

USDA's Economic Research Service estimates that a total of 31 percent, or 133 billion pounds, of the 430 billion pounds of the available food supply at the retail and consumer levels went uneaten, with an estimated retail value of \$162 BILLION.

This translates into 141 trillion calories (kcal) of food available in the U.S. food supply but not consumed. Expressed on a per capita basis, food loss at the retail and consumer levels totaled roughly 1.2 pounds/person/day, with a retail value of over \$1.40.

EPA estimated that in 2015 in the US, more food reached landfills and combustion facilities than any other single material in our everyday trash, at 22 percent of the amount landfilled and at 22 percent of the amount combusted with energy recovery. Reducing food waste will help the US address climate change, as 20 percent of total U.S. methane emissions come from landfills. By keeping wholesome and nutritious food in our communities and out of our landfills, we can help address the 42 million Americans that live in food insecure households.

FDA does not mandate an expiration date, retailers rely on 'Sell by date' as a mechanism to convey food freshness; 'Use by date' is for consumers to indicate food freshness but they throw away the food thinking that the 'Use by date' is an 'Expiration date'. According to the USDA, 'Sell by date' and 'Use by date' is intended to convey the quality of food (food freshness) and not food safety (safe to eat). Food is perfectly edible to eat after the 'sell-by date' and 'Use by date' unless it looks bad or smells bad or tastes bad.

At SpoilerAlert, we are developing a smart food packaging technology that changes color when the food gets spoiled. Our technology provides a visual indicator of food spoilage or expiration, thus reducing the confusion relating to 'food labels'. Consumers using SpoilerAlert food packaging technology can consume the food until the food packaging changes color thus increasing the shelf life of food, reducing carbon footprint and addressing food inequality.