Automating Expiration Date Management for Fresh Foods

Consumer safety, reduced food spoilage and improved point-of-sale efficiencies seen in GS1 DataBar pilot in Korea

Expiration dates are an important aspect of ensuring that the food on the shelves is safe. However, most are printed in “human-readable” formats only, which means that verifying them cannot be automated and that there is no way to automatically incentivize shoppers to buy “less-fresh-but-still-fine” food.

To address these issues, GS1 Korea launched a GS1 DataBar pilot with LOTTE Mart, a major hypermarket chain; Pulmuone, Korea’s market leader in tofu, soybean sprouts and refrigerated noodles; and Konkuk Dairy & Ham, a major supplier of private-label milk products for LOTTE Mart.

One goal was to stop the sale of expired products. GS1 Korea designed a system that uses GS1 DataBar to automatically inform cashiers that an item is past its sell-by date by sending a pop-up message onto their checkout screen.

Another goal was to enable automatic markdowns for items that are close to their date. Consumers usually choose products that still have a long shelf life ahead of them. Retailers and suppliers would rather consumers picked items that were soon to expire. Here, too, GS1 DataBar standards were used to automatically create a discount depending on the number of days remaining until the expiration date: Products were given a 20% markdown when they had four days left before expiring and a 40% discount when there were three days left.

The pilot clearly revealed the quantifiable benefits: For soybean sprouts, increases in total sales and net profit were 60% and 22%, respectively; for milk products, these were 32% and 48%. For the retailer, the automatic markdown process resulted in improved efficiency that allowed employees to focus on other tasks.

“A Gallup Korea/GS1 Korea survey showed that using GS1 DataBar on fresh foods reassured consumers about the freshness of the food they bought and increased their satisfaction.”