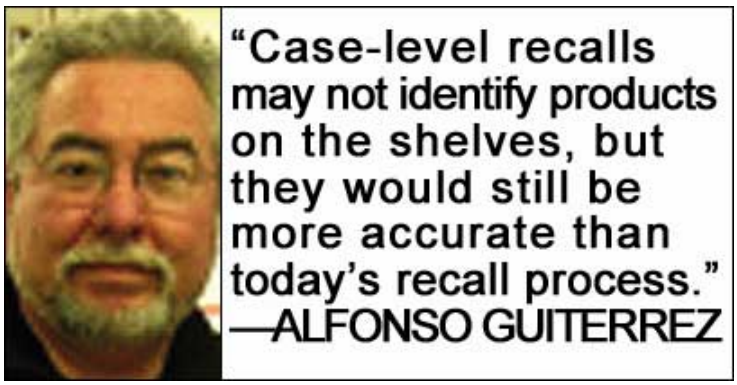
VERTICAL FOCUS

Keeping Fresh Foods Fresh

Protecting the Food Supply
A study released in October by the U.S. Government Accountability Office (GAO), the watchdog arm of Congress, found food recalls are increasing and handled very ineffectively. In 2004, 36 million pounds of meat and poultry were recalled in the United States—more than six times the amount recalled in 1988. Recent recalls have included E. coli contamination of packaged salads, cantaloupe and unpasturized juice. In addition, a growing number of companies have had to pull products off store shelves because they were not labeled properly and contained ingredients that are highly allergenic, such as peanuts. Such recall announcements can be devastating for a company, generating negative publicity, liability lawsuits and damage to the company's brands.

The GAO looked at 20 food recalls in 2004 and concluded that only 36 percent of agricultural foods and 38 percent of foods regulated by the U.S. Food and Drug Administration (FDA) were recovered. Another study in 2002 at Ohio State University found that only half of the meat and poultry subject to recall in the United States from 1998 to 2002 was ever recovered.



"Today, the technology used in recalling products has a wide margin of error," says Alfonso Gutierrez, director of the RFID Lab at the University of Wisconsin-Madison. The use of RFID would help companies involved in product recalls locate the tainted goods. Each case and pallet would have a unique EPC number that could be correlated with pertinent data, such as where the food was grown, raised or processed, which retailers it was shipped to, and where it is currently situated in a distribution center, warehouse or store. Case-level recalls may not identify products on the shelves—item-level tracking for recalls is still several years away—but Gutierrez says they would still be more accurate than today's recall process.

"If we can know exactly what distribution center or store the products went through, we can track by batch or lot number instead of recalling everything that went out," says Bill Hardgrave, director of the RFID Center at the University of Arkansas. He adds that if tainted batches of food can be tracked more accurately, recalls might cost companies only a few thousand dollars.

RFID tracking of cattle and poultry has the potential to help assure consumers that the products being sold are not from diseased animals. The rise of mad cow disease and avian flu convinced governments around the world to enact regulations and bans to ensure the safety of meat and poultry products. In 2003, after a cow in Washington State was found to have mad cow disease, Japan and a few dozen other countries banned imports of all U.S.-raised beef. The U.S. Department of Agriculture prohibits the importation of beef from Britain, after the outbreak of mad cow disease there in the 1990s. In countries with large cattle populations, such as Australia and New Zealand, ranchers have turned to RFID tagging herds to ensure against the spread of the disease there. The United States now has an animal-tracking program that is technology neutral, but some livestock auction companies, such as Northern Livestock Video Auction, are recommending the industry adopt RFID.

RFID could also help food and beverage manufacturers, processors, distributors and importers maintain better records in compliance with new U.S. government requirements developed after Sept. 11, 2001. Concerns that the nation's food supply might be targeted for bioterrorism led the FDA to issue a new ruling, slated to go into effect this year, requiring the maintenance of records to protect the supply of human food and animal feed. The rule, which would impact both fresh and packaged foods, will require that records indicate the source of food received and where it was sold.

Unisys worked on an RFID pilot program, partly funded by the U.S. Department of Homeland Security, which used the technology to better secure coffee beans imported from Brazil. The project involved attaching active (battery-powered) RFID tags to seal large burlap bags of coffee beans imported by Sara Lee. "The objective was product integrity and to ensure a secure environment to police the smuggling of drugs or weapons or other things," says Peter Regen, vice president of global visible commerce at Unisys. In the importation process, every time the bags of coffee passed an RFID interrogator, it would read the seals to ensure that the product had not been tampered with.

< < Previous Page | 1 | 2 | 3 | 4 | 5 | 6 Next Page > >

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