

FOOD SAFETY: A QUESTION OF SCIENCE

The application of scientific methods, and especially the hazard analysis and critical control point system, is the ultimate weapon in the battle to ensure optimal food safety.

Food recalls, food-borne outbreaks of illness and other food safety issues have kept food safety in the news and often resulted in negative publicity for food processing companies. The safety of our food supply is an area that deserves, and urgently requires, close attention.

As with many areas of food processing, food safety is dynamic. The food industry has seen changes in regulatory requirements, technological development and increased expectations from consumers in terms of food safety.

One food safety programme that has been implemented in process control throughout the food industry is the hazard analysis and critical control point (HACCP) system.

In the USA, there are several government agencies responsible for the safety of the food supply, and there are many regulatory requirements. The US FDA-mandated HACCP for both seafood and fruit juice, and the US Department of Agriculture's Food Safety and Inspection Service (FSIS) mandated HACCP for meat and poultry companies. The regulations are as follows:

- › *21 CFR 123 and 1240*: Procedures for the Safe and Sanitary Processing and Importing of Fish and Fishery Products; Final Rule, 18 December 1995

- › *21 CFR Part 120*: HACCP; Procedures for the Safe and Sanitary Processing and Importing of Juice; Final Rule, 19 January 1995
- › *9 CFR 417*: Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems; Final Rule, 25 July 1996

Although the HACCP regulations were developed by two different regulatory agencies, all the regulations are based on the principles of HACCP. These mandatory requirements have had a major impact on food processing companies.

FOOD SAFETY IS A KEY ISSUE FOR EVERYONE INVOLVED IN THE FOOD CHAIN

While HACCP is mandated for the areas outlined above, it should be noted that many food companies were using HACCP or HACCP-based programmes before the US Government mandates. Furthermore, many companies that are not even required to have HACCP are using it today.

SCIENCE-BASED APPROACH

HACCP is a systematic approach to food

safety that has been utilised on an international basis to identify food safety hazards (biological, chemical and physical) and establish controls throughout the food production process.

Food companies have utilised the principles of HACCP to develop a science-based food safety system. Using a food safety system approach allows companies to employ a range of programmes, such as good manufacturing practices (GMPs) sanitation, pest control, allergen control programmes and other in-plant food safety programmes, to protect public health. So, while HACCP is a buzzword

and receives a lot of attention, it is the entire food safety system that allows food companies to implement and document procedures and activities that are being taken on a daily basis to produce the safest food possible.

POSITIVE RESULTS

The results of these food safety systems have been positive. For example, FSIS released the 2004 *E coli* O157:H7 testing

data on 28 February 2005. The data shows a 43.3 per cent drop in *E coli* O157:H7-positive ground beef samples in 2004 compared with 2003. From 2000, the percentage of positive samples in FSIS regulatory sampling has declined by more than 80 per cent.

This data help demonstrate that the food processors are taking food safety seriously and that the programmes are working as designed. Using a science-based food safety approach has allowed programmes to develop that cut across all segments of the food industry.

WORKING TOGETHER

It seems that the expectations on food processing companies tend to be greatest because they often serve as a 'funnel' that most food products go through between the 'harvesting' phase and the production

of foods for the retailer, the restaurant and the consumer.

Fortunately, those growing fresh produce and fruit or rearing livestock and poultry are now more aware of food safety issues and the impact that they have on food safety.

Retailers and restaurants are implementing additional programmes and are focused on ensuring that food is stored, handled and prepared in a way that maintains the integrity and safety of the product.

Today's consumers are also more aware of food safety issues, and educational programmes have been developed to target consumers, including children.

The bottom line is that food safety is a key issue for everyone involved in the food chain, and all components must continue to work together to achieve an optimal system. ■

Author profile

Kerri B Harris is president and CEO of the International HACCP Alliance.

Organisation profile

The International HACCP Alliance was formed in March 1994. The HACCP Alliance is a non-profit organisation that works to bring all interested parties together for the common goal of enhancing food safety. The members of the HACCP Alliance are dedicated to food safety by facilitating uniform development and implementation of HACCP and food safety programmes. The HACCP Alliance's activities include: HACCP course accreditation, scientific article database, train-the-trainer HACCP programmes and information sessions.

What's the
best way to find a
circulation figure?
Guess.

Only ABC can give you
accurate circulation figures
for nearly 3000 titles.

No ABC. No guarantee.



Audit Bureau of Circulations Ltd.,
Black Prince Yard, 207-209 High Street,
Berkhamsted, Herts HP4 1AD
Tel: 01442 870800 Fax: 01442 877407