



Context



Food waste is a major social, environmental, and economic issue.



Current date labeling causes confusion with consumers.



Voluntary standardization of date labeling by industry can help to reduce confusion and food that is unnecessarily thrown away.

The Food Marketing Institute (FMI) and Grocery Manufacturers Association (GMA) recommend consumer products packaging uses two standard phrases:



BEST IF USED BY

Describes product quality, where the product may not taste or perform as expected but is safe to use or consume.

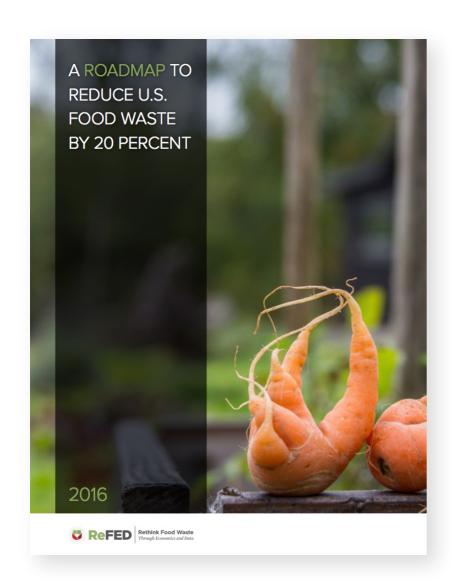


USE BY

Applies to the few products that are highly perishable and/or have a food safety concern over time; these products should be consumed by the date listed on the package – and disposed of after that date.



ReFED's Date Labeling Work Stream



ReFED is a multi-stakeholder nonprofit, powered by an influential network of the nation's leading business, nonprofit, foundation, and government leaders committed to reducing U.S. food waste.

ReFED has identified 27 of the best solutions through the *Roadmap to Reduce U.S.*Food Waste by 20 Percent. The top three solutions to reducing food waste with the greatest economic value per ton are Standardized Date Labeling, Consumer Education Campaigns, and Packaging Adjustments.

ReFED convened a multi-stakeholder Date Labeling Working Group to agree on which products should receive the quality and the discard date labels.

The Working Group determined that a date labeling standardization tool using a decision tree approach would be the most valuable output to develop, in order to be both comprehensive of the range of existing food products and adaptable to new products.

The decision tree outlined in this document is the result of many months of development and revisions based on working group and other expert input from legal and food safety experts.



Intention of the Tool

This tool is intended for food manufacturers to determine whether a quality label or a discard label should be placed on their products. This tool is not intended to be used by, or communicated directly to consumers.



WHAT THE TOOL DOES

- Should help limit the number of products that are assigned a discard label and will reduce the unnecessary waste of products that are still safe to consume.
- Addresses the date label for a package before opened, not after opened. Manufacturer may put additional guidance for "Once opened, eat within X days."



WHAT THE TOOL DOESN'T DO

- Not designed to guide the dates chosen, i.e., the time period.
 The time period should be determined by the manufacturer's technical experts and based on best science available.
- Not intended to address nutrient content deterioration over time.
- Does not constitute any legal advice or supersede any State-level date label regulations. It is entirely industry driven. Companies should make their own decisions about compliance needs and meeting consumer expectations.

ASSUMPTIONS

- **1.** This tool focuses on specific pathogens that can grow under refrigerated temperatures, e.g., Listeria and Yersinia and not pathogens like E. coli, botulism and Salmonella.
- 2. The quality and discard labels follow the recommendations from FMI/GMA: quality label should be "BEST If Used By" and discard label should be "USE By."
- **3.** The product is handled and stored appropriately throughout the supply chain.
- **4.** Consumers follow safe handling and cooking instructions.
- 5. The discard label should also include freezing instructions if appropriate for product, e.g., "USE By: XXX, FREEZE By: XXX." It should be clear to the consumer that if they freeze the product by the USE By date, it is safe to eat.



Logic Behind the Tool Steps

Please see the Guidelines document for further background information on the tool.



REFRIGERATION

This categorizes those products that require refrigeration for both safety and spoilage (the state to which food deteriorates and develops unpleasant characteristics such as an undesirable taste or odor making the food not wholesome, but does not cause illness).



READY TO EAT (RTE)

If a product is RTE, there is no "kill" step (a process that adequately reduces microorganisms of public health concern) so the product may present a potential safety risk. If it is not RTE, then we assume there will be a "kill" step and the product will be labeled with additional cooking and handling instructions, which are separate from the date label.



RISK OF PATHOGEN

This step identifies those RTE products that are higher risk of pathogens despite being refrigerated, e.g., may be prone to Listeria growth. The intention of this step is to provide another level of analysis to further narrow the list of products to receive a discard date label.

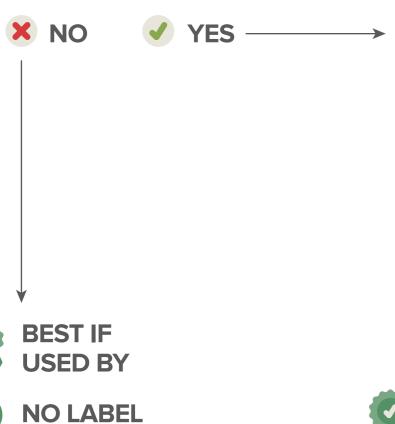


The Date Labeling Standardization Tool



REFRIGERATION

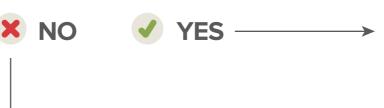
In its packaged form and prior to opening, does the food require refrigeration or freezing?



2. ||

READY TO EAT (RTE)

Is the food intended to be or is sold as Ready to Eat?



3.



RISK OF PATHOGEN

Does the method in which the food was processed and packaged allow for a pathogen to grow under refrigeration or freezing to a level that could result in serious adverse health consequences?



BEST IF USED BY



1. REFRIGERATION

In its packaged form and prior to opening, does the food require refrigeration or freezing?



NO:

USE NO LABEL OR
QUALITY DATE LABEL
("BEST IF USED BY")

EXAMPLE PRODUCTS

- Beverages containing 10% or more by volume of alcohol
- Vinegar
- Food grade salt
- Solid sugars
- Confectionery products consisting of flavored and/or colored sugars
- Chewing gum
- Bread products and other baked goods

- Canned
- aseptically packaged products*
- Dry packaged goods*
- Condiments
- Nuts
- Seeds
- Meat jerky products
- Dry cured meats



YES:

MOVE TO NEXT STEP

EXAMPLE PRODUCTS

- Poultry
- Beef
- Pork
- Lamb & game meat
- Seafood
- Pâté and meat spreads
- Cut fruits & vegetables
- Cooked fruit & vegetables
- Pre-cooked noodles
- Pre-cooked rice
- Eggs
- · Prepared salads & sandwiches

- Sushi
- Non-pasteurized & pasteurized milk and milk products
- Vegan proteins (e.g., tofu)
- Frozen foods
- Custard & cream tarts
- Oil with real garlic
- Seed sprouts
- Packaged foods that contain one or more of these products



NOTES ON THIS STEP:

The products listed are intended to be indicative, not exhaustive.

* Manufacturers that produce low-acid or shelf-stable dairy products should consider additional review with their food safety and quality assurance teams based on specific product specifications.



2. READY TO EAT (RTE)

Is the food intended to be or is sold as Ready to Eat?



NO:

USE QUALITY DATE LABEL ("BEST IF USED BY")



- Raw poultry
- · Raw beef
- Raw pork
- Raw lamb & game meat
- · Raw seafood
- Raw eggs
- Non-cooked vegan proteins (e.g., seitan)
- Frozen foods (e.g. frozen entrees)
- Raw cut fruits & vegetables intended to be cooked



YES:

MOVE TO NEXT STEP

EXAMPLE PRODUCTS

- Deli meats
- Frankfurters
- Pâté and meat spreads
- Raw cut fruits & vegetables intended to be eaten raw
- Cooked fruit & vegetables
- Pre-cooked noodles
- Pre-cooked rice
- Pre-cooked eggs
- Prepared salads & sandwiches
- Sushi

- Non-pasteurized and pasteurized milk and milk products
- Tofu and precooked tempeh
- Custard & cream tarts
- Oil with real garlic
- Seed sprouts
- Packaged foods that contain one or more of these products



NOTES ON THIS STEP:

The products listed are intended to be indicative, not exhaustive.

A key assumption is that consumers follow safe handling and cooking instructions.



3. RISK OF PATHOGEN

Does the method in which the food was processed and packaged allow for a pathogen to grow under refrigeration or freezing to a level that could result in serious adverse health consequences?



NO:

USE QUALITY DATE LABEL ("BEST IF USED BY")



- Products with pH and water activity that sufficiently reduce pathogen growth risk (e.g., hard cheese)
- Pasteurized products (e.g., pasteurized milk)
- Products treated with high pressure pasteurization (e.g., many guacamole products)
- Products with antimicrobial ingredients (e.g., deli meats treated with anti-Listeria agent)



YES:

DISCARD DATE LABEL ("USE BY")

EXAMPLE PRODUCTS & PROCESSES

Products with pH and water activity that do NOT sufficiently reduce pathogen growth risk and that have NOT been treated with processes that mitigate against pathogen growth. Some common examples include:

- Deli meats
- Pâté and meat spreads
- Unpasteurized milk & soft cheeses
- Smoked seafood
- Cooked ready-to-eat crustaceans

- Prepared salads & sandwiches
- Sushi
- Packaged foods that contain one or more of these products



NOTES ON THIS STEP:

The products listed are intended to be indicative, not exhaustive.

The selection of which date label to use should be based on the manufacturer's risk assessment for that specific product.

Contact & Next Steps

Please email Eva Goulbourne, Director of Business & Multistakeholder Programs, info@refed.com



PROVIDE FEEDBACK

Share your answers to the public comment questionnaire by August 31st. *refed.com/questionnaire*



PARTICIPATE

If you are a manufacturer, engage with ReFED to design a pilot project to test the tool and to receive dedicated support for the transition to the two-label system.

Thank you for taking the time to engage in this important step to reduce food waste through date labeling standardization.







ABOUT REFED

ReFED is a multi-stakeholder nonprofit, powered by an influential network of the nation's leading business, nonprofit, foundation, and government leaders committed to reducing U.S. food waste. ReFED has identified 27 of the best solutions through the Roadmap to Reduce U.S. Food Waste by 20 Percent, a first-of-its-kind economic analysis. Implementation of these 27 solutions, combined with the cross-sector levers of policy, financing, education, and innovation are necessary to meet the national 50% reduction goal by 2030. Today, ReFED is scaling these solutions by developing new tools and resources identified by the Roadmap, driving multi-stakeholder collaboration, and galvanizing the capital and innovation needed to realize the Roadmap's potential.

CONTEXT

Currently, humans waste up to 40% of our food globally. In the United States, this equals roughly 400 lbs annually for every American. This has serious implications. For one, it is a waste of money: The United States spends over \$218 billion - 1.3% of GDP – growing, processing, transporting, and disposing of food that is never eaten. In addition, food waste is a waste of the labor and natural resources used to grow the food and also contributes to climate change. With one in six Americans estimated to be food insecure, this is also a social problem.

The time is ripe for action on food waste. Globally the issue is gaining momentum from all stakeholders, from government to the private sector to the media. Here in the U.S., we are seeing uptake in action on the issue as well, in particular from food retailers and manufacturers. There is a significant opportunity for the food industry to lead, demonstrating their responsibility and commitment to address this key social, environmental, and economic issue.

ReFED's 2016 Roadmap report identifies the top three solutions to reducing food waste with the greatest economic value per ton to be Standardized Date Labeling, Consumer Education Campaigns, and Packaging Adjustments.

Food product open dating — the use of date labels in a format consumers would understand — is not currently regulated for most products in the U.S. and is contributing to unnecessary food waste. Current date labeling practices on food packaging cause consumer confusion with "sell by," "best by," "use by," and "best before" dates (among the many labels used), leading up to 90% of Americans to occasionally throw out still-fresh food. Confusion over the meaning of date labels is estimated to account for 20% of consumer waste of safe, edible food. This equates to approximately \$29 billion of wasted consumer spending each year - 5% to 10% of this is expected to be impacted by Standardized Date Labeling.

Infant formula is the only product that is regulated to have a date label due to the possibility of nutrients declining after a certain amount of time. Other food product date labels often refer to the time when a product is at peak quality and is best to eat, but do not always refer to a date by which is it unsafe to eat the product.

Some states do require open dating of selected products, such as milk, eggs, meat, and perishable packaged foods. Of these food products, Ready To Eat (RTE) **CONFUSION OVER THE MEANING OF DATE LABELS IS ESTIMATED TO ACCOUNT FOR 20% OF CONSUMER WASTE** OF SAFE, EDIBLE FOOD.

INFANT FORMULA IS THE ONLY PRODUCT THAT IS FEDERALLY **REGULATED TO HAVE A DATE LABEL**



products that do not require re-heating or re-cooking are at the greatest risk for developing harmful microbial growth, such as Listeria monocytogenes or Clostridium botulinum, and are often labeled "use by" for safety. Other foods that are to be eaten by susceptible populations, which are more prone to microbial infection, are also recommended to be labelled "use by."

Because of the lack of Federal regulation and consumer confusion around labelling, some states have suggested using "best if used by" to indicate when a food is at its best quality state, and using "expires on" to indicate safety dates on high-risk foods, such as RTE foods. In contrast to the U.S., other developed countries such as those in the European Union and Australia do require open dating of products and have distinct definitions for terms that indicate quality and safety of foods. A consistent and regulated approach to food product date labeling in the U.S. has yet to be agreed upon and implemented.

Changes to date labels require little upfront investment from businesses and can be enacted unilaterally by large food companies to reduce consumer confusion. An industry-led voluntary agreement by manufacturers and retailers represents the most efficient way to implement consistent change.

The two largest food trade associations, the Food Marketing Institute (FMI) and Grocery Manufacturers Association (GMA), have partnered on an initiative to adopt standard wording on packaging about the quality and discard dates of products by mid-2018. The new voluntary initiative streamlines the myriad date labels on consumer products packaging down to just two standard phrases:

- "BEST If Used By" describes product quality, where the product may not taste or perform as expected but is safe to use or consume.
- "USE By" applies to the few products that are highly perishable and/or have a food safety concern over time; these products should be consumed by the date listed on the package – and disposed of after that date.

This guidance from FMI & GMA builds on ongoing shifts from retailers and manufacturing companies towards fewer labels. For example, in 2016 Walmart announced it will ask its suppliers to shift non-perishable products to "Best if used by."

AN INDUSTRY-LED VOLUNTARY AGREEMENT BY MANUFACTURERS AND RETAILERS REPRESENTS THE MOST EFFICIENT **WAY TO IMPLEMENT** CONSISTENT CHANGE.

HOW TO USE THIS TOOL

This tool is intended to complement the Food Marketing Institute and Grocery Manufacturer Association's guidance by providing a simple process for food product manufacturers to determine whether a quality label or a discard label should be placed on their products. This tool is not intended for consumer use.

THE QUALITY AND DISCARD LABELS FOLLOW THE RECOMMENDATIONS FROM FMI/GMA:



THE QUALITY LABEL WILL BE "BEST IF USED BY"



THE DISCARD LABEL WILL BE "USE BY"

ASSUMPTIONS:

- · This tool focuses on specific pathogens that can grow under refrigerated temperatures, e.g., Listeria and Yersinia. It is not focused on pathogens which would be eliminated by a kill-step (Step 2), i.e., E. coli, salmonella, botulism.
 - For more information on food-borne pathogens, please see the Centers for Disease Control and Prevention website: cdc.gov/foodsafety/foodborne-germs
- The product is handled and stored appropriately throughout the supply chain.
- · Consumers follow safe handling and cooking instructions.
- The discard label should also include freezing instructions if appropriate for product, e.g., "USE BY: XXX, FREEZE BY: XXX." It should be clear to the consumer that if they freeze the product by the USE BY date, it is safe to eat.
- · Shifting to the proposed two label system requires education of consumers to be effective in reducing food waste. Therefore, manufacturers and retailers should consider a consumer education plan to support the roll-out of the two date labels.

The tool is constructed in a decision tree format for the user to follow the steps to determine which label to use on their products. Each step asks a question which guides the user to either YES or NO. The steps should be followed in the order listed.

WHAT THE TOOL DOES:

- If used consistently, the tool should help limit the number of products that are assigned a discard date label and will reduce the waste of products that are still safe to consume.
- · This tool addresses the date label for a package before opened, not after opened. Manufacturers may put additional guidance for "Once opened, eat within X days."



WHAT THE TOOL **DOESN'T DO:**

- · This chart is not designed to guide the dates chosen, i.e., the time period. The time period should be determined by the manufacturer's technical experts and based on best science available.
- · This tool not intended to address nutrient content deterioration over time.
- · This tool does not constitute any legal advice. It is entirely voluntary and industry driven. Companies should make their own decisions about consumer expectations and how they can best relay information to their customers.

KEY STEPS OF THE TOOL:



STEP 1 - REFRIGERATION

This categorizes those products that require refrigeration for both safety and spoilage (the state to which food to deteriorates and develops unpleasant characteristics such as an undesirable taste or odor making the food not wholesome, but does not cause illness).



STEP 2 - READY TO EAT (RTE)

If a product is RTE, there is no "kill" step (a process that adequately reduces microorganisms of public health concern) so the product presents a potential safety risk. If it is not RTE, then we assume there will be a "kill" step and the product will be labeled with additional cooking and handling instructions, which are separate from the date label.



STEP 3 - RISK OF PATHOGEN

This step identifies those RTE products that are higher risk of pathogens despite being refrigerated, e.g., may be prone to Listeria growth. The intention of this step is to provide another level of analysis to further narrow the list of products to receive a discard date label.

FREQUENTLY ASKED QUESTIONS

WHO IS THIS TOOL INTENDED FOR?

Food product manufacturers and grocer retailers.

WHY DID YOU USE A DECISION TREE FORMAT FOR THE TOOL?

ReFED's Date Labeling Working Group agreed that a decision tree approach would be the most valuable output to develop, in order to be both comprehensive of the range of foods and adaptable to new products. We looked to examples of this approach from other countries and saw that both the United Kingdom (U.K.) and New Zealand had created their own decision tree tools. We used the U.K. tool as a model for the U.S. version. The Working Group identified what was relevant and appropriate to U.S. manufacturers, which led us to create this U.S. tool.

WHAT IS READY TO EAT (RTE)?

A food that is normally eaten in its raw state or any other food, including a processed food, for which it is reasonably foreseeable that the food will be eaten without further processing that would significantly minimize biological hazards.

WHY DOES THE TOOL DIRECT NON-RTE FOODS, SUCH AS RAW MEAT, TO THE QUALITY DATE LABEL RATHER THAN THE DISCARD DATE LABEL?

The tool assumes that consumers follow safe handling and cooking instructions, which would kill any pathogens that may exist on non-RTE food.

HOW DID YOU DECIDE ON WHICH PROCESSES OR CHARACTERISTICS TO CALL **OUT FOR QUALITY VS DISCARD DATE LABEL IN STEP 3?**

These are based on food safety science and the most common techniques for reducing the risk of food pathogens. We include example products identified through consultation with food safety experts.

HOT DOGS/FRANKFURTERS ARE MEANT TO BE COOKED. WHY DID YOU LIST THEM AS "READY TO EAT"?

Manufacturers are required by the USDA to process frankfurters to be ready to be eaten without further cooking. Some manufacturers choose to add instructions on the package for additional heating however this is not necessary for safety purposes.

WHAT IS THE FAO GUIDANCE ON DATE LABELING?

The following items are exempt from any date label according to the FAO's Codex and was the basis for the products indicated in question one of the tool:

- · whole fresh fruits and vegetables, including potatoes which have not been peeled, cut or similarly treated
- wines, liqueur wines, sparkling wines, aromatized wines, fruit wines and sparkling fruit wines
- beverages containing 10% or more by volume of alcohol
- · bakers' or pastry-cooks' wares which, given the nature of their content, are normally consumed within 24 hours of their manufacture
- · confectionery products consisting of flavored and/or colored sugars
- vinegar
- · food grade salt
- · solid sugars
- · chewing gum

PROCESS AND VALIDATION **BEHIND TOOL**

ReFED took the initiative to convene a multi-stakeholder Date Labelling Working Group to agree on which products should receive the quality and the discard date labels. The Working Group members were experts from a wide range of organizations representing manufacturers, retailers, government, academia, and nongovernmental organizations. The individuals that participated in the Working Group are listed in the table below.

WORKING GROUP MEMBERS				
Name	Title	Organization	Stakeholder Type	
Norbert Wilson	Professor of Food Policy in the Friedman School of Nutrition Science and Policy	Tufts University	Academia	
Bradley Rickard	Associate Professor of Applied Economics & Management	Cornell University	Academia	
Christina Rice	Clinical Fellow	Harvard Food Law and Policy Clinic	Academia	
Emily Broad Leib	Director	Harvard Food Law and Policy Clinic	Academia	
Roni Neff	Assistant Professor	Johns Hopkins Center for Livable Future	Academia	
Christine Scanlan	President & CEO	Keystone Policy Center	Academia	
Don Schaffner	Distinguished Professor, Extension Specialist in Food Science	Rutgers University	Academia	
William Hallman	Professor/Chair, Department of Human Ecology	Rutgers University	Academia	
Ted Labuza	Distinguished Professor of Food Science & Engineering	University of Minnesota	Academia	
Kevin Smith	Senior Advisor for Food Safety	Food & Drug Administration	Government	
Jeff Canavan	Deputy Director, Labeling and Program Delivery Division	USDA Food Safety and Inspection Service	Government	
Melissa Donnelly	Manager, Sustainability Integration & Metrics	Campbell's Soup	Manufacturer	
Dennis Pittman	Director of Corporate Communications & Public Affairs	Smithfield Foods	Manufacturer	
Patrizia Barone	Regulatory Affairs, Global Foods & Refreshment	Unilever	Manufacturer	
Carrie Calvert	Director of Tax & Commodity Policy	Feeding America	NGO/non-profit	
Karen Hanner	Managing Director Manufacturing Product Sourcing	Feeding America	NGO/non-profit	
Liz Baldridge	Director of Sustainability & Food Waste Initiatives	Feeding America	NGO/non-profit	
Ali Schklair	Food Safety and Nutrition Fellow	National Consumers League	NGO/non-profit	
Dana Gunders	Staff Scientist, Food & Agriculture Program	NRDC	NGO/non-profit	
Doug Rauch	Founder & President	Daily Table	Retailer	
Michael Hewett	Director of Environmental & Sustainability Programs	Publix	Retailer	
Amy White	Food Safety Manager	Walmart	Retailer	
Frank Yiannas	Vice President, Food Safety	Walmart	Retailer	

WORKING GROUP MEMBERS				
Name	Title	Organization	Stakeholder Type	
Jackie Saumweber	Global Food Sustainability	Walmart	Retailer	
Andy Harig	Senior Director, Sustainability, Tax & Trade	Food Marketing Institute	Trade Association	
David Fikes	VP, Communications & Community/Consumer Affairs	Food Marketing Institute	Trade Association	
Meghan Stasz	Senior Director, Sustainability	Grocery Manufacturers Association	Trade Association	
Cary Frye	Vice President Regulatory & Scientific Affairs	International Dairy Foods Association	Trade Association	
Emily Lyons	Director, Regulatory Affairs & Counsel	International Dairy Foods Association	Trade Association	
Susan Backus	Vice President, Regulatory & Scientific Programs	North American Meat Institute	Trade Association	
Janet Riley	Sr. Vice President, Public Affairs & Member Services	North American Meat Institute	Trade Association	
Kathy Means	Vice President of Industry Relations	Produce Marketing Association	Trade Association	
Julie Koch	VP, Member Relations	Produce Marketing Association	Trade Association	

The Working Group also featured a Steering Committee of the members from FMI, GMA, NRDC, and Harvard. ReFED organized eight Working Group calls between August 2016 and May 2017 to enable a rigorous and collaborative approach to achieving the Group's common objective.

The Working Group agreed that a decision tree approach would be the most valuable output to develop, in order to be both comprehensive of the range of foods and adaptable to new products. We looked to examples of this approach from other countries and saw that both the United Kingdom (U.K.) and New Zealand had created their own decision tree tools. We used the U.K. tool as a model for the U.S. version. The Working Group identified what was relevant and appropriate to U.S. manufacturers which led us to create this U.S. tool.

In addition to the intensive collective and individual Working Group member feedback, we carried out interviews with the following experts to gain their input into the tool:

- · Jim Dickson, Professor of Animal Science, Iowa State
- Oscar Garrison, Vice President, Food Safety Regulatory Affairs, United Egg Producers
- · Mike Goscinski, Director, Government Relations & Lee Sanders, SVP Government Relations, American Bakers Association
- Steven Leslie, General Counsel, Grocery Manufacturers Association
- Jennifer McEntire, Vice President Food Safety and Technology, & Erin Grether, Manager, Food Safety Policy and Programs, United Fresh Produce Association
- · Dr. Dennis Seman, Consultant, Meat Science and Food Safety, University of Wisconsin

The tool went through many rounds of revisions, based on the suggested edits from the various experts who contributed. We refined the order and wording of the questions, the products and processes listed in the YES and NO categories, and the supporting assumptions and guidance for the tool.

ReFED would like to take this opportunity to thank those individuals and organizations that participated in the research, interviews, and Working Group discussions that resulted in the creation of the Date Labeling Standardization Tool and accompanying guidance.

Note: A company's presence on the list above does not equate to an "endorsement" of this tool. Working Group members agreed that because many food manufacturers already have robust internal decision-making processes for determining date label use, no one tool can be endorsed as the industry standard. Instead, greater impact comes from standardizing around the two types of date labels suggested. The ReFED Date Labeling Standardization Tool proposes one way of doing that and provides guidance to manufacturers looking to evolve internal labeling processes.

RESOURCES

KEY GUIDANCE:

- · Food Marketing Institute (FMI) and the Grocery Manufacturers Association (GMA) voluntary initiative on standardizing date labeling
- US Department of Agriculture Food Safety and Inspection Service December 2016 Guidance on Food Product Labeling
- US Food and Drug Administration Food Code
- · Food and Agriculture Organization (FAO) Codex General Standard for the Labelling of prepackaged Foods
- · Food and Drug Association 2003 Listeria risk assessment

FULL REFERENCES:

105 Mass. Code Regs. § 520.119(D) (2013), www.mass.gov/eohhs/docs/dph/regs/105cmr520.pdf. Accessed 19 October 2016.

Department for Environment, Food and Rural Affairs (DEFRA), "Guidance on the application of date labels to food." 2011, www.gov.uk/government/uploads/system/uploads/attachment_data/file/69316/pb132629food-date-labelling-110915.pdf. Accessed 19 October 2016.

Department for Environment, Food and Rural Affairs (DEFRA) "Guidance: Food labelling: giving food information to consumers." 2016, www.gov.uk/guidance/food-labelling-giving-food-information-toconsumers. Accessed 26 October 2016.

Eastern Research Group, Inc. (ERG). "Current State of Food Product Open Dates in the U.S." July 18, 2003, foodrisk.org/default/assets/File/Food_Open_Dating.pdf. Accessed 19 October 2016.

Fu, B., Taoukis, P. S., and. Labuza, T. P. "Predictive Microbiology for Monitoring Spoilage of Dairy Products with Time-Temperature Integrators." Journal of Food Science, vol 56, no. 5, 1991, pp. 1209-1215

Greenaway, T. "Can Walmart's food labels make a dent in America's \$29bn food waste problem?" The Guardian. June 26, 2016. www.theguardian.com/sustainable-business/2016/jun/26/food-waste-walmartdate-labels Accessed October 26 2016

Leib, E. B., Rice, C., Neff, R., Spiker, M., Schklair, A., and Greenburg, S. "Consumer Perceptions of Date Labels: National Survey." May 2016, d3n8a8pro7vhmx.cloudfront.net/ncl/pages/3071/attachments/ original/1462971984/date_labeling_report.pdf?1462971984. Accessed 19 October 2016.

Natural Resources Defense Council (NRDC). "The Dating Game: How Confusing Labels Land Billions of Pounds of Food in the Trash." NRDC Issue Brief, September 2013, https://www.nrdc.org/sites/default/files/ dating-game-IB.pdf. Accessed 19 October 2016.

Newsome, R., Balestrini, C. G., Baum, M. D., Corby, J., Fisher, W., Goodburn, K., Labuza, T. P., Prince, G., Thesmar, H. S., and Yiannas, F. June 2014. "Applications and Perception of Date Labeling of Food." Comprehensive Reviews in Food Science and Food Safety, vol. 13, no. 4, pp. 745-769.

New Zealand Food Safety Authority (NZFSA). "A Guide to Calculating the Shelf Life of Foods." Information booklet for the food industry. February 2005, https://www.forma-te.com/mediateca/finish/64-higiene-eseguranca-alimentar-haccp/25417-a-guide-to-calculating-the-shelf-life-of-foods. Accessed 19 October 2016.

New Zealand Government. Ministry for Primary Industries. "How to Determine the Shelf life of Food, A Guidance Document." June 9 2016. Accessed October 28 2016.

Pal, A., Labuza, T.P., and Diez-Gonzales, F. "Safety-Based Shelf Life Model for Frankfurters Based on Time To Detect Listeria monocytogenes with Initial Inoculum below Detection Limit." Journal of Food Protection, vol. 72, no. 9, 2009, pp 1878-1884

Ransom, G. "Considerations for Establishing Safety-Based Consumer-By Date Labels For Refrigerated Ready-to-Eat Foods." National Advisory Committee on Microbiological Criteria for Foods, August 27, 2004, http://www.fsis.usda.gov/wps/wcm/connect/8c679d8c-318b-408d-b8d4-52d530e20910/NACMCF_Safetybased_Date_Labels_082704.pdf?MOD=AJPERES. Accessed 19 October 2016.

Senator Blumenthal, R. & Congresswoman Pingree C. "Food Date Labeling Act – Key Facts." May 2016. http://maineagcom.org/cms/wp-content/uploads/2016/06/The-Food-Date-Labeling-Act-Fact-Sheet.pdf. Accessed 19 October 2016.

WRAP. "Determining consumer understanding and use of date labels and storage guidance in order to reduce household food waste." May 2011, www.wrap.org.uk/sites/files/wrap/Technical report dates.pdf. Accessed 26 October 2016.

Disclaimer:

This guidance is designed to provide an appropriate understanding of best practice in establishing whether to give a product a quality or a discard date label. Compliance with this advice on best practice is not required by law.

This guidance does not override specific State regulations that require the use of a particular date label for specific food products. You may need to consult relevant legislation to see what applies in your circumstances.

You may also need to consult with technical experts on the microbiological risks posed by your products. This may require businesses, particularly smaller businesses without in-house technical expertise, to access independent scientific advice.

ReFED Date Labeling Standardization Tool

Feedback Questionnaire

ReFED's Date Labeling Working Group has developed a tool to promote the accelerated adoption of the Grocery Manufacturers Association and Food Marketing Institute's voluntary date labeling standards by helping manufacturers determine which label to use for different products. We created a draft of this tool in consultation with over 40 food safety experts and are now seeking input from additional stakeholders through **August 31, 2017** to make the tool as comprehensive as possible.

If you have expertise in food date labeling, quality assurance, or food safety, we welcome your review of the tool. Please complete questionnaire and send to **Eva Goulbourne**, **Director of Business & Multistakeholder Programs at info@refed.com or submit online at refed.com/questionnaire**.

Thank you in advance for your interest in this initiative and for your time and thoughtful commentary.

- 1. Are the assumptions and guidance logical and comprehensive? Is there additional clarification or guidance that would also be helpful?
- 2. Is this tool intuitive and helpful in order to support manufacturers to reduce food waste?
- 3. Do you agree that this simplified framework, while not exhaustive, is a positive contribution for manufacturers to begin making the label changes?
- 4. Does this tool appropriately minimize the number of food items that receive a discard label while still maintaining proper safety standards? If not, what can be done to change that?
- 5. We are focusing the tool around those pathogens that grow under refrigeration because we are focusing on refrigerated, Ready to Eat (RTE) foods following the logic that non-RTE foods (e.g., raw meat) will be cooked, killing any pathogens. Do you support that assumption? If not, how would you revise the scope of the tool in order to maintain safety levels while still reducing food waste?
- 6. The products listed are meant to be examples, not exhaustive lists. However, do you generally agree with the examples given? Are there other common products that should be explicitly named?
- 7. Step 3 is focused on separating out those processes and example products that distinguish risk of only those pathogens that grow under refrigeration of non-opened packaged products (e.g., *Listeria*, but not *C. botulinum*). What other processes or products should we make sure to call out given that focus?
- 8. For Manufacturers only: How are you thinking about the two-label transition in your own company and are there additional tools that may be helpful?

