

Grayway



KEEPING FOOD SAFE

.....
HOW FOOD PROCESSORS
ARE WORKING TO PROTECT
AMERICA'S FOOD SUPPLY
.....



THIS ISSUE / FOOD SAFETY



A handwritten signature in black ink, reading 'Tyler Cundiff'.

Tyler Cundiff
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Food quality and safety is a topic all of us care about. As Americans, we entrust the food and beverage industry to provide our grocery stores, restaurants and other foodservice vendors with food that not only tastes great, but is safe to eat.

Whether you run a food plant, work on a processing line, or simply consume food from a store or restaurant, the quality and safety of our nation's food supply simply could not be more important. This issue of the *GrayWay* discusses how food processors plan for and prioritize food safety; the design and construction of food plants; and how food safety laws are changing as the Food Safety Modernization Act takes shape.



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CONTENTS

2 BUILDING FOR FOOD SAFETY

Best Practices for Food Plant
Design and Construction

6 PLAYING BY A NEW SET OF RULES

Food and Beverage Industry
Bracing for Change as
Food Safety Modernization Act
Takes Form

8 GRAY...WE'RE BUILDING

Adena Beef
Fort McCoy, Fla.

Chelten House Products
North Las Vegas, Nev.

9 GRAY MATTER

The Safe Choice

10 FOOD SAFETY TIPS

For the Consumer



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KEEPING FOOD SAFE

HOW FOOD PROCESSORS
ARE WORKING TO PROTECT
AMERICA'S FOOD SUPPLY

BUILDING FOR FOOD SAFETY

BEST PRACTICES FOR FOOD PLANT DESIGN AND CONSTRUCTION

Most U.S. consumers are unaware that food safety begins with the design and construction of the plant that produces the food. And, if you've ever been a part of a food plant project team, you know how critical the facility design and engineering phase is to how the plant will ultimately operate. It is not enough to build a shell and *then* decide where equipment will be set and how production lines will flow. To truly maximize your investment, plant operations must be top-of-mind during the visioning phase, and that is especially true for food plants.



Rod Bowling

Because of the sensitive nature of food processing and the risk of contamination, many food safety experts believe the earlier they become involved in the planning for a new plant or expansion, the better. Like Rod Bowling, a seasoned agribusiness consultant whose experience dates back to the first documented *E. Coli* outbreak. Bowling has been enlisted by dozens of food processors to help plan for and optimize food safety practices in food plant design. He says the first step is to identify any potential hazard within a given plant design.

"I work with plant engineers to design the flow of the product," began Bowling. "We design the interventions; we design the measurements of the system so that we make sure food safety is considered in every step all the way down the line."

Bowling says the food and beverage industry's strict food safety control program called Hazard Analysis and Critical Control Points, or HACCP, is the most vital thing to consider in food plant design.

“HACCP is the discipline of designing the product, designing the process, designing the critical control points, and making sure that your interventions respond in the appropriate manner, and that you verify and show that,” he said. “You’ve got to recognize the limitations and the hazards inherent to the raw material.”

Many in the food plant construction industry share this sentiment. Mark Shambaugh, P.E. is the CEO and president of Shambaugh & Son, L.P., the sixth largest MEP contractor in the U.S. that specializes in food plants. He says one of the biggest considerations when his team designs a food plant is how the plant materials and mechanisms could pose a hazard to the food products. One plant feature he says is becoming the “new normal” in preventing this type of contamination is the installation of walkable ceilings.

A walkable ceiling, Shambaugh explained, is a ceiling made of four or six-inch panels above the process floor. All of the plant’s utilities and other fixtures are contained above the ceiling so maintenance can be done without the risk of contaminating the plant’s food products or equipment.

Shambaugh says another critical component of planning for food safety is red-zoning.

“We design the interventions; we design the measurements of the system so that we make sure food safety is considered in every step all the way down the line.”

- Rod Bowling,
Agribusiness Consultant



This “walkable ceiling” allows utilities and other fixtures to be more easily accessible above the plant floor, substantially reducing the risk of contamination from equipment breakdown and maintenance.

“Basically, red-zoning is the segregation of the workforce and plant visitors to the plant’s hygienic areas,” he said. “Certain people are only allowed to go certain places, and they can only badge in through a red zone or a green zone or a blue zone—depending on their purpose—and you can’t cross over or even down to the work rooms, lunch and locker rooms.”

Like Bowling, Shambaugh says that perhaps the greatest priority should be involving the right people at the right times in plant design, and that includes government regulators.

“Get the inspectors involved during the early design process, and get their buy-in,” he advised. “Because if you do it later, it’s going to cost more money if you end up with a problem to fix.”



Shambaugh & Son collaborated with Gray to build a salad dressing plant for T. Marzetti, a leading specialty foods company in Horse

Cave, Ky. This plant was named *Food Engineering’s* “Plant of the Year” in 2007. Tom McGirty, director of quality assurance for T. Marzetti, was involved in designing the plant and says planning for food safety goes hand-in-hand with planning for operational efficiencies.

“The really good thing is when you start to design for efficiencies in terms of one-piece material flow—or never having to backtrack your material—you tend to then also design for food safety,” McGirty said.

McGirty gave the example of a redesign of the company’s mixing tanks for the new Horse Cave facility. Traditionally, these tanks sit high up off the floor and workers are required to stand on a platform to access the tanks. This creates both a food safety and inefficiency concern because the platform must be thoroughly cleaned on a regular basis to ensure a foreign source doesn’t enter the tank, and the food materials had to be lifted by a forklift to be accessible to workers on the platform. In the Horse Cave plant, these tanks were instead set down into pits, making them waist-level. This eliminated the need for the platform and its need for sanitation, and made the mixing process more efficient by eliminating the use of forklifts.

“If you’re thinking about both food safety and efficiency at the same time, you are probably going to have a successful plant design,” he said.



Things to Consider

When Designing a Food Processing Plant



Mark Shambaugh

- Divide the space into hygienic zones and control all external points of entry.
- Control product, people and trash flow to align with the “red” zoning.
- Consider dedicated water and air supply with no dead spaces and proper balance to the zones or specific areas.
- Make everything cleanable, well-lit and accessible, avoiding seams and horizontal surfaces and encouraging surfaces with chemical/bacterial growth resistance.
- Supply numerous hand and boot cleaning areas throughout the facility.
- Design for stringent humidity, air pressurization and condensation control.
- Avoid excessive landscaping, particularly close to the building.
- Get inspectors involved in early design and with early “buy-in.”

Source: Shambaugh & Son

This T. Marzetti plant in Horse Cave, Ky., was named *Food Engineering's* “Plant of the Year” in 2007, partly due to its innovative food safety design features.



PLAYING BY A NEW SET OF RULES

Food and Beverage Industry Bracing for Change
as the Food Safety Modernization Act Takes Form



President Barack Obama signs the FDA Food Safety Modernization Act in the Oval Office.
(Official White House Photo by Pete Souza)

Doing business in a stringent regulatory environment is nothing new to today's food processors, especially in the meat and poultry industry. The U.S. Department of Agriculture (USDA) has been enforcing its ever-so-strict food quality and safety dogma for decades and such oversight is entrenched in the everyday practices of meat and poultry businesses. Likewise, all other food and beverage businesses have long been regulated by the Food and Drug Administration's (FDA) rigid quality and safety programs.

But now, the FDA is reforming what many believe are antiquated food safety laws with the development of the Food Safety Modernization Act (FSMA), signed into law by President Obama in January of 2011. The goal of this reform is to shift the focus from attempting to control contaminants in the U.S. food supply to preventing contamination altogether. While it may be too soon to tell how the FSMA will impact the food and beverage industry, some experts believe this reform will mean sweeping changes to traditional food handling and processing practices.



Hilary Thesmar

“Any food plant or manufacturer that is regulated by the FDA is going to be required to have a preventative control plan,” explained Hilary Thesmar, vice president of food safety programs for the Food Marketing Institute. “So, they have to implement basically a food safety plan that’s going to

prevent food safety problems from occurring and to identify what hazards could occur and try to control those hazards.”



Allen Merritt

Food safety experts have varying opinions on how this might affect business-as-usual for the nation’s food processors. Allen Merritt, managing director for his food and beverage consulting firm Allen & Associates Consulting, thinks that the biggest impact will be in the area of inspection.

“I think what is going to happen is the inspection intensity is going to change,” Merritt explained. “And in meat and poultry, if the local inspector doesn’t think your plant’s clean, you don’t start up today. That kind of activity has never been experienced by the rest of the industry, unless there is a severe problem.”



David Baker

Others doubt the government’s ability to fund such a program. David Baker is a food safety consultant who has worked with some of the top food processors in the nation and knows a little something about putting together effective food safety programs.

Baker says while the USDA has the funding to provide round-

the-clock inspectors on-site in the nation’s meat and poultry plants, it would be a huge jump for the FDA to follow suit.

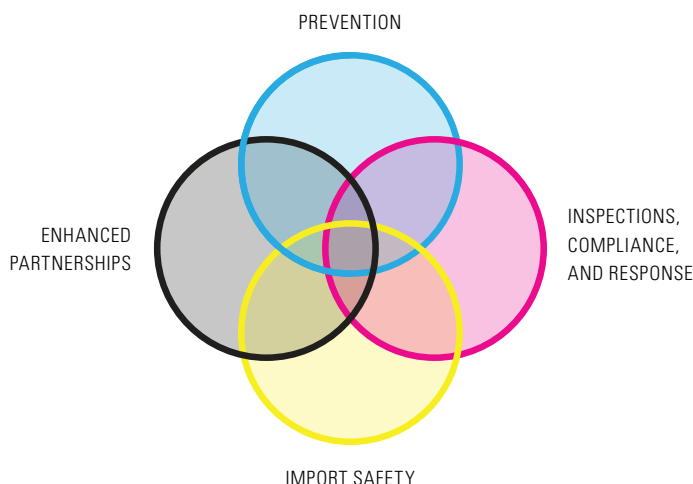
“The balancing point is where the economy goes and whether the government will have enough money to implement the programs that they’ve foreseen,” said Baker. “These types of programs are very expensive. And, whether they’ll actually come up with a program that is aggressive enough to charge companies with the actual costs of inspection is also an unknown.”

THEMES OF THE FOOD SAFETY MODERNIZATION ACT

For an expanded version of this article, visit www.gray.com/news/blog/food-manufacturing-plants-brace-for-change-as-safety-modernization-act-takes-form

Source: FDA

New regulations are being created by a broad coalition under the Food Safety Modernization Act including a broad prevention and accountability mandate; a new system of import oversight; and an emphasis on partnerships and farm-to-table responsibility.



GRAY... WE'RE BUILDING

CHELTEN HOUSE PRODUCTS North Las Vegas, Nev.

Chelten House Products, a privately held manufacturer of organic pasta sauces and salad dressings, has selected Gray Construction to design and build its new manufacturing plant in North Las Vegas, Nev. Construction is expected to begin in the summer of 2012 with completion in early 2013.



The 86,000-square-foot food production facility will include administrative offices; employee amenities; raw receiving, processing, packaging, warehousing, and shipping areas; and utility systems.

Chelten House Products, Inc., now in its fourth generation of industry leadership, has been developing premium products for food purveyors and marketing companies for more than 40 years.



ADENA BEEF Fort McCoy, Fla.

Gray Construction has been selected to build the first beef harvesting and processing facility for Adena Beef in Fort McCoy, Fla. The facility will include extensive refrigeration systems, harvesting equipment, packaging, and ground beef production. Automated beef processing equipment is being provided by BANSS of Germany. The Adena Beef harvesting operation will produce all-natural, grass-fed lean beef and will be designed to make as little environmental impact to the surrounding community as possible.

Adena Beef is a new business venture by Canadian businessman Frank Stronach, founder of an international automotive parts company based in Aurora, Ontario. The Fort McCoy site is expected to include 6,000 to 7,000 head of cattle and employ some 100 people.



THE SAFE CHOICE

Food safety is a matter of global importance. The world's food processors are continually under the microscope of not only their respective governments, but also the governments of the countries that import foreign food products. In America, new, more stringent government regulation is being formulated by the FDA with the development of the Food Safety Modernization Act. These new laws will not only affect the business of food and beverage processing, but also those of us involved in the design and construction of these types of plants.

At Gray, we understand the challenge of keeping up with new and changing government regulations. Having built plants for leading food and beverage processors like Clifty Farms, JBS, Pepsi, McCormick, Nestlé, T. Marzetti, and Tyson—among many others—we are in tune to the unique needs of this type of customer. We know that food safety is priority number one for these customers and understand that planning for food safety begins well before any dirt is moved. With the right vision, these businesses can—and do—provide Americans with a wide variety of food choices that pose few health risks. Hats off to them for taking on this tremendous responsibility.



Stephen Gray
President and Chief Executive Officer





The CDC recommends washing produce before eating.

FOOD SAFETY TIPS

FOR THE CONSUMER

Food safety begins in our nation's food plants, but ends at home with the consumer. Experts agree that without proper food handling and preparation, it is virtually impossible to prevent foodborne illnesses. These health and safety tips from the Center for Disease Control and Prevention are just a few ways you can help reduce the risk to yourself and your family.

- Wash your hands with soap and water before preparing food.
- Wash produce and cutting boards often.
- Use a food thermometer to cook meat and poultry to proper temperatures.
- Wash hands, utensils, and cutting boards after they have been in contact with raw meat or poultry and before they touch another food.
- Refrigerate food within two hours of serving.



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