



RPA Guidelines and Best Practices for the Safe Use of Returnable Containers in Food Supply Chains

Frequently Asked Questions

Why did RPA create the Food Safety Working Group?

Growers, retailers, and providers of reusable plastic containers (RPCs) have been using different practices to clean and handle RPCs, and to store and deliver dirty ones. Many members of the supply chain saw the value in uniform practices. Retailers want documented guidelines to share with members of their supply chains. Providers of RPCs want uniform best practices that will further increase confidence in the sanitation and food safety of RPCs. The need for common practices also was driven by the increased adoption of reusables and the desire to educate the growing market.

Have there been any food safety incidents related to the use of RPCs?

No, there has never been a documented food safety issue associated with the use of RPCs. RPCs have revolutionized the transportation of fresh food since their US introduction in 2002 because they are safe and efficient. An increasing number of growers, processors, and retailers are switching from expendable solutions because reusables deliver cost reductions, better product protection, better transportation utilization, more efficient handling, and a more environmentally friendly solution for all users in the supply chain. They are inherently safe, and undergo routine cleaning to ensure that they meet federal government and industry standards for mitigating the possibility of contamination.

What were the industry guidelines prior to the RPA's recommendations?

The reusables industry already has rigorous cleaning and testing protocols that meet or exceed regulations established by the Canadian Food Inspection Agency and the USDA. While there are not specific CFIA/USDA references to Reusable Plastic Containers, there are direct guidelines and regulations to food contact packaging using olefin polymer resins (i.e. clean and fit for use with food, sourced from items on the GRAS list (USDA) and approved food additives list, etc.) In addition, the providers of reusables and cleaning services have their own individual sanitation and food safety standards; however, these practices are not always made public. The RPA is encouraging all providers to follow these new best practices so that the market has a clear understanding of the processes.



What guidelines and regulations did the committee review?

The guidelines identify and endorse existing food safety protocols such as Hazard Analysis & Critical Control Points (HACCP) and Good Manufacturing Processes (GMPs). We also looked closely at the Global Food Safety Initiative (GFSI) and FDA Model Food Code (Regs 4-602.11 and 4-703.11) for food contact surfaces and packaging and drew from recognized international food safety standards and practices. The RPA's resulting guidelines are based on science, best practices, and common knowledge to create a safer food supply chain.

Are these guidelines mandatory?

No, the RPA does not have any power to enforce these guidelines. However, the association believes the guidelines will be widely adopted because they were developed with broad industry support and input.

Which regions are likely to adopt the guidelines?

The guidelines are designed for companies operating in North America. Our committee included representatives of associations and companies with business in the US, Canada & Mexico.

Who will be impacted by the best practices?

The committee outlined best practices for manageable and controllable processes for growers, retailers, and providers of reusable plastic containers and services.

What are the most notable best practices for growers and retailers?

A large part of the recommendations address practices to keep clean RPCs from coming into contact with potential contaminants. For growers, key practices include:

- Wrapping pallets of clean RPCs
- Transporting RPCs in covered van trailers or flatbed trailers with covers
- Regular inspection of trailers
- Storing RPCs under cover, preferably inside
- Using only RPC compliant labels



Retailer guidelines include handling and loading RPC pallets like any other packaged commodity. Additionally, the RPA recommends that retailers and growers take steps to properly secure and store used RPCs to minimize their potential to be contaminated by other products in the area.

Also, RPCs should be stored in a secure area where they are free from tampering as well as accidental contaminants. And growers and retailers should create secure loads of used RPCs to help maintain chain of custody with food defense in mind.

What are the standards for an RPC compliant label?

- Adhesive should release at room temperature with no residue.
- Adhesive should not be rubber based or permanent. Water based acrylic emulsion is required. Pressure sensitive acrylic emulsions work best
- Adhesive must comply with FDA Approved Indirect Food Contact Grade Removable Adhesives (21 CFR 175.105).
- Label must be barcode printing capable to enable scanning.
- Label must comply with dimensions established by retailers.
- Label stock must be of appropriate thickness or gauge that prevent tearing or segmenting.
- Materials should be sourced from suppliers who are committed to providing compliant labels and RPA has a non-exclusive list of such suppliers as an aid to members
- Performance characteristics of labels and associated materials are to withstand the rigors of the produce supply chain, including:
 - Application at point of harvesting or shed pack.
 - Pre-cooling process used by grower/shipper when used (e.g., forced air cooling, hydro cooling, hydro vacuum cooling, icing, etc.).
 - Transit from grower/shipper/packer to retailer distribution center (DC) and stores.
 - Reverse logistics cycle for return of empty RPCs.
 - Complete and automated removal at RPC provider service center with a release temperature of 120°F.



Why did the committee create standards for labels?

The use of adhesive labels has become more prevalent in the supply chain and, in fact, is being mandated by select retailers. The RPA created a task force to test and establish guidelines for adhesive labels with the number one goal of improving food safety, but also to minimize damage to the RPC and wash process equipment, reduce cost of label and residue removal from the RPC, and increase label removal quality and efficiency.

How much will it cost growers and retailers to implement these new guidelines?

There is very little, if any, cost associated with the implementation of these new guidelines. It's mostly a matter of documenting and communicating the steps to everyone involved in the handling of RPCs. Everyone needs to treat RPCs with respect and as a critical part of the food safety supply chain. If growers or retailers chose not to comply with the recommendations, enforcement and associated fees would be included in the rental agreements as applicable.

What are the best practices for sanitation of RPCs?

The most critical control points in the wash process are temperature control and chemical concentration of the cleaning/sanitizing agent. In other words, providers need to use the right amount of soap and the right temperature for washing used RPCs. Additionally, the committee recommends that RPCs be delivered dry to customers. Furthermore, the provider needs to take steps to make sure the RPCs remain clean until they are delivered.

The RPC wash process should also follow Good Manufacturing Practices, or GMPs. These GMPs cover equipment, utensils, water, plumbing, waste and physical facilities. When combined with proper employee hygiene and food defense practices, these GMPs form the core of a sound RPC wash operation.

What is HACCP?

HACCP stands for Hazard Analysis & Critical Control Points. It is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. HACCP is the cornerstone of all modern food safety systems.



What is the role of HACCP in RPC sanitation?

The HACCP program encompasses every aspect of an RPC provider operation including production, procurement and handling, manufacture, and distribution of finished product. It must be governed through certified HACCP coordinators educated through professional and certified programs through the International HACCP Alliance. For sanitation specifically, it governs the wash temperature, contact time, detergent, sanitizer, microbiology testing, drying, and packaging. We strongly recommend that the HACCP program be governed through certified HACCP coordinators educated through professional and certified programs through the International HACCP Alliance.

What are the other significant best practices recommended for providers?

The committee outlined rigorous and routine surface and environmental testing. The RPA recommends a frequency that can effectively cover and monitor a statistically significant sample size representative of the entire production process. This requires hourly, daily, monthly, and quarterly testing. The RPA encourages to test the finished product, which is the washed RPC, and the equipment used for washing it.

There are studies suggesting that RPCs are not always clean. What is the RPA's response to the studies?

We take issue with the methods and conclusions of the studies. Some of the studies clearly did not fully represent the industrial process standards used for the cleaning and sanitation of RPCs, and/or replicate normal field conditions for RPC use. Studies done under experimental conditions often do not represent “real world” conditions.

What about the UCD and Guelph studies that showed RPC contamination?

We take food safety very seriously and evaluate all credible research related to RPCs and food safety. However, it is important to note that RPCs have never been cited as the cause of a food safety incident, and the UCD and Guelph studies did not find a food safety issue with the RPCs that were tested. And it should also be noted that those two studies were funded by the cardboard container industry in an effort to cast doubt on RPCs in an attempt to gain a marketplace advantage. Each RPC is washed, rinsed and sanitized after each use in accordance with industry and government standards.



What about the biofilm issue raised in the University of Arkansas study?

The results of the Arkansas study should be met with extreme caution. The biofilm test was conducted under laboratory conditions; and results - if the test can be replicated outside of the laboratory - are often very different when the testing occurs in the field under real world RPC conditions.

What additional steps is the RPA taking to keep RPCs safe for use in the food supply chain?

Because our industry takes food safety seriously, and because we are committed to a culture of continuous improvement, we monitor the complete body of research on container safety to ensure we will continue to provide our customers with safe products. Food safety is the number one priority for the RPC industry. Without a strong commitment to producing and maintaining safe products, nothing else we do is possible.

What are the qualifications of Paul Pederson, RPA Committee Chair?

Paul Pederson has been IFCO's Director of Food Safety since 2011 and is a highly qualified food safety expert. He has a Bachelor's of Science degree in Organismal Microbiology from Portland State University and an MSc in Food Science and International Food Law from Michigan State University. Prior to joining IFCO, he was Food Safety Director at Associated Food Stores, a microbiologist for the State of Utah, and an environmental health scientist at the United States Department of Agriculture.

His current industry involvement includes:

- Member of the National Registry of Food Safety Professionals
- Licensed Environmental Health Scientist with the National Environmental Health Association
- SQF (Safe Quality Food) Lead Auditor & Practitioner
- Member of the Institute of Food Technologists and National Environmental Health Scientists Association
- National Registry of Food Safety Professionals Proctor
- Better Process Control School Scholar
- Utah Environmental Health Scientists & Administrators Committee Member
- United Fresh Food Safety & Technology Committee Member
- PMA Food Safety and Technology Council Member



In his position at IFCO, he is responsible for food safety and quality control related to all IFCO container operations, policy and procedure auditing, quality improvement projects and contamination prevention and detection.

Who were the other members of the committee?

The RPA brought together a comprehensive group of RPC providers, retailers and growers to represent all parts of the food supply chain. The ability to bring together all members of the supply chain, including competitors, to address industry issues is an important and unique strength of the RPA.

Members of the committee were:

- Joseph Pham, Polymer Logistics
- Carl Glick, Polymer Logistics
- Danny Bartal, Polymer Logistics
- Greg Gorski, Tosca
- Steve Teclaw, Tosca
- Bob Klimko, ORBIS Corporation
- Phil Davis, The Kroger Company
- Mike Lewis, XtremeRFID

Contributors

- Iris Bitterlich, BC Greenhouse Grower's Association
- Mike Reed, BC Hothouse
- Jane Proctor, Canadian Produce Marketing Association
- Anne Fowlie, Canadian Horticultural Council
- Blane Seley, Dole
- Paul Forsythe, DRG Tech
- Phil Smith, Label and Barcode
- Jay Shirodker, Loblaw
- Ed Treacy, Produce Marketing Association
- Jerry Noland, Safeway
- Dan Vache, United Fresh Produce Association
- Claude Laniel, Union of Agricultural Producers of Quebec
- Michael Bledsoe, Village Farms
- James Ball, WalMart