



WHITE PAPER

# Reducing the risk of food safety incidents

Materials handling best practices to help reduce risk and improve performance in food processing and distribution

Roughly 15.5 million pounds of food were recalled by the [USDA](#) in 2021 alone. In addition to contributing to food waste, recalls can have a significant impact on the bottom line. The average direct cost (including scrap, administration fees and lost sales) of a food product recall in the US is [close to \\$10 million](#) but can end up being much higher — costing as much as \$100 million.

Beyond contamination, food operations must also contend with a host of unique risks and challenges, which may include harsh, corrosive work environments that are subject to strict regulation and are often tough on employees and equipment.

#### BREAKDOWN OF RECALLS:

- 25.5% various bacteria
- 23.4% undeclared allergen
- 21.4% extraneous material or unapproved substance
- 19.1% import violation
- 10.6% produced without inspection

To tackle the toughest environments, regulatory demands and productivity targets, material handling equipment plays a crucial role in day-to-day processes. It is essential that food operations make use of smarter lift truck solutions to help combat some of their top challenges.



Aside from the direct costs to individual companies, the USDA estimates that [foodborne illnesses cost the United States more than \\$15.6 billion each year.](#)



#### WHAT ARE THE TOP 5 FOOD SAFETY RISKS?



Contamination



Equipment sanitization



Harsh, corrosive environments



Operator incidents



Visibility and traceability of food

Continue reading to learn about game-changing solutions that can help you mitigate risk in your operation, like:

- Food-grade lubricants
- Lithium-ion batteries
- Impermeable materials
- Wash-down packages
- Operator assist systems
- Automation/robotics
- Telemetry solutions



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## Contamination

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There are numerous touch points that compromise food integrity as raw materials come into the facility, pass through the production line and reach the end consumer. Protecting against the risk of recalls requires evaluating and mitigating incidental contact between food and potentially dangerous contaminants, like equipment lubricants or acid, fumes or spills from equipment power sources like lead-acid batteries and more.

Greasing equipment with food-grade lubricants that are formulated specifically for safe use around food products, and powering lift trucks with lithium-ion batteries which don't produce any emissions and don't require a battery equalizing processes, are just a few ways to reduce product loss from contamination.

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## Equipment sanitization

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Strict food safety guidelines and environments like protein processing may require rigorous sanitization measures. To avoid harboring bacteria or foreign agents that could cause contamination, look for material handling equipment made with impermeable materials, such as composite and aluminum, on all touch points. These materials allow for thorough surface sanitization and help reduce vapor transmission.

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## Harsh, corrosive environments

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Frequent equipment wash-downs are often necessary in food operations to rid equipment of corrosive fluids, but the moisture can take a toll on standard lift truck equipment, requiring more time in the shop for repairs and part replacements – impacting productivity and your bottom line.

Increase your total cost of ownership with specialized lift truck packages with galvanized steel and heavy-duty frames, which can protect components to help equipment withstand the abuse of these applications and reduce risk of rust contamination.



## Operator incidents

Where there are humans, there is the risk of human error – including incidents causing spills, contamination, injuries and damage to equipment or facilities.

Technologies such as operator assist systems that monitor the environment in real-time, alert the operator and automatically adjust truck performance can help support awareness and provide additional reaction time. Some of these technology suites can also limit truck performance to exclude equipment from certain locations and restricted areas.

Automation goes even further. Robotic lift trucks are predictable – they always follow safety procedures and can be programmed for site-specific rules of the road. This capability helps reduce product touches and human error, provide greater obstacle and pedestrian detection and achieve consistent adherence to best practices – reducing the risk of accidents, collisions or other safety incidents.



## Visibility and traceability of food

Under the Food Safety Modernization Act, operations are required to take steps to enhance the visibility and traceability of food products. Having access to lift truck monitoring and impact detection, operator access control and pre-shift checklists can help isolate potential problems.

Telemetry systems provide real-time monitoring of lift truck and operator location, automation of OSHA checklist compliance and monitoring of utilization and impacts to help operations optimize visibility – promoting regulatory compliance, increasing food and operator safety and driving greater fleet efficiency.





## Conclusion

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Every application is unique, to combat food contamination the solution may involve a combination of strategies and solutions. Food experts at Yale are available to help you evaluate and pinpoint the right solutions that make sense for your operation.



Explore more food material handling solutions by Yale, click the links below to visit these pages:

- [Food Processing](#)
- [Food Distribution & Cold Storage](#)

For a deeper conversation around best practices,  
contact your local [Yale® dealer](#).