different food types (i.e., raw versus RTE)
- Color-coded shelf clips and tags can help identify proper storage order on wire racks in coolers

**ZONE ISOLATION**
Color coding has also progressed to another level - different zones in an operation associated with specific colors to minimize cross-contamination risks. Restrooms, kitchens, dining rooms, lobby areas, often have their own dedicated color for cleaning tools to contain hazards within a particular zone and prevent cross-contamination between areas.

**TRAINING**
All your hard work and planning is useless if there is no follow through on the part of your employees. Stock your facility with color coded supplies and follow up with training of your staff to use them correctly and minimize contamination risks.

**Key areas for training include:**
- Proper use of color coded cutting boards and tools, and the reasons why
- Emphasize the colors dedicated to specific foods according to industry standards, or customized for your operation
- Importance of cleaning - Staff need to be trained and supervised on cleaning methods, proper chemical usage and frequency of cleaning and sanitizing food contact surfaces, colored or not

Don’t underestimate the power of preventive controls and color coding to minimize cross-contamination hazards of all kinds in your operation. Being prepared with the proper supplies and training your staff to consistently follow your COLOR CODING SYSTEM and Standard Operating Procedures will strengthen your food safety program and help your operation soar high above these risks.