Scientific Challenges and Cost-Effective Management of Risks Associated with Implementation of Produce Safety Regulations

Key Takeaways
"Root Cause Analysis: The How"

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Top 5

1) When identifying where a contamination event may have occurred, in addition to examining the specific operation's risks, it is also important to think about where the ingredient or product came from (one step back) and where it went (one step forward). RCA investigations should aim to be systematic and objective, first occur within the facility in question, and incorporate supply chain and environmental components.
2) When conducting RCAs, the "what" and "when" should be used to guide the "how" (data collection, which may include water testing, microbial swabs, environmental assessments, documentation review, and others). Operations should investigate one theory at a time that is appropriate for the situation.
3) Some steps you may use to conduct an RCA include defining the problem, collecting data, analyzing data, identifying possible immediate causes for food safety issues based on the data analysis, identifying the underlying issue that results in food safety events, developing and implementing solutions, and monitoring and verifying results.
4) One successful interstate and interagency approach used prioritized assembling a broad team (include state departments of agriculture, universities, trade associations, and industry members), identifying a list of potential contributing factors, collecting data and additional information to narrow down potential contributing factors, developing and implementing interventions relevant to the primary cause(s), and an interagency debrief after resolution of the food safety event to discuss the approach used and findings.
5) Some RCA tools that can be used to assist with evaluating RCA data including brainstorming and hypothesis generation, fishbone diagrams, is/is not methods, the 5-why method, and the Go-See-Think-Do method.

Acronym Key:

RCA: Root cause analysis

Additional Reading

International Fresh Produce Association (2023). Root Cause Analysis: Food Safety 101. https://www.freshproduce.com/resources/food-safety/root-cause-analysis/.

The PEW Charitable Trusts (2020). A Guide for Conducting a Food Safety Root Cause Analysis: Approaches for Investigating Contamination Incidents and Preventing Recurrence. https://www.pewtrusts.org/-/media/assets/2020/03/guide_for_conducting_food_safety_root_cause_analysis_report.pdf.

Shabu A and P Prusty (2023). Effective Root Cause Analysis for CAPA Management. *Food Safety Tech* Magazine. https://foodsafetytech.com/feature_article/effective-root-cause-analysis-for-capa-management/.

Wallace CA and Y Motarjemi (2023). Chapter 45 – Incident Management and Root Cause Analysis. *A Practical Guide for the Food Industry.* Academic Press.

Western Growers (2021). Conducting a Root Cause Analysis: A "How-To" Guide for the Produce Industry. https://www.wga.com/wp-content/uploads/d7files/resource/files/RCA%20Guidance%20for%20the%20Produce%20Industry_How%20to%20do%20RCA.pdf

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