

Food Loss + Waste

PROTOCOL

Overcoming Obstacles to Measuring Food Loss and Waste (FLW)

December 17, 2019

Kai Robertson, Lead Advisor, World Resources Institute, Food Loss & Waste Protocol

Brian Lipinski, Associate, World Resources Institute

Caroline Powell, Data & Insights Director, ReFED

Guidance to Help Overcome ‘Bumps In the Road’ to Measuring Food Loss and Waste (FLW)

What we'll cover today

1. Overcoming resistance to measurement (Kai)
2. New features of the Food Waste Atlas (Brian)
3. Guidance on excluding the weight of packaging from the weight of FLW (Kai)
4. Converting financial data to weight (Caroline)
5. Prioritizing on which crops to focus (for downstream companies interested in understanding farm-level FLW) (Brian)

“What Gets Measured, Gets Managed”

& Gets Improved

Measurement enables you to:

- Understand size of the opportunity
- Identify priority hot-spots for action
- Set baseline and track progress against goals
- Provides a path to co-benefits



Good News – Ongoing Growth in Who is Setting Targets and Measuring (sampling)

U.S. Food Loss and Waste 2030 Champions



Canadian commitment



Plus... U.S. EPA Food Recovery Challenge Participants
... The Consumer Goods Forum members



Companies Are Using the *FLW Standard* to Help Them Measure

Provides a:

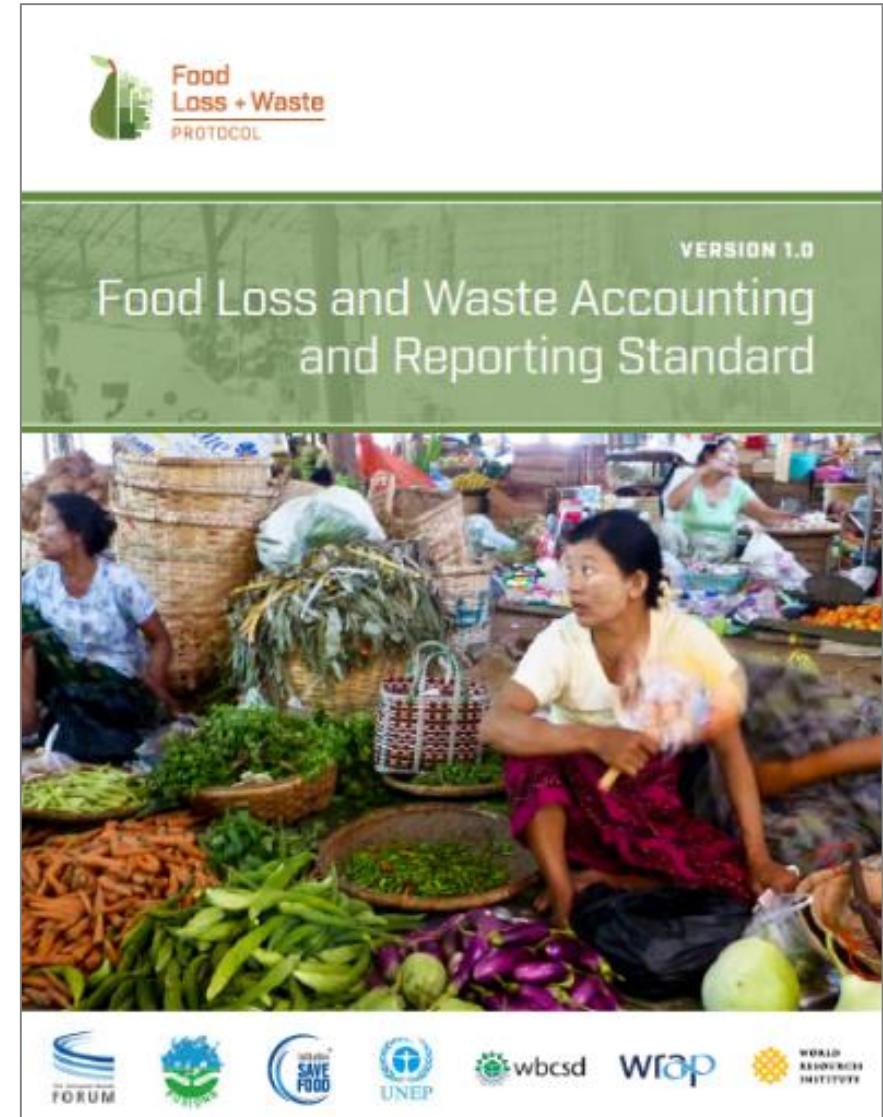
- Common language
- Framework for consistent and transparent reporting

Plus... practical guidance supports users in:

- Understanding why to measure FLW
- What to quantify
- Options for how to approach measurement

To learn more, download:

Case studies, FLW Value Calculator, FAQ and
guidance @ www.FLWProtocol.org



www.FLWProtocol.org

Sampling of Where to Find Guidance @ www.FLWProtocol.org

[Why Measure?](#)[FLW Standard](#)[News & Updates](#)[About the FLW Protocol](#)

TOOLS & RESOURCES

**Case studies on
using the FLW
Standard
including:**



& more

Overcoming Obstacles to Measurement

Guidance on Quantification Methods

- Case Studies
- Tools & Resources
- Trainings
- FAQs
- The Food Waste Atlas

Overcoming Obstacles to Measurement

We have guidance available to help you overcome specific "bumps" that may hamper your ability to measure food loss and waste. Click through to get help with the following:

- Overcoming resistance to measurement
- Excluding the weight of packaging from the weight of FLW
- Prioritizing on which crops to focus (for downstream companies interested in understanding farm-level food loss and waste)
- *Converting financial data to weight (coming January 2020)*

Food Loss and Waste Value Calculator

How and Why to Measure Food Loss and Waste: A Practical Guide

DOWNLOADS

FLW Standard Executive Summary

(PDF) – ENG | CHI | JAP | POR | SPA | FRE

FLW Standard

(PDF) – ENG | JAP | SPA

Sample Reporting Template for FLW Standard

(XLS) – ENG

Guidance on FLW Quantification Methods

(PDF) – ENG

FLW Quantification Method Ranking Tool

(XLS) – ENG

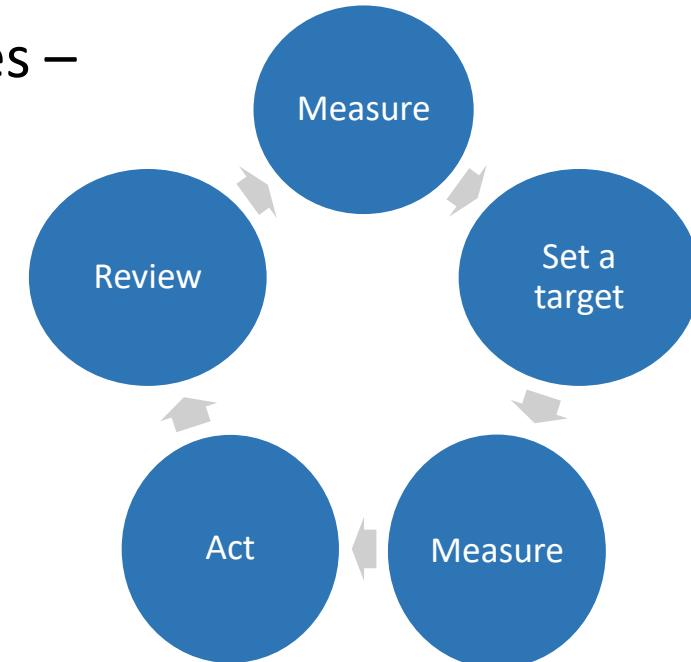
[Learn to Use These Resources](#)

Some Lessons Learned About the Quantification Process

1. Staff **involvement and commitment** is key (training, coordination of data sources, understanding / awareness of reporting commitments)

2. May need a **combination** of different quantification approaches
For example: estimates based on waste contractor data/ audits to get insights by destination and measurement based on POS/ SKU data for more granular product level insights

3. Pathway to compiling food waste estimates –
a **continuous improvement** loop



Overcoming resistance to
measurement of FLW

Statements of Resistance You May Hear *Expressed* & What the Individual May Be *Thinking* (underlying concerns)

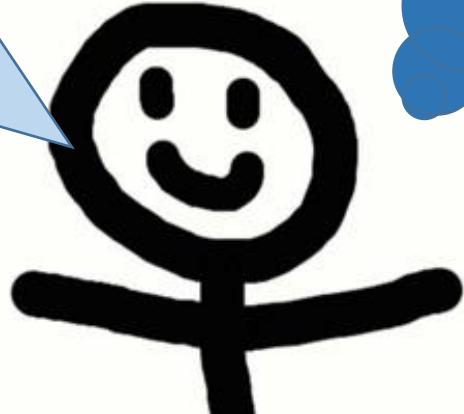
"We have our food loss and waste under control."

"We don't have any food loss or waste."

"We'll always have waste. It's just part of our business."

"I don't have time to measure. It's just extra work."

1. Unclear about why to measure
2. Not relevant
3. Already efficient
4. Not meaningful
5. No incentive
6. Fear of "finger pointing"
7. Limited ability to change situation
8. Measurement feels daunting



What They're Thinking – Underlying Concerns and Examples of Specific Fears and Beliefs

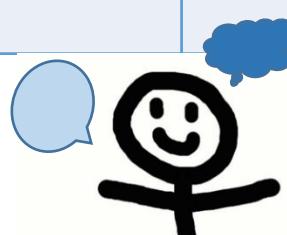
Underlying Concerns	What the Individual May Be Thinking
BUSINESS CASE IS UNCLEAR	<p>1. Unclear about why to measure</p> <p><i>I don't understand why this is a priority.</i></p> <p><i>I don't understand why you are prying into my work.</i></p>
	<p>2. Not relevant</p> <p><i>Any food we don't use in our business is donated, used for compost, fed to animals, plowed under, or used for a beneficial purpose. I don't consider this to be "waste."</i></p>
	<p>3. Already efficient</p> <p><i>I value food and pride myself on already being as efficient as possible.</i></p> <p><i>I don't see the need to start measuring, or adopt a new way of measuring food loss and waste (e.g., using electronic scales, expanding the scope of measurement to include additional destinations or parts of the business).</i></p>
	<p>4. Not meaningful</p> <p><i>The amount of food loss or waste I generate is too small to matter.</i></p>
	<p>5. No incentive</p> <p><i>I'm not evaluated on the amount of waste, so have no incentive to measure it.</i></p> <p><i>I already have a lot of demands on my time and this is a hassle.</i></p>

What They're Thinking – Underlying Concerns and Examples of Specific Fears and Beliefs (cont.)

Underlying Concerns		What the Individual May Be Thinking
DISTRUST	6. Fear of “finger pointing”	<p><i>Acknowledging there is food loss or waste implies I'm not doing my job well and/or could be bad for our brand's reputation.</i></p> <p><i>I'm going to be blamed or punished for any loss or waste we have.</i></p>
TOO HARD TO CHANGE	7. Limited ability to change situation	<p><i>I don't have any control over factors that cause food to be lost or wasted (e.g., the weather, poor quality, menu decisions).</i></p> <p><i>I need to meet my boss's or customer's requests.</i></p> <p><i>I am simply meeting the consumer's expectations (e.g., we can't run out of food).</i></p>
	8. Measurement feels daunting	<p><i>I don't feel confident in the quality of the data.</i></p> <p><i>We have no data for certain categories or parts of our business, and/or no visibility into our supply chain.</i></p> <p><i>I'm afraid we'll find out how little we do know and the expectation will keep growing to dig deeper (i.e., I'll never be done).</i></p> <p><i>The process of tracking food loss and waste or collecting data feels overwhelming.</i></p> <p><i>We don't have a consistent process for tracking and reporting the data over time.</i></p> <p><i>I don't have the authority, access to the food loss and waste, and/or resources (financial, time, cooperation from colleagues, physical equipment) to get the information being requested.</i></p>

Concerns that May Underlie the Statements of Resistance to Measuring Food Loss and Waste

Statements of Resistance You May Hear Expressed	& What the Individual May be Thinking (Underlying Concerns)
"We have our food loss and waste under control."	1. Unclear about why to measure 3. Already efficient 4. Not meaningful
"We don't have any food loss or waste."	2. Not relevant 6. Fear of "finger pointing"
"We'll always have waste. It's just part of our business."	1. Unclear about why to measure 4. Not meaningful 5. No incentive 7. Limited ability to change situation
"I don't have time to measure. It's just extra work."	1. Unclear about why to measure 3. Already efficient 4. Not meaningful 5. No incentive 8. Measurement feels daunting



Sample Table of Concern, Response, Rationale & Case Example

Table 2. Underlying Concern: Not Relevant

What The Individual May Be Thinking	What You Could Say	Why the Response May Work
<p><i>Any food we don't use in our business is donated, used for compost, fed to animals, plowed under, or used for a beneficial purpose. I don't consider this to be "waste."</i></p>	<ul style="list-style-type: none"> • “We want to know how much we don’t use or sell to see where there is an opportunity to get more value out of it. We buy our raw materials to make products for people, not for use as animal feed or compost.” <i>This second sentence should be customized to reflect the nature of your business.</i> • “Do we know how much goes to the different destinations? ^a Seeing what goes where helps us figure out how to: <ul style="list-style-type: none"> • avoid the loss and waste from occurring in the first place, • reuse material (e.g., repurpose trim or other byproduct for new products), and/or • make better use it (e.g., monetize it, send it to a destination where the outputs also have some value)." • “Do we know how much is being donated? We could highlight you and your team in a blog post/social media to share our goals and success in increasing the amount of food rescued for people in need.” <p><small>^a The 10 destinations included in the <i>Food Loss and Waste Accounting and Reporting Standard</i> describe where food and/or inedible parts may be directed when removed from the food supply chain.</small></p>	<p>Different people have different definitions of waste. To encourage consistency and transparency, it is important to use the <i>FLW Standard</i> to clearly describe what has been quantified. It’s also important to be clear that the goal is to measure the amount of any material that is not sold—whether called waste or other terms such as “diverted,” “recovered,” or “recycled.” This helps individuals focus on “source reduction” to avoid any food from leaving the human food supply chain in the first place. It also encourages more expansive thinking about alternatives to landfill where some value may be extracted from food (or inedible parts) no longer safe for human consumption.</p>

Case Examples

Kellogg (a producer of cereal, cookies, crackers, savory snacks, and frozen foods) views any leftover or unwanted raw materials as valuable assets. It is prioritizing the prevention of waste to maximize the use of ingredients purchased, which it estimates could generate [\\$30 million](#) in savings based on the cost of raw materials. As one example, [Kellogg](#) in the UK has teamed up with local brewery SE7EN BROTHERS to turn into beer corn flakes that are rejected for being too big, small, or overcooked as well as other non-packaged, less-than-perfect cereal. This turns raw materials that would previously have gone to animal feed into a product for people. Sources: Food Loss and Waste Protocol. 2017. “[Kellogg Company: Food Waste in Global Manufacturing Operations](#)” September 13. Washington, DC; Seven Bro7hers Brewery, Accessed November 24

Note: Guidance also includes example from Conagra Brands

Communicating About Food Loss and Waste with Different Audiences

BOX 1. Communicating About Food Loss and Waste with Different Audiences

While the financial benefits (e.g., additional revenue, food cost savings, or waste hauler fee savings) can be a selling point, other benefits of measuring and taking action on food loss and waste are equally if not more compelling. The following are more specific examples of ways to describe the benefits in terms that may resonate with different types of audiences.

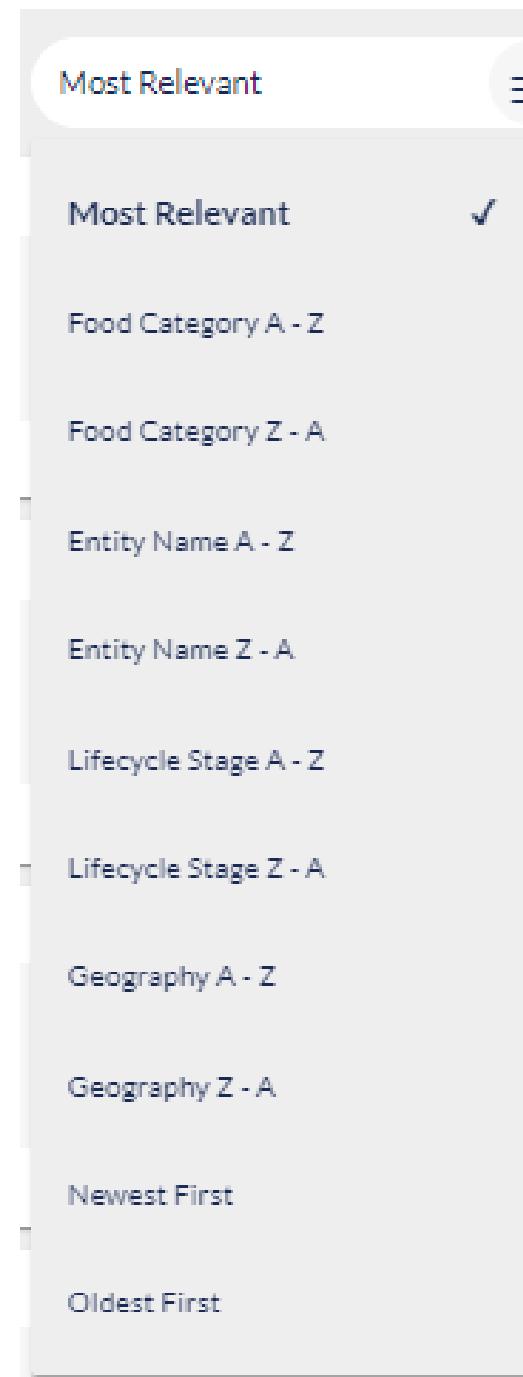
- **C-suite:** show leadership in meeting national/global food loss and waste reduction targets; stay ahead of your competition
- **Finance/tax:** capture enhanced tax deductions available when donating food; reduce operating expenses
- **Operations/supply chain:** increase efficiency (e.g., reduce time spent) managing unsold product; improve productivity and workflow; support continuous improvement strategy
- **Procurement/purchasing:** spend savings from reduced food spend to improve quality of food purchased
- **Merchandising/inventory control:** inform purchasing decisions (e.g., optimize timing of orders to reduce unsold inventory)
- **Sales/marketing:** improve brand recognition and customer retention; address consumer's interest in the issue; respond to public campaign or petition bringing attention to this issue; improve sustainable meetings and events offerings
- **Human resources:** improve employee engagement and collaboration, recruit talent
- **Sustainability:** meet other sustainability objectives (e.g., goals related to food security, landfill avoidance, greenhouse gas emission reductions)
- **Legal:** comply with existing or emerging regulations related to organic waste
- **Hourly/front-line individuals:** rescue safe but unmarketable food for local people in need; help households save money; make your job easier
- **Agricultural producers/ranchers/fishers:** identify alternative channels for surplus crops or catch; determine for which crops the cost of sending harvest crews in for another pass at your field would be justified; understand and unlock the opportunity for full utilization of what you grow, raise, or catch (e.g., to space plantings a few more days apart so that fields can be harvested again, to plant less acreage in order to reduce land and chemical use but still harvest the same amount, or to train harvest labor to take more time in the field to ensure less product is missed)

Sources: (a) Spoiler Alert. 2018. "[Sizing up food waste reduction: 4 factors to consider](#)." August 21. (b) WWF-US (World Wildlife Fund—United States). 2018. *No Food Left Behind, Part 1, Underutilized Produce Ripe for Alternative Market*. Washington: WWF-US. (c) WWF-US ((World Wildlife Fund—United States) in collaboration with the American Hotel & Lodging Association. 2018. "[Fighting Food Waste in Hotels](#)." Washington: WWF-US. (d) R. Dunning and L. Johnson. 2019. "[Are You Leaving Money in the Farm Field?](#)" *Blog*. August 7.

New features in the Food Waste Atlas

What's new with The Food Waste Atlas?

- Improved search speed and functionality
- More data
- More options for filtering your search results



And coming soon...

- An online data submission form to make sharing your data easier

Welcome back!

Want to review or make updates to past food waste data submissions?

[VIEW DATA](#)

Want to make a new food waste data submission?

[SUBMIT DATA](#)

Data Summary

All information input into the "Data Summary" section must be related to the material type listed in *Food Category Included* above. For example, if *Food Category Included* is "Carrots" then quantities for each of the listed destinations must be the quantity of carrots sent to that destination within the time period specified.

Sum of food sent to the following destinations	Do you send food to this destination?	Quantity	Units	Notes
Destination not known (if destinations are known but not how much to each destination, please specify in notes)	Select ...	0	Select ...	
Redistribution for human consumption	Select ...	0		
Sent for animal feed	Select ...	0		
Bio based materials / biochemical processing	Select ...	0		
Anaerobic digestion / codigestion	Select ...	0		
Composting / aerobic processes	Select ...	0		
Incineration / controlled combustion	Select ...	0		



QUESTIONS

ANSWERS

Guidance on excluding the weight of
packaging from the weight of FLW

Introduction & How to Use the Guidance on “Excluding the Weight of Packaging from the Weight of FLW”

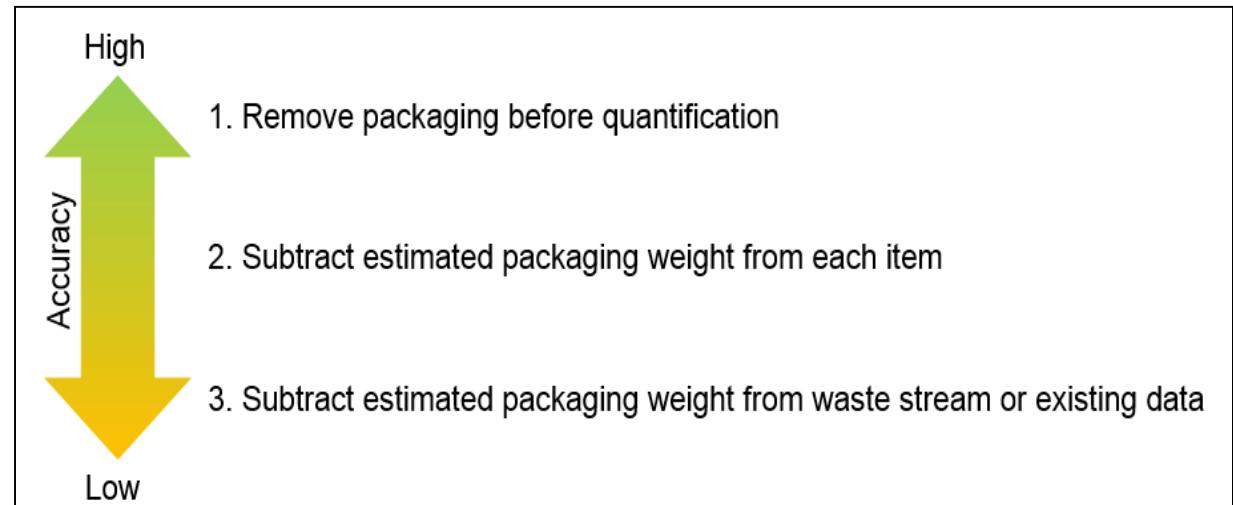
Introduction

- The definition of food loss / waste (FLW) does not include packaging such as boxes, wrapping, or plastic containers.
- Therefore the *Food Loss and Waste Accounting and Reporting Standard* (also referred to as the *FLW Standard*) requires users of the FLW Standard to exclude the weight of any packaging from its FLW inventory.
- This document describes three approaches you could use for excluding the weight of packaging from the weight of FLW (Figure 1).
- In many situations, the FLW that requires quantification will still be in its packaging (e.g., yogurt in its container), will be mixed with packaging (e.g., food scraps and wrapping mixed together in a collection container), or data relating to FLW will include the weight of the packaging. In these cases, you will need to make a calculation to separate the weight of the FLW from the weight of packaging (see approaches 2 and 3 in Figure 1).
- This document expands upon the related guidance provided in the *FLW Standard* (Sections 6.7 and 8.3).

How to Use This Guidance

The guidance (as a “choose your own adventure” pdf file) provides details about using the three approaches in Figure 1. You can use the questions on [slide 4](#) as a guide to selecting the approach that is most relevant to your situation.

Figure 1. Summary of Approaches for Excluding the Weight of Packaging from FLW



Note: this figure corresponds to Figure 8.2 in the *FLW Standard*

Selecting the Relevant Approach

Questions to Ask in Selecting an Approach

Read the questions below and click through to the slide that is relevant to your situation:

1. Can you remove the packaging from the FLW before quantifying it?

If yes, go to [slide 5](#) (Approach 1. Removing Packaging Before the Quantification of FLW)

If no, go to question 2

2. For individual items, or product categories, can you estimate the weight of packaging?

If yes, go to [slide 7](#) (Approach 2. Subtracting Estimated Packaging Weight From Individual Items / Product Categories)

If no, go to question 3

3. Can you get an estimate of the packaging weight from your waste management vendor (third-party processor) or elsewhere in order to subtract it from the total weight of the waste stream, or from existing data?

If yes, see [slide 9](#) (Approach 3. Subtracting Estimated Packaging Weight From Waste Stream / Existing Data)

If no (i.e., you have assessed the three approaches and are not able to subtract the weight of packaging), report in your FLW inventory that the weight of packaging is included along with any other relevant context

Approach 3. Subtracting Estimated Packaging Weight From Waste Stream / Existing Data

About the Approach

If waste management vendor (third-party processor) records, or prior FLW studies, are being used that include the combined weight of both the FLW and packaging, then you could estimate the weight of packaging and subtract it from the total to calculate the FLW. This will produce a less accurate estimate of FLW but may be the only practical option available.

Options

The steps to take in two situations are as follows:

- Where FLW is collected for processing (e.g., anaerobic digestion) and includes packaged products, the facility doing the collection may be able to estimate the amount of packaging across its customers, ideally by sector (e.g., all food retailers). This estimate could be used by the individual reporting entity (e.g., a retailer) who would apply the “percentage of packaging weight” across its full waste stream to calculate the weight of FLW net of packaging weight.
 - [Slide 10](#) provides an illustrative example of the related steps a retailer might take with their vendor
 - [Slide 11](#) illustrates a sampling protocol for a vendor
 - [Slide 14](#) includes a sampling of benchmarks for retailers to use as proxy data
- For a national or subnational FLW inventory, if a separate estimate of household packaging waste exists at the national / subnational level, this amount could be subtracted from an estimate of household FLW that includes packaging waste.

What to Report

Since estimates are involved, the *FLW Standard* requires you to describe the approach and calculation used. You should also provide any other relevant context about the associated uncertainty (see Chapter 9 of the *FLW Standard* for guidance on estimating and reporting uncertainty).

Where Product is De-packaged by a Vendor, Illustrative Steps for a Retailer to Estimate and Report the Weight of FLW Net of Packaging Weight

Where product is de-packaged by a vendor (third-party processor), the following is an example of steps a retailer and its vendor would take to estimate, subtract, and report the weight of FLW net of packaging.

-
- The diagram illustrates a vertical flow of steps between three parties: Retailer, Vendor, and another Retailer. The first Retailer is on the left, the Vendor is in the middle, and the second Retailer is on the right. Arrows point from the first Retailer to the Vendor, and from the Vendor to the second Retailer. The steps are organized into three main sections corresponding to these parties.
- Retailer:**
 - Store associates recycle food waste with its packaging still included (e.g., produce is *not* removed from the clamshell container, packaged lettuce is *not* removed from the plastic bag).
 - Vendor:**
 - Vendor picks up recycled food waste.
 - Vendor provides actual weight of material picked up, which includes the weight of both food and packaging (e.g., 110,000 pounds weekly).
 - Vendor estimates how much of the waste stream is packaging, by weight. [Slide 11](#) provides an example of how a vendor may do so. In order to assess the accuracy of the estimate, the measuring entity may take an additional optional step ([slide 13](#)).
 - If the vendor is *not* able to provide an estimate for the retailer's own waste stream, use proxy data (e.g., an industry average) to estimate the proportion that is packaging.
 - [Slide 14](#) provides estimates from several third-party processors for U.S. retailers.
 - Since the amount of packaging that is included with the FLW will vary depending upon several variables – such as the nature of a company's food rescue and mark-down programs as well as the type of food collected – guidance on [slide 14](#) helps you determine whether the estimate for your company should be on the lower or higher end of the proxy percentages.
 - Retailer:**
 - Retailer applies percentage (estimated by vendor or proxy data) to total weight of pounds processed. Using the example noted here and assuming a packaging percentage of 10%, the equation would be: 110,000 pounds * 10% = 11,000 pounds.
 - Retailer reports food waste, net of packaging weight (e.g., 99,000 pounds). In conformance with the *FLW Standard*, report the calculation used (see sample example below).

Sample example of calculation reported:

Food waste in pounds

110,000	Pounds picked up by vendor for processing through anaerobic digestion
minus <u>11,000</u>	Estimate of packaging by vendor = 10% packaging in feedstock received
99,000	Net food waste

For U.S. Retailers, Proxy Data (from slide 14 of guidance)

Sampling of guidance for Approach 3.

If you don't have an estimate from your vendor, use proxy data to estimate the proportion that is packaging. [Slide 14](#) provides estimates from several third-party processors for U.S. retailers.

The amount of packaging that is included with the FLW will vary depending upon several variables including the nature of a company's food rescue and mark-down programs, as well as the type of food collected.

Guidance on [slide 14](#) helps you determine whether the estimate for your company would be on the lower or higher end of the proxy percentages.

Possible benchmarks to use as proxy data

- Based on the following estimates, the average proportion of FLW that is packaging (by weight) ranges from 5 – 11%.
- This is based on estimates from five third-party processors operating in the following U.S. states, and is assumed to be from FLW generated by food retailers:

Illinois: 8 – 11%

NJ and Massachusetts: 8%

North Carolina: 10%

Maine: 10%

Rhode Island: 5 – 7%

Source: Information gathered by Organix, an organic residuals management company, in conversations with a sampling of other third-party processors where the level of de-packaging by the retailer and vendor may have differed

For U.S. Retailers, Variables that Affect the Amount of Packaging (from slide 14 of guidance)

Variables that affect the proportion of packaging in FLW from a retailer

The proportion of the waste stream that is packaging will vary based on a store's donation and mark-down program as well as its product mix. Use the following guidelines to determine whether the estimate for your store is on the lower or higher end of the benchmarks provided as proxy data.

Donation / mark-down policy impact

On a per pound basis, a store will likely have more packaging in their waste stream if it has:

- Fewer donation collections per week (e.g., only twice a week versus daily)*
- Limited mark-downs

Note: Since more of the donated product from retailers typically is shelf-stable (i.e., with a higher packaging to food ratio by weight) if collection is less frequent this therefore likely results in more shelf-stable product in the waste stream.

Product mix variables

On a per pound basis, a store will likely have more packaging in their waste stream if it sells:

- More packaged produce (i.e., less produce is sold loose)
- More service deli with salad bar/cut fruit in store
- More prepared meals (e.g., meal kits)
- More packaged, refrigerated products

Source: Guidelines developed based on conversations with Divert Inc., a resource recovery service provider

Converting financial data to weight

Prioritizing on which commodities to focus

(for downstream companies interested in understanding on-/near farm food loss and waste)

Introduction & How to Use the Commodity Prioritization Tool

- For businesses and others who are trying to measure and reduce upstream FLW
- The tool helps prioritize commodities based on a series of questions (more guidance in the tool):
 - 1. Does the commodity reflect a key aspect or interest for my business?
 - 2. Do I (or a close partner) have direct access to the commodity to perform new measurements if necessary?
 - 3. Do I have close partnerships or relationships with my suppliers of this commodity?
 - 4. Are there existing studies or measurements that I can use as proxy data?
 - 5. Is the absolute amount (by weight) of this commodity purchased or produced by the business high or low, compared to other commodities purchased or produced by my business?
 - 6. Is the economic value of this commodity high or low, compared to other commodities purchased or produced by my business?
 - 7. Does the commodity have significant environmental impacts, compared to other commodities purchased or produced by my business?

The Commodity Prioritization Tool

AutoSave Off H undo redo File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do Share Comments

Commodity Prioritization Tool - Excel Brian Lipinski

Clipboard Cut Copy Format Painter

Font Calibri 11 A⁺ A⁻ Wrap Text

Alignment

Number General \$ % , .00

Styles Conditional Format as Cell Formatting Table Styles

Cells Insert Delete Format

Editing AutoSum Fill Clear Sort & Filter Select

C22

A B C D E F G H I J

 Food Loss + Waste
PROTOCOL
Guidance on Prioritizing Measurement of On-Farm FLW
Prioritization Ranking Tool

Food loss and waste (FLW) occurs throughout the food supply chain, with actions upstream affecting FLW downstream (and vice versa). As more businesses begin measuring the FLW happening within their own operations, they are increasingly working with their suppliers to measure and reduce upstream FLW as well. For example, in the 10x20x30 initiative, ten of the world's largest food retailers and providers agreed to work with twenty of their priority suppliers to halve FLW by 2030. Measuring farm-level FLW can be a daunting prospect, however. Many businesses engage with a wide range of suppliers and a diverse set of commodities. The set of questions below aim to help companies prioritize on which commodities to focus. By comparing several commodities with these criteria in mind, a company can assess which commodities to prioritize for on- or near-farm level measurement.

The below questionnaire will help you assess which commodities are most important to prioritize for farm-level measurement. Start by filling in the names of your commodities of interest in the top row. Then, for each question, select the most appropriate answer from the drop-down list for each question, based on your needs and circumstances. The field will then turn a shade of green, yellow or red, depending on how you answer. A commodity with numerous green answers is a commodity that is well-suited for farm-level measurement, while a commodity with numerous red answers may not be well-suited for farm-level measurement.

For more information on how to answer each question, consult the "How To Answer the Questions" tab.

	Commodity 1 (e.g. corn, tomatoes, beef, etc.)	Commodity 2	Commodity 3	Commodity 4	Commodity 5	Commodity 6
1. Does the commodity reflect a key aspect or interest for my business?						
2. Do I (or a close partner) have direct access to the commodity to perform new measurements if necessary?						
3. Do I have close partnerships or relationships with my suppliers of this commodity?						

The Commodity Prioritization Tool – hypothetical example

	<i>Wheat</i>	<i>Beef</i>	<i>Chicken</i>
1. Does the commodity reflect a key aspect or interest for my business?	Yes	Somewhat/don't know	No
2. Do I (or a close partner) have direct access to the commodity to perform new measurements if necessary?	Yes	Yes	No
3. Do I have close partnerships or relationships with my suppliers of this commodity?	Very strong	Neither strong nor weak/unsure	Not strong
4. Are there existing studies or measurements that I can use as proxy data?	Similar data, but not perfect	Don't know	Don't know
5. Is the absolute amount (by weight) of this commodity purchased or produced by the business high or low, compared to other commodities	Much higher	Somewhat lower	Somewhat lower
6. Is the economic value of this commodity high or low, compared to other commodities purchased or produced by my business?	Somewhat lower	Somewhat higher	Average/unsure
7. Does the commodity have significant environmental impacts, compared to other commodities purchased or produced by my business?	Much lower	Much higher	Average/unsure

- Findings in this example:
 - Many reasons to measure wheat
 - Beef may be more difficult but worthwhile due to impacts associated with its production
 - Chicken would be a lower priority for this business

More guidance in-tool

Below, you will find an explanation for each question listed in the prioritization tool and how to go about answering them.

1. Does the commodity reflect a key aspect or interest for my business?

Some companies may have a high level of interest in a particular commodity for reputational or operational reasons. For example, a breakfast cereal manufacturer may be especially interested in wheat if the most prominent cereal within their product line is wheat-based. A business will find value in prioritizing measurement of any such crucial commodities.

2. Do I (or a close partner) have direct access to the commodity to perform new measurements if necessary?

Direct measurement of a commodity (meaning the ability to go to where a commodity is produced and conduct counting or weighing directly) results in more accurate FLW figures. If direct measurement is not possible, you may have to rely on less reliable measurement methods, such as records or proxy data. Therefore, having the ability to perform direct measurement of FLW at the production level may be a reason for prioritizing a specific commodity.

3. Do I have close partnerships or relationships with my suppliers of this commodity?

If your company has a long-time relationship with a supplier of a specific commodity, it will likely be easier to partner with them on a production-level measurement project. However, if the relationship is less well-established, then it may be more difficult to partner with that specific supplier to get accurate FLW measurements for that commodity.

4. Are there existing studies or measurements that I can use as proxy data?

If there is existing data about loss for the particular commodity you are focused on, you may not need to begin an entirely new study. The Food Waste Atlas (developed by WRAP and WRI) and the FAO Food Loss and Waste Database are two searchable resources where you can see if there are existing data points you may be able to use for your measurement process.

[Food Waste Atlas](#)

[FAO Food Loss and Waste Database](#)



QUESTIONS

ANSWERS

Sampling of Where to Find Guidance @ www.FLWProtocol.org

[Why Measure?](#)[FLW Standard](#)[News & Updates](#)[About the FLW Protocol](#)

TOOLS & RESOURCES

**Case studies on
using the FLW
Standard
including:**



& more

Overcoming Obstacles to Measurement

Guidance on Quantification Methods

- [Case Studies](#)
- [Tools & Resources](#)
- [Trainings](#)
- [FAQs](#)
- [The Food Waste Atlas](#)

Overcoming Obstacles to Measurement

We have guidance available to help you overcome specific "bumps" that may hamper your ability to measure food loss and waste. Click through to get help with the following:

- Overcoming resistance to measurement
- Excluding the weight of packaging from the weight of FLW
- Prioritizing on which crops to focus (for downstream companies interested in understanding farm-level food loss and waste)
- *Converting financial data to weight (coming January 2020)*

Food Loss and Waste Value Calculator

How and Why to Measure Food Loss and Waste: A Practical Guide

DOWNLOADS

FLW Standard Executive Summary

[\(PDF\) – ENG | CHI | JAP | POR | SPA | FRE](#)

FLW Standard

[\(PDF\) – ENG | JAP | SPA](#)

Sample Reporting Template for FLW Standard

[\(XLS\) – ENG](#)

Guidance on FLW Quantification Methods

[\(PDF\) – ENG](#)

FLW Quantification Method Ranking Tool

[\(XLS\) – ENG](#)

[Learn to Use These Resources](#)

Acknowledgement of Financial Support



Ministry of Economic Affairs

The Netherlands Ministry of Economic Affairs



Ministry of Foreign Affairs of the
Netherlands



Sida
SWEDISH INTERNATIONAL DEVELOPMENT
COOPERATION AGENCY

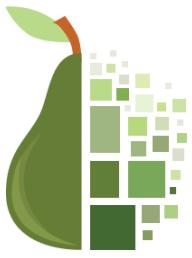


MINISTRY OF FOREIGN AFFAIRS OF DENMARK
DANIDA INTERNATIONAL DEVELOPMENT COOPERATION



 **Irish Aid**
Government of Ireland
Rialtas na hÉireann

Note: The Ministry of Foreign Affairs of the Netherlands, the Royal Danish Ministry of Foreign Affairs, the Swedish International Development Cooperation Agency (SIDA) and the Department of Foreign Affairs and Trade of Ireland (Irish Aid) provided core funding of the World Resources Institute, which made possible the development of the Food Loss and Waste Protocol. The generous financial support of the Walmart Foundation made this guidance about overcoming obstacles to measurement possible.



Food
Loss + Waste
PROTOCOL

www.flwprotocol.org

STAY IN TOUCH AND INFORMED

Sign up to stay updated on the latest FLW news, case studies, tools, and training events.

*First Name	*Last Name	*Email
<input type="text"/>	<input type="text"/>	<input type="text"/>
Company	Job Title	City
<input type="text"/>	<input type="text"/>	<input type="text"/>
State	*Country	
<input type="text"/>	<input type="button" value="▼"/>	
<input type="button" value="Sign Up"/>		

CONTACT US WITH ANY QUESTIONS

Kai Robertson, Lead Advisor, FLW Protocol: robertson.kai@gmail.com

Brian Lipinski, Associate, World Resources Institute: blipinski@wri.org

Caroline Powell, Data & Insights Director, ReFED: caroline.powell@refed.com