

weever

# The Master Sanitation Gap

The Choice Every Sanitation Manager and FSQA Manager Faces in 2026



Key Contributor

**Sean Berdan** is a seasoned food safety and sanitation professional with over 35 years of experience across meat, dairy, canning, frozen, and ready-to-eat food production. Throughout his career he has developed deep expertise in food safety, quality assurance, sanitation program design, and production processes. Sean has created technical content both in industry roles and as an instructor at the Craig Richardson Institute of Food Processing Technology at Conestoga College. He holds certifications in CFIL, sanitary design, HACCP, SQF, and PCQI.

Founder, CleanOps Quality Consulting | [www.cleanopsqualityconsulting.com](http://www.cleanopsqualityconsulting.com)

# Executive Summary

Food manufacturing sanitation programs are under more pressure than ever. Regulatory requirements are tightening. Audits are more rigorous. And the administrative burden of managing Master Sanitation Schedules on paper, spreadsheets, and disconnected tools is no longer sustainable.

The blueprint of a complete sanitation system includes daily sanitation, MSS and PIC/PEC programs. Each piece is critical to the success of creating safe, quality products for consumers and requires schedules and documentation to verify and validate both completion and effectiveness.



**Daily sanitation** | Tasks are those that occur upon completion or before each production cycle. This includes production lines, floor drains, tools, and conveyance equipment used in manufacturing.



**Master Sanitation Schedule (MSS)** | includes tasks throughout the facility that support production but are not directly in production areas. These include the warehouse, coolers & freezers, and are completed less frequently, generated by a Risk-Based Analysis. These items will be scheduled based on the RBA assessment.



**Periodic Infrastructure Cleaning / Periodic Equipment Cleaning (PIC/PEC)** | this type of cleaning occurs when equipment is fully disassembled to access niches that regular, daily sanitation cannot reach. It includes ceilings, cooling units, belt removal, and opening control panels. Again, this happens less frequently, generated by the RBA and scheduled appropriately. PIC/PEC sanitation covers all production areas.

The U.S. food manufacturing industry generated \$1.1 trillion in output in 2024. Yet the tools most plants use to manage sanitation haven't kept pace. The FDA's Food Traceability Rule signals where regulatory expectations are heading, with digital records, retrievable on demand, traceable to the specific cleaning event. The federal enforcement date has been extended to 2028, but the direction is clear. Retailer audit requirements are already there. Plants still running MSS on paper are building risk, not buying time.

This report draws on survey responses and interviews with sanitation managers responsible for production line cleaning and sanitation programs. The findings show a consistent gap between what sanitation programs are supposed to deliver – real-time compliance visibility, efficient execution, audit-ready documentation – and what most plants can produce with the tools they have today.

“

“ Without a digital platform that links documents and gathers pertinent information all into one report, QA and sanitation leaders are left chasing CARs long after the issue has occurred. This leaves your company vulnerable to recalls and withdrawals.”

**Sean Berdan**

Food Safety & Sanitation Consultant, CleanOps Quality Consulting

## Four Themes Emerged:

01

### **Compliance & Regulations**

Pressure is growing as regulations become stricter, and paper documentation and Excel spreadsheets are no longer viable.

02

### **Software & Technology**

Most plants know they need to modernize; few have made the move, especially when it comes to sanitation tasks.

03

### **Training & Retention**

High turnover, loss of knowledge and language barriers make consistency hard to maintain.

04

### **Continuous Improvement**

Leaders feel the pressure to improve, but lack the data and visibility to know where, when and how to act to create improvements.

Thank you to all of the sanitation managers who participated. This report is a reflection of your experience.

**Steve McBride** | CEO & Co-Founder, Weever

Weever is a Connected Worker Platform built for the people doing the work and trusted by the people leading it. It digitizes core programs like MSS, BBSO, 5S, and Autonomous Maintenance by mirroring how your teams already work — so operators actually use it, adoption happens fast, and leaders get the real-time visibility they need to drive compliance, accountability, and improvement.

Learn more at [weeverapps.com](https://weeverapps.com)

# Compliance & Regulations

For most plants, the hardest part of compliance isn't knowing the rules. It's proving you followed them when someone asks. In 2025, sanitation procedures were cited by 27% of food manufacturing professionals as one of the most difficult preventative controls to manage, sitting alongside allergen controls and cross-contamination prevention. The procedures exist. The schedules are written.

The issue is that paper documents are not designed for multiple users with different documentation requirements. Paper does not allow for multiple documents to be easily linked, and it takes time and effort to go through all the different documents to put the pertinent information in 1 place, ie, a spreadsheet.

“

“ Compliance and documentation requirements have tightened several times over the last 10-12 years, leading to more and more paperwork. Companies must adapt their programs accordingly, yet they are reluctant to change the way they collect and verify their information.”

**Sean Berdan**

CleanOps Quality Consulting

Congress has directed the FDA not to enforce the Food Traceability Rule prior to July 20, 2028. For plants producing foods on the FDA's Food Traceability List – leafy greens, ready-to-eat deli salads, shell eggs, nut butters, soft cheeses, fresh-cut fruits, and certain seafood – that may feel like breathing room. It isn't. The federal date moved. Retailer requirements didn't.

Walmart, Kroger, Costco, and other major grocery chains set their own supplier documentation standards independently of the FDA, and those standards haven't been extended. Plants selling into large retail channels are already being asked to demonstrate digital, retrievable sanitation records. The 2028 date tells us when the FDA starts enforcing. It doesn't tell you when your biggest customer will stop asking.

For facilities not on the Food Traceability List, the direction is the same. GFSI standards (SQF, BRC, FSSC 22000) and third-party audits increasingly expect records that can be produced in hours, not assembled from binders over three days. The audit environment is already there. The question is whether your documentation is.

Auditors want a specific answer: was this surface cleaned, when, by whom, and was it done correctly?

With paper documentation, answering these questions could easily require four different documents. Paper records were never meant to provide quick or reliable answers. When the expectation is 24-hour documentation, the gap between what paper can deliver and what auditors expect keeps widening.

33.3%

of management charged with sanitation list compliance as their #1 challenge—tied with efficiency.

### What's driving compliance anxiety?



Increased documentation and tracking requirements



Inability to answer 'was it cleaned?' in real time



Days of manual prep required before audits



Over 75% of compliance-focused managers are 'very concerned' about regulatory risk



FSMA 204 Traceability Rule: federal enforcement by July 2028 — retailer requirements active now

## What Sanitation Managers Are Saying

“

“ We know that there are regular changes being made. That just ensures that we know the proper steps to take if anything different should happen.”

**April C.**

Sanitation Manager

“

“ Corporate keeps up on the regulatory changes and informs the plants. We make changes as needed.”

**Cheryl S.**

Sanitation Manager

## The Real Problem With Paper-Based Compliance

A paper MSS can document that a task was scheduled. It cannot prove it was completed correctly, by the right person, at the right time, with the right chemicals. For facilities on the FDA Food Traceability List — leafy greens, RTE deli salads, nut butters, soft cheeses, shell eggs, and others — digital sanitation records are part of traceability compliance. For every other food manufacturer, the audit environment is moving the same direction. GFSI, SQF, BRC, and retailer audits increasingly expect records you can produce in hours, not days.



The compliance challenge isn't just regulatory — it's operational. A 2025 PMMI survey of food and beverage manufacturers found that 59% cite new or changing regulations as a top macro trend affecting their operations. But the more telling number is what happens once those regulations reach the floor: 65% of end users say getting employees to follow sanitation SOPs properly and consistently is their top day-to-day challenge. The regulation exists. The procedure is written. The gap is in execution, and paper doesn't close it.

## Software & Technology

The manufacturing industry has embraced digital tools across production, maintenance, and quality. Sanitation programs have largely been left behind. Most plants are still running all of their sanitation programs the same way they did 20 years ago: printed packets, paper binders, and manual spreadsheets that take hours to maintain and can't answer a simple question in real time.

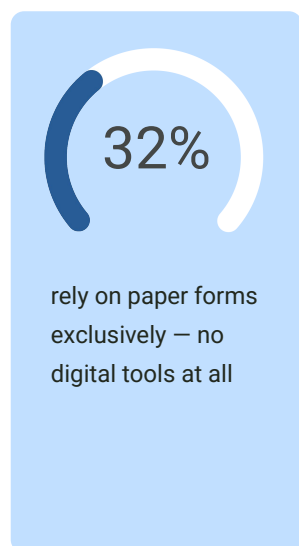
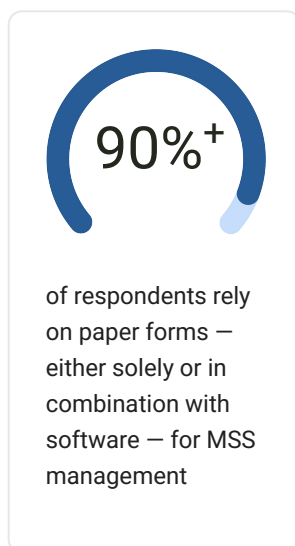
The gap is wider than most leaders realize. Fewer than 10% of food and beverage manufacturers qualify as digital leaders, while 65% describe themselves as laggards who have stalled at the early stages of digital transformation. The most common barrier isn't technical complexity or legacy system integration. It's cost. Nearly 70% of food manufacturers cite budget as their top challenge, which is exactly why per-site, unlimited-user pricing models matter more in this market than anywhere else.

Staying on paper carries a real financial cost. The average direct cost of a food recall is approximately \$10 million, covering notifications, product retrieval, disposal, and labor. In 23% of cases, direct recall costs exceed \$30 million. Those figures don't include canceled contracts, lost shelf space, retailer penalties, or brand damage that can take years to recover from.

In 2024, hospitalizations and deaths from foodborne illnesses doubled compared to 2023. There are 48 million foodborne illness cases in the U.S. every year. For sanitation managers, these aren't abstract statistics. They're the consequences of the programs they run every day.

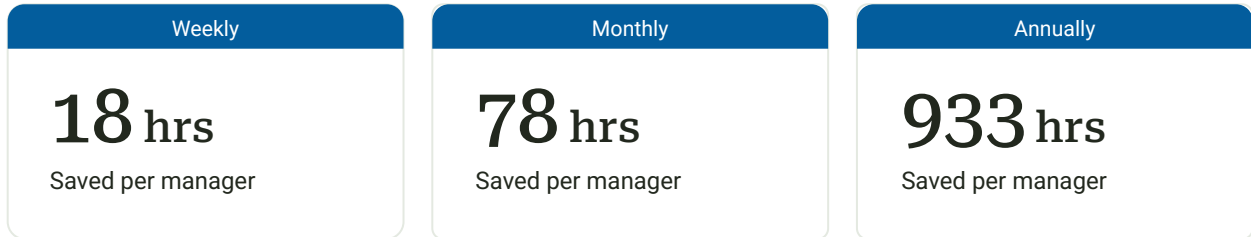
Switching to a digital platform helps reduce these issues. Linked documents, automated data collection, and built-in reminders ensure MSS and PIC/PEC tasks are finished promptly and documented accurately.

### The Paper Problem is Still Widespread



## Where Managers Are Losing Time

When asked whether their time is well allocated, over 90% of respondents said 'No' or 'Somewhat'. The survey identified where the hours are going and how much of it could be reclaimed with digital tools.



These hours come from three main sources: managing issues from incorrectly executed tasks (4 hrs/week), forecasting and managing schedules (9.2 hrs/week), and building reports for leadership and auditors (4.75 hrs/week). All of it is recoverable with the right digital tools.

## What Managers Want from Technology

When asked which automated reports would be most valuable, respondents ranked them in order:

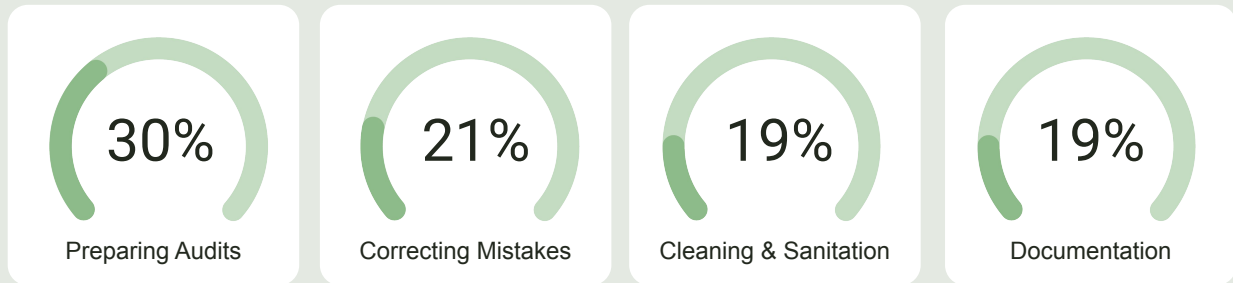
- 01 What lines, machines, or employees are taking the longest (25%)
- 02 Who is completing assigned sanitation tasks on time – and who is not (22.5%)
- 03 What issues have been resolved and which are outstanding (20%)
- 04 What lines, machines, or employees are producing the most task failures (20%)

The most requested technology was on-demand instructions for operators: providing frontline teams with everything they need to do the job correctly the first time, without requiring a supervisor to step in.

## When Digitization Works, It Works Fast

Food safety preventive controls — the category that includes sanitation programs — is one of just four business processes most consistently cited as delivering strong ROI from digital investment, according to IFT's 2025 Technology Trends survey of nearly 200 food industry professionals. The manufacturers seeing the strongest results aren't the ones who invested the most. They're the ones who started with the right problem.

## Where Managers Spend Too Much Time



## Training & Retention

Sanitation programs are only as reliable as the people running them. And right now, those people are dealing with high turnover, language barriers, and training that doesn't keep pace with change on the floor.

The labor shortage in food manufacturing is not easing. As of January 2024, there were 622,000 unfilled manufacturing positions in the U.S. The manufacturing sector will need an estimated 3.8 million new workers by 2033, and nearly half of those roles could go unfilled. Food manufacturing unit labor costs rose 7.5% in 2024, and 47% of industry respondents cite the inability to attract and retain employees as their biggest challenge.

Food manufacturing also lost 15% of its workforce since 2020. When experienced staff leave, the knowledge they carry walks out with them. Paper-based programs, with handwritten instructions and physical binders, are the hardest systems to hand off to someone new.

The connection between labor turnover and sanitation compliance failure is direct. A 2025 PMMI survey found that 61% of food and beverage end users cite labor shortages and turnover as their top operational trend, and 65% say getting employees to consistently follow SSOPs is their top sanitation challenge. Those two numbers describe the same problem. Turnover creates a training gap. The training gap creates execution failure. Execution failure creates compliance risk. A digital MSS breaks that chain because the procedure lives in the system, not in someone's memory.

Those two figures describe the same issue. Turnover creates a training gap, which leads to execution failures. These failures then increase compliance risk. A digital MSS system breaks this chain because the procedure is stored in the platform, not in someone's memory. By adding video SSOPs to your digital MSS platform, you can ensure that, regardless of turnover, new hires are properly trained and follow the correct procedures.

# 9.87/10

average importance of employee retention,  
on a scale of 1 to 10

# 75%

of managers face resource constraints

Yes	Somewhat	No
36.4%	27.3%	27.3% (only) meaning nearly two-thirds of sanitation programs are operating under resource pressure.

## The Autonomous Sanitation Opportunity

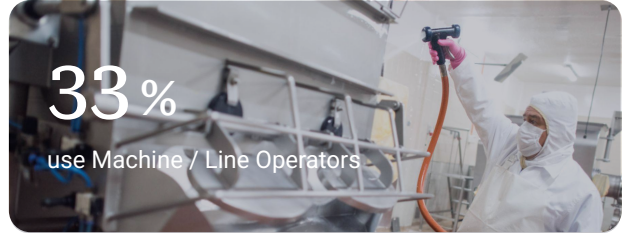
The survey revealed a split in how sanitation work is executed across plants:

**67%**

use Specialized Sanitation Teams

**33%**

use Machine / Line Operators



Plants moving toward operator-led or autonomous sanitation strategies report gains in efficiency, productivity, and engagement. But without the right digital tools, that shift creates more training burden, not less. Sanitors need better access to instructions, visual guides, and multilingual resources to execute sanitation tasks consistently, without having to search for a sanitation leader.

## What Effective Training Programs Include

Training employees on regulatory requirements is the top compliance challenge reported by food manufacturers, cited by 54% of end users in PMMI's 2025 Food Safety and Sanitation survey. That's not a knowledge problem at the corporate level; it's a delivery issue on the plant floor. Most plants have the regulations but lack a reliable way to get them into the hands of the workers.

① Standardized programs tailored to different job roles, delivered consistently across shifts

④ Multilingual and visual materials that work for diverse frontline teams

② Hands-on training with supervised exercises and practical demonstrations

⑤ On-demand access to instructions and resources at the point of work

③ Specialized training with SME (subject matter experts)

## Continuous Improvement

Managers aren't just maintaining the status quo. They're under real pressure to improve. The survey found an average pressure-to-improve score of 7 out of 10, with 37% giving it a perfect 10. This is a program area where leaders expect progress, not just compliance.

That pressure is compounded by growing production demands. Three in five food manufacturing professionals expected throughput to increase by an average of 20% in 2025, and 78% say total cost per product has increased. Sanitation programs are being squeezed in the process. Sanitation cycles have been shortened, budgets cut, and workforces reduced – yet standards continue to rise. This doesn't even consider that many manufacturers are moving to a 24/7 schedule. Where does the time for MSS and PIC/PEC cleaning come from?

Meanwhile, the industry is investing heavily in digital tools, with most food manufacturers allocating 26 to 50% of their equipment and systems budgets to digital and automation projects. Yet, MSS execution, one of the most compliance-critical programs in the plant, is still the last to get digitized. Companies are investing in analytics and automation while the foundational data layer – who cleaned what, when, and whether it was done correctly – is still captured on paper.

Continuous improvement requires data. And most sanitation programs running on paper and spreadsheets don't produce the kind of consistent, comparable data that makes CI possible. Scores vary by who recorded them. Action items get missed. The same problems show up in audit after audit.

**7/10**

average pressure  
score to improve  
sanitation programs

**66%**

Actively invest  
in Continuous  
Improvement

**37%**

rate their improvement  
pressure as 10 out  
of 10

## How Managers Are Pursuing CI Today

The most common CI activities reported by sanitation managers:

- 01** **Updating SOPs (36%)**  
– the most common activity, but often reactive rather than proactive
- 02** **Kaizens (16%)**  
– structured improvement events, usually tied to a broader Lean or TPM initiative
- 03** **Statistical Analysis (12%) and Suggestions (12%)**  
– used less frequently, often because the data isn't readily available
- 04** **Abnormality Reports (8%)**  
– a strong CI tool, but only useful when tracked systematically

Of these activities, the first two items are very difficult to measure in terms of CI. Performing these tasks doesn't guarantee improvements. Statistical analysis and abnormality reports depend on gathering information, which takes time and usually occurs after the fact. Therefore, any improvements lag behind the issues that occurred. With a digital MSS system, the delay virtually disappears; you gain real-time visibility that enables you to make decisions and implement improvements more quickly than with a paper-based system.

## The CI Gap: Efficiency as the Other #1 Challenge

Compliance and efficiency are tied as the top challenges for sanitation managers. The efficiency problem isn't about crews working harder. It's about lines being down too long during changeovers and sanitation cycles.

“Efficiency – lines are down too long because we are slow.”

**Survey respondent**

Digital daily, MSS and PIC/PEC programs help close this gap by flagging delays in real time, and giving managers the data to identify the who, what, when, why and how tasks are consistently causing issues before the next audit or the next downtime event.

# Conclusion

The data is clear. Food manufacturing sanitation programs are under more pressure, facing more scrutiny, and running on tools that weren't built for the job.

Paper binders, spreadsheets, and manual processes are a compliance liability, not just an efficiency problem. For facilities on the FDA Food Traceability List, digital sanitation records are a direct compliance requirement. For everyone else, the audit environment, GFSI, SQF, BRC, and retailer audits are moving in the same direction, regardless of the federal timeline.

The path forward doesn't require a transformation project. Sanitation managers who have moved to digital consistently report faster adoption than expected, because the tools mirror how their teams already work. The cleaning routines don't change. People don't have to relearn their jobs. The records just become reliable, visible, and ready when an auditor asks.

## Four Things Every Sanitation Leader Should Act On In 2026:

- 01 Prepare for FSMA 204 now – federal enforcement begins in 2028, but retailer requirements and GFSI audits don't wait. Paper records cannot meet the 24-hour documentation standard.
- 02 Digitize all your sanitation programs and mirror your existing process, so you can make it reliable and audit-ready.
- 03 Reclaim the data gathering and manual data entry, 1000+ hours per year is recoverable per manager; that's not a nice-to-have, it's a business case.
- 04 Build the tools for CI and reduced food safety incidents –consistent digital data is the starting point for everything else.

With a \$10 million average direct cost per recall and hospitalizations from foodborne illness doubling in 2024, the cost of waiting is real and measurable. Food safety preventive controls are one of the top four business areas where digital investment delivers clear, consistent results. The gap between where most sanitation programs are today and where they need to be isn't a technology problem. It's a prioritization problem. The tools exist. The proof points are real.

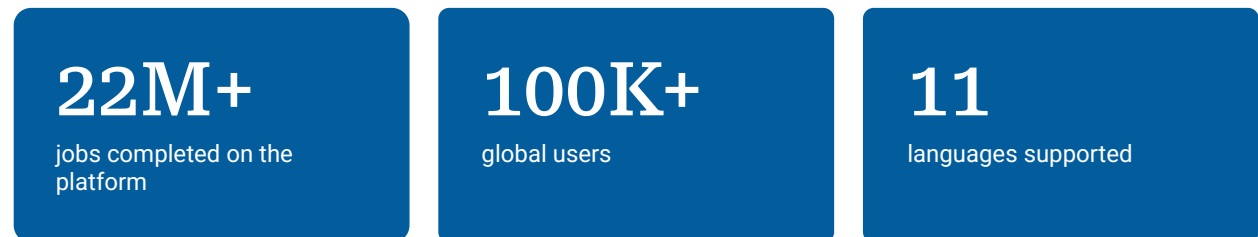
The industry agrees. In PMMI's 2025 Food Safety and Sanitation survey, 93% of food and beverage end users said they expect to spend the same or more on food safety and sanitation equipment and services in the coming year. The budget is there. The question is whether it goes toward tools that address the real problem – execution on the floor – or more of what isn't working.

# About Weever

Weever is a Connected Worker Platform built for the people doing the work and trusted by the people leading it.

It digitizes core frontline programs, including Master Sanitation Scheduling, Behavior-Based Safety Observations, 5S Audits, Quality Checks and Autonomous Maintenance.

Our approach mirrors how your teams already work. No process redesigns. No heavy retraining. No complex rollout. Operators use it from day one, adoption happens quickly, and leaders get the real-time visibility they need.



## What Weever Customers Are Seeing



Ready to see what Weever can do for your MSS program?

[weeverapps.com](http://weeverapps.com)

# References

1. IBISWorld. (2024). *U.S. food manufacturing industry report*. IBISWorld.
2. U.S. Food and Drug Administration. (2022, November 21). *Requirements for additional traceability records for certain foods* (Section 204, FSMA Final Rule). FDA.  
<https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-requirements-additional-traceability-records-certain-foods>
3. Food Engineering Magazine. (2025, October). *The state of food manufacturing in 2025*. BNP Media.
4. U.S. Food and Drug Administration. (2022). *Requirements for additional traceability records for certain foods*. See reference 2. Enforcement date directed by Congress to July 20, 2028 via the Continuing Appropriations, Agriculture, Legislative Branch, Military Construction and Veterans Affairs, and Extensions Act of 2026.
5. FSNS Certification & Audit. (2025, October). *GFSI benchmarking requirements 2024: What it means for you*. FSNS.  
<https://fsns.com/gfsi-benchmarking-requirements-2024-what-it-means-for-you/>
6. PMMI: The Association for Packaging and Processing Technologies. (2025, August). *Food safety and sanitation trends: End user, OEM, and supplier perspectives*. PMMI.  
<https://www.pmmi.org/report/2025-food-safety-and-sanitation-trends-end-user-oem-and-supplier-perspectives>
7. PMMI: The Association for Packaging and Processing Technologies. (2025, August). *Food safety and sanitation trends: End user, OEM, and supplier perspectives*. PMMI. See reference 6.
8. IFS. (2025, February). *Global manufacturing digital transformation survey*. Cited in automation.com, *A digital transformation roadmap for food and beverage manufacturers*.
9. Food Industry Executive / Institute of Food Technologists. (2025). *IFT benchmark survey*. Cited in The Produce Wire. (2025). *The 4-stage integration gap holding food manufacturers back in 2026*.  
<https://theproducewire.com/the-4-stage-integration-gap-holding-food-manufacturers-back-in-2026/>
10. Grocery Manufacturers Association & Food Marketing Institute. (n.d.). *Capturing recall costs*. Cited in Marel. (2025, March). *Food recalls cost millions: Is your brand protected?*
11. Grocery Manufacturers Association, Covington & Burling LLP, & Ernst & Young. (n.d.). *Recall cost study*. Cited in Marel. (2025, March). *Food recalls cost millions: Is your brand protected?*
12. FSNS. (2025, February). *Food recalls in 2024: Revealing the statistics*. Based on U.S. PIRG Education Fund. (2025, February). *Food for thought 2025 report*.
13. Centers for Disease Control and Prevention. (n.d.). *Estimates of foodborne illness in the United States*. Cited in monitorQA. (2025, October). *2025 food processing trends: Safety & tech*.
14. American Immigration Visa Kits / EB3.work. (2024, January). *Solutions for the labor shortage in U.S. food manufacturing*. Citing Bureau of Labor Statistics data.
15. Coykendall, J., Hardin, K., Morehouse, J., Reyes, V., & Carrick, G. (2024, April 2). *Taking charge: Manufacturers support growth with active workforce strategies*. Deloitte & The Manufacturing Institute.  
<https://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/us-manufacturing-could-need-new-employees-by-2033.html>
16. FTI Consulting. (2025, July). *U.S. agriculture: Navigating labor challenges and finding solutions*. Citing Bureau of Labor Statistics and Federal Reserve Bank of St. Louis.
17. monitorQA. (2025, October). *2025 food processing trends: Safety & tech*. Citing Bureau of Labor Statistics (BLS).
18. PMMI: The Association for Packaging and Processing Technologies. (2025, August). *Food safety and sanitation trends: End user, OEM, and supplier perspectives*. PMMI. See reference 6.
19. PMMI: The Association for Packaging and Processing Technologies. (2025, August). *Food safety and sanitation trends: End user, OEM, and supplier perspectives*. PMMI. See reference 6.
20. Food Engineering Magazine. (2025, October). *The state of food manufacturing in 2025*. BNP Media. See reference 3.
21. Food Engineering Magazine. (2025, October). *The state of food manufacturing in 2025*. BNP Media. See reference 3.
22. Food Industry Executive. (2025, April). *2025 state of food manufacturing: Digital transformation report*.  
<https://foodindustryexecutive.com/2025/04/report-2025-state-of-food-manufacturing-digital-transformation/>
23. FSNS Certification & Audit. (2025). *GFSI benchmarking requirements 2024*. See reference 5. See also BRCGS Food Safety Standard 9; SQF Food Safety Code Edition 9; FSSC 22000 Version 6.
24. Grocery Manufacturers Association & Food Marketing Institute. (n.d.). *Capturing recall costs*. See reference 10.
25. FSNS. (2025, February). *Food recalls in 2024: Revealing the statistics*. See reference 12.
26. Institute of Food Technologists. (2024, November). *Food technology magazine: Outlook 2025 technology trends*. Survey of 194 food industry professionals. IFT.  
<https://ift.org/news-and-publications/food-technology-magazine/issues/2024/november/features/outlook-2025-technology-trends>
27. PMMI: The Association for Packaging and Processing Technologies. (2025, August). *Food safety and sanitation trends: End user, OEM, and supplier perspectives*. PMMI. See reference 6.

