



The Society for Food Science and Technology FOODSERVICE DIVISION NEWSLETTER

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Foodservice Division Mission: "The mission of the Foodservice Division is to disseminate and promote research and other information on food technology as it relates to foodservice with the objective that operating conditions in the industry are improved."

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Below is a revised version of the article in the Fall 2006 newsletter by Dr. Gideon Zeidler, "A Fresh Look at Food Safety," to include references.

A FRESH LOOK AT FOOD SAFETY Gideon Zeidler

Many safety issues as well as food safety issues are not popular with the public nor with manufacturers and face stiff resistance and delays before being implemented. We all remember the 30-years battle for car seat belts and the endless discussions on freedom of choice regarding bike and motorbike helmets, despite the grim statistics. Consumers who prefer better flavor or price regardless of safety successfully influence good safety regulations. For example, tasty raw milk is still sold legally in many markets, as pasteurization of milk and dairy products to eliminate bovine Tuberculosis is not mandatory in the U.S. Cracked eggs, which can transfer high levels of several kinds *Salmonella*, can legally be sold on farms, and Pekin ducks are not processed or inspected according to USDA and FSIS but are legally sold everywhere.

The food industry, on the other hand, looks at food safety as a COST CENTER whereby money is spent without generating the extra revenues to cover these expenses. This follows the basic law of economics, which states that every constraint on a system costs money. Thus, every regulation or enforced practice that is added to the operations of the business increases costs. Therefore, industry representatives use government hearings, lobbying, and educating legislators in order to lower the impact of a proposed law or regulation. Later on, many operators will carefully practice the minimum required by law, especially as stiff penalties and large-sum lawsuits may be involved.

Transforming a HACCP system into a PROFIT CENTER could change the negative attitude and create enthusiasm toward food safety. This can be achieved by using a new

system called PREVENTIVE MAINTENANCE HACCP, which elevates HACCP performance and expands its capabilities beyond the narrow limits of food safety. The improved operation can result in significant labor cost savings and substantial reduction of food waste, food spoilage and food deterioration. Equipment breakdown, facility downtime, and costly repairs can be drastically reduced. Other cost savings include improving operation efficiency and optimizing energy utilization, integrating the cold chain and the food chain, integrating multi-unit operations, and enhancing two-way communication between the various units.

The technology to achieve these goals is already available and is used by numerous small-to-large foodservice operations at various levels of sophistication. The returns, of course, are greater for large entities; however, small restaurants can also economically benefit. The following two successful cases demonstrate the potential in transforming a HACCP system into a profit center.

Case #1: Integrating Food Safety Program in County's Schools

Entity: Duncanville School District; Duncanville, Texas

The System: 25 school district schools and 11 other schools; approximately 13,000 students and staff per day

The Facility: meat-breaking operation, central commissary, 36 school lunch kitchens and distribution system.

Features: automated HACCP monitoring and warning system, central supervision in real time.

Currently Upgrading: remote cooking monitoring and control, online preventive maintenance.

Major Achievements: 50% labor reduction and 20% food saving while doubling production.

This case demonstrates the effect of integrating multi-school lunch units of one county, meat plant, central commissary, and

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headquarters into one operating system using a wireless, remote monitoring HACCP system.

The system provided more efficient communication among the units as well as closer supervision and support. The improved production efficiency and control initiated major savings even while production was doubled. The system operated for about five years, and the county is spending some of the savings to expand the system's capabilities.

Case #2: Expanding HACCP Capabilities to Adjust Production to Fluctuating Patrons Number

Company: Jackpot Junction Casino Hotel; Morton, Minnesota
Number of Guests: average 3,000 per day; peak 14,000+ per day during weekends and holidays

Restaurants: 4 restaurants (buffet, cafeteria, fast food, full-deck grill) and employees' restaurant

Kitchen: brand new

Features: automated HACCP, preventive maintenance HACCP, remote recipe and cooking specifications delivery to all ovens and grills, remote cooking control, remote monitoring and control of ingredient flow, multi-equipment processing, finished products (hundreds) inventory control and point of sale

Major Achievements: 18% labor savings and 10% food savings while doubling output. Better and faster response to variable guest numbers within the day.

The second case demonstrates the expansion of the preventive maintenance HACCP system into providing production flexibility to accommodate a wide fluctuation of patrons in a large casino. One goal is to be able to adjust the amount of food produced to the number of visitors within the day without disappointing patrons for lack of their favorite dishes and at the same time, not to overproduce and waste unused food. In order to achieve this, incoming ingredients are monitored. The chef utilizes his computer station to send recipes and their specifications to every oven, grill, and pizza oven, and to any cooking station. He has in real time the inventory of dishes available minus the dishes sold at point of sale and therefore, can adjust closely to the changes in the number of patrons. This process helps to achieve substantial labor savings and to better utilize his food ingredients and already-prepared dishes. In this case, the HACCP system has indeed become a profit center. The new system has been in operation for about one year, and new applications are in the developing stage. It is worthwhile to mention that all of the many potential applications are add-ons to the elevated HACCP system and therefore, do not need major capital investment.

When one reads the interviews with the two directors of the above facilities, one can feel their enthusiasm and pride in the new food safety system and its applications. This is the change of attitude toward food safety that we all hope to achieve.

References:

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