

Results of Informal Discussions and Semistructured Interviews on Estimating Retail-Level Loss Factors for the Loss-Adjusted Food Availability (LAFA) Data Series

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Appendices

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Appendix A: Informal Discussion Guides¹

¹ RTI did not use standardized recruitment materials for either round of informal discussions. Instead, we sent an email or called prospective participants without using a standardized script. RTI did not develop a discussion guide for the second round of informal discussions. We used an agenda that was tailored to each participant.

Appendix A.1: Informal Discussion Guide, Round 1 (Trade Association)

Informal Discussion Guide – Trade Association

Thank participant and make introductions.

I'm calling from RTI International, a nonprofit research institute about a study we are conducting for USDA's Economic Research Service (ERS). ERS plans to update the data system that it uses to measure food loss at the commodity level. Our study is focused on updating the estimates of loss, also called shrink, at the retail level.

[If asked about the definition of food loss] ERS defines food loss as the edible amount of food, postharvest, that is available for human consumption but is not consumed for any reason. It includes cooking loss and natural shrinkage (for example, moisture loss); loss from mold, pests, or inadequate climate control; and food waste.

[Other background information if needed] The dataset to be updated through this study is the Loss-Adjusted Food Availability data, which is part of the Food Availability data system.

Questions about Methods Used to Track and Measure Retail Shrink

- Is it common practice for retailers to track and measure retail shrink?
- What are the incentives for retailers to track and measure retail shrink?
- Can you tell me about the current methods used to track and measure retail shrink?
 - o *[If the respondent talks only about software]* Are there any methods other than software that retailers use to track and measure retail shrink?
 - o We are trying to understand whether the methods used by retailers to track and measure shrink would be useful in developing industry-wide estimates of retail shrink. Can you tell me what information is captured in the tracking process?
 - o Do methods differ depending on store type (supermarket, supercenter, vs. club store) or size?
- Do retailers use specific software to track and measure shrink?
 - o If yes, can you tell me about the different software options that are available?
 - o Do you have an idea of how common it is for retailers to use tracking software?
 - o Probe on whether certain software is more common and the reasons why
- Do retailers separately track shipments of ingredients used for foods prepared in the store like bakery items or prepared foods?

Extent and Measurement of Donations

- Do retailers track and measure food donations?
 - o If yes, can you tell me what types of records of food donations are kept by retailers?
- What happens to food that does not sell by its "best by" or "sell by" date?
 - o Do these products get donated or disposed of?
 - o Do stores track and measure these donated/disposed of products?

Potential Approaches to Obtaining Data & Nonmonetary Incentives

- ERS is planning to conduct a nationally representative survey to collect information to calculate retail shrink, so transactions data on incoming shipments and sales data at the store level are needed. Our planned approach is to contact the headquarter location of randomly-selected stores by phone and request data on shipments and sales. We will provide an electronic

template for providing the data and work with the selected store or its headquarters location to obtain the data. As an incentive for participation, we plan to provide each responding store a report that compares the loss factors for their store with the industry as a whole. All the data we collect will be kept confidential and secure as required by CIPSEA.

- Any thoughts on this approach?
- How do you think retailers will respond to this request?
- What can we do or say that will help motivate them to participate? How do we demonstrate that there is a benefit to them participating?
- Would your association be willing to “endorse” the data collection?

[Background information on CIPSEA if needed] CIPSEA stands for the Confidential Information Protection and Statistical Efficiency Act. It establishes confidentiality protections for information collected for statistical purposes so that respondents cannot be identified.

- Do you know what person at the corporate location (i.e., job title) will make the decision to share data with RTI? (e.g., who should we reach out to for the initial contact?)
- Any thoughts on how to alleviate retailer concerns about protecting the confidentiality of their data?
 - For example, if ERS is not allowed access to the raw data (only receive the estimate loss factors), would this encourage retailer participation?
 - If RTI ensures that data are only handled by the project team trained in data security and in a secure location, would this encourage retailer participation?
- Do you have suggestions for other nonmonetary incentives that would encourage retailers to provide data for use in our study?
 - Probe: As noted, we plan to provide retailers with a report that compares retail loss factors for their stores relative to the industry. Do you think they will find this useful? Would this be an attractive nonmonetary incentive to retailers?

Wrap Up

- We plan to contact a small number of retailers to collect information to inform the study design and to pretest the draft instruments. Can you provide names and contact information for member retailers that might be willing to help us?
- Can we follow-up with you early next year to get your feedback on the draft instrument?
- Can we say that we conducted this discussion with you in a report?
- Thank you

Appendix A.2: Informal Discussion Guide, Round 1 (Retailer)

Informal Discussion Guide – Retailer

Thank participant and make introductions.

I'm calling from RTI International, a nonprofit research institute about a study we are conducting for USDA. USDA plans to update the data system that it uses to measure food loss at the commodity level. Our study is focused on updating the estimates of loss, also called shrink, at the retail level.

[If asked about the definition of food loss] USDA defines food loss as the edible amount of food, postharvest, that is available for human consumption but is not consumed for any reason. It includes cooking loss and natural shrinkage (for example, moisture loss); loss from mold, pests, or inadequate climate control; and food waste.

[Other background information if needed] The dataset to be updated through this study is the Loss-Adjusted Food Availability data, which is part of the Food Availability data system.

Questions about Methods Used to Track and Measure Retail Shrink

- First, can you talk about how your stores receive product (store owned distribution centers vs. direct shipments vs. wholesaler)
- Is your company currently tracking and measuring retail shrink, or have plans to do so in the future?
- If yes, can you tell me about the current method your company uses to track and measure retail shrink?
 - o Why do you use this method?
 - o Do all the stores owned by your company track and measure shrink using this same method?
- At what level of detail do you track? (Note: This is to get at the level of aggregation. It could be that they just track the meat department, produce department, etc. versus individual product categories).
- We are trying to understand whether the methods used by retailers to track and measure shrink would be useful in developing industry-wide estimates of retail shrink at the commodity level. Can you tell me what information your company captures in the tracking process?
- *[If not discussed earlier]* Does your company use specific software to track and measure shrink?
 - o If yes, tell me about the software and what it tracks.
- Does your company separately track shipments of ingredients used for foods prepared in the store like bakery items or prepared foods?

Random Weight Products

- Do the stores owned by your company cut or grind meat or poultry products within the store? *[If yes, continue asking questions on this topic.]*
- Which types of products are typically cut up or ground?
 - o Probe: poultry, pork, beef, other
- For the products that will be further cut up or ground in the store, in what form do they arrive to the store? (e.g., beef sides, primals, other forms)
- Do the stores owned by your company only repackage meat and poultry products without further handling?

- *[If the store mentioned using Invatron or some other software earlier]* How does your software account for loss from random-weight products such as meat and poultry?
- *[If the store does not use tracking software]* Do your stores use rule-of-thumb conversion factors in planning your orders to meet particular sales goals?

Extent and Measurement of Donations

- Do your stores track and measure food donations?
 - o If yes, what types of records of food donations are kept?
 - o At what level of detail do you track? (product level vs. category)
- What happens to food that does not sell by its “best by” or “sell by” date?
 - o Do these products get donated or disposed of?
 - o Do you track and measure these donated/disposed of products? If so, how?

Potential Approaches to Obtaining Data & Nonmonetary Incentives

USDA is planning to conduct a nationally representative survey to collect information to calculate retail shrink. We anticipate that transactions data on incoming shipments and sales data at the store level are needed. As an incentive for participation, we plan to provide each responding store a report that compares the loss factors for their store with the industry as a whole. All the data we collect will be kept confidential and secure as required by CIPSEA which is the Confidential Information Protection and Statistical Efficiency Act. It establishes confidentiality protections for information collected for statistical purposes so that respondents cannot be identified.

- Feedback on approach
 - o Any thoughts on this approach?
 - o How do you think retailers will respond to this request?
 - o What would encourage your company to participate? What do you see as the benefit to participating?
- How can we alleviate your concerns about protecting the confidentiality of your data?
 - o For example, if USDA is not allowed access to your raw data (only receive the estimated aggregate commodity-level loss factors), would this encourage your participation?
 - o If RTI ensures that data are only handled by the project team trained in data security and in a secure location, would this encourage your participation?
- Do you have suggestions for other nonmonetary incentives that would encourage your company to provide data for use in our study?
 - o Probe: As noted, we plan to provide retailers with a report that compares retail loss factors for their stores relative to the industry. Would your company find this useful? Would this be an attractive nonmonetary incentive to your company?
- Do you know what person at your corporate headquarters (i.e., job title) would make the decision to share data with RTI? (e.g., who should we reach out to for the initial contact?)

Wrap Up

- We plan to contact a small number of retailers to pretest the draft instruments. Can we follow-up with you early next year to get your feedback on the draft instrument?
- Can we say that we conducted this discussion with you in a report?
- Thank you

Appendix B: Recruitment Materials for Semistructured Interviews

Appendix B.1: Wave 1 Recruitment Materials

Recruitment Script (No contact identified)

Recruitment Script (No contact identified)²

Company is an Independent Operator

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International. I am calling about a study we are conducting for the U.S. Department of Agriculture, Economic Research Service (USDA ERS). USDA is working to address the problem of food loss and waste through its programs, policies, and guidance. As part of these efforts, we are asking food retail companies to participate in confidential interviews to help inform the design of a potential national study on retail-level food loss. We have chosen your company so that we talk to different sizes and types of retailers.

We would like to interview the person or persons in your company who is most knowledgeable about how your company tracks food loss and maintains electronic data on product shipments and sales. This might be someone in operations or supply chain management, or a procurement specialist or retail/supermarket buyer. Taking part in the interview will up to 1 hour. Would you be able to help me identify the person who could help us with this study?

[IF YES AND IF TRANSFERRING TO DIRECT LINE] Thank you, may I also have their extension so that I can follow up directly if we get disconnected?

[IF YES, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [GO TO SCRIPT-CONTACT IDENTIFIED]

[IF NO] Thank you for your time.

Company is a Regional or National Chain

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International. I am calling about a study we are conducting for the U.S. Department of Agriculture, Economic Research Service (USDA ERS). USDA is working to address the problem of food loss and waste through its programs, policies, and guidance. As part of these efforts, we are asking food retail companies to participate in confidential interviews to help inform the design of a potential national study on retail-level food loss. We have chosen your company so that we talk to different sizes and types of retailers.

We would like to speak with the Director of Sustainability or someone who holds a similar position within your company to help us identify the person to interview. Taking part in the interview will take up to 1 hour. Would you be able to help me identify the person who could help us with this study?

[IF YES AND IF TRANSFERRING TO DIRECT LINE] Thank you, may I also have their extension or email so that I can follow up directly if we get disconnected?

²We will initially contact the company by phone if an email address is not available from online sources. When an initial point of contact is not identified through online searches and the main number for the company is being called, use this script. If an initial contact is available through online searches, use the script for contact identified.

[IF YES, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [GO TO SCRIPT-CONTACT IDENTIFIED]]

[IF NO] Thank you for your time.

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN: Public reporting burden for this Recruitment Script is estimated to average 5 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is #0536-0073. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Linda Kantor, U.S. Department of Agriculture, Economic Research Service (linda.kantor@usda.gov).

Recruitment Script (Contact identified)

Recruitment Script (Contact identified)³

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International. I am calling about a study we on conducting for the U.S. Department of Agriculture, Economic Research Service (USDA ERS), and you were identified as someone who might be able to help us. USDA is working to address the problem of food loss and waste through its programs, policies, and guidance. As part of these efforts, we are asking food retail companies to participate in confidential interviews to help inform the design of a potential national study on retail-level food loss. We have chosen your company so that we talk to different sizes and types of retailers.

We would like to interview the person or persons in your company who is most knowledgeable about how your company tracks food loss and maintains electronic data on product shipments and sales. This might be someone in operations or supply chain management, or a procurement specialist or retail/supermarket buyer. Taking part in the interview will take up to 1 hour. Participation is voluntary and confidential. Would you be the best person to interview?

[IF YES] Thank you. Would you like to schedule the interview now or would it be better if I followed up by email?

We have the following days/times available:

May I have your email address and phone number?

[RECORD INFORMATION]

Thank you, I will follow up by email (to schedule interview/confirm interview) and provide additional information about the interview. Please feel free to invite other individuals from your company to participate in the interview.

[IF NOT BEST PERSON] Who do you suggest I contact? Can you please provide me with their email or phone number?

[IF CONTACT RECOMMENDED, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [REPEAT SCRIPT FOR IDENTIFIED INDIVIDUAL]

[IF NO CONTACT RECOMMENDED] Thank you for your time.

Interview Topics (Reference for Interviewer If Needed)

- General information about company
- If and how your company currently tracks food loss
 - Process for receiving product shipments (i.e., from store-owned distribution centers vs. direct shipments vs. wholesalers) and tracking shipment information
 - Information on unsold product removed from shelves

³ We will use this script if a contact was available from online sources or if we identified a contact using the previous call script.

- Information on donated product
 - Data maintained on product shipments: level of detail (e.g., product code vs. department), time period, information maintained (e.g., units, value, weight)
 - Data maintained on product sales: level of detail, time period, information maintained
 - Whether stores cut, grind, or repackage meat, poultry, or seafood in the store and sell as random-weight products and, if so, data maintained on shipments and sales for random-weight products
 - Whether stores do intra-store transfers (e.g., using raw chicken from the meat department to make chicken salad in the deli) and, if so, data maintained on intra-store transfers
 - Data management and software systems
 - Availability, willingness, feasibility, and estimated amount of time to provide requested data
 - Feedback on proposed benchmarking report as benefit for participation
 - Feedback on data security and confidentiality procedures.

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Initial Recruitment Email

Initial Recruitment Email⁴

Hello,

The U.S. Department of Agriculture (USDA) is working to address the problem of food loss and waste through its programs, policies, and guidance. As part of these efforts, the USDA Economic Research Service (USDA, ERS) has contracted with RTI International to conduct a study on food loss in retail stores. We are asking food retail companies to participate in confidential interviews to help inform the design of a potential national study on retail-level food loss. We have chosen your company so that we talk to different sizes and types of retailers.

We would like to interview the person or persons in your company who is most knowledgeable about how your company tracks food loss and maintains electronic data on product shipments and sales. This might be someone in operations or supply chain management, or a procurement specialist or retail/supermarket buyer. Taking part in the interview will take about 1 and a half hours—60 minutes for the interview itself and about 30 minutes of prep time before the interview. Participation is voluntary and confidential.

Please reply to my email to confirm your interest or to recommend the person within your company I should contact (including an email and phone number). I will follow-up by email to schedule an interview and to provide more information about the study. Thank you in advance for your help.

Best regards,

Name

[Study Coordinator name]

USDA ERS Retail-Level Food Loss Study

[email address, phone number]

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN: Public reporting burden for this Recruitment Email is estimated to average 5 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is #0536-0073. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Linda Kantor, U.S. Department of Agriculture, Economic Research Service (linda.kantor@usda.gov).

⁴ We will initially contact companies by email instead of phone if an email address is available through online searches. After sending this email, we will follow-up to schedule the interview and provide more information by sending the scheduling email. If both an email address and telephone number are available, we will make two email attempts and two phone call attempts.

Scheduling Email (Participant identified)

Scheduling Email (Participant identified)

Hello,

On behalf of the U.S. Department of Agriculture, Economic Research Service (USDA, ERS), RTI International is conducting interviews with food retail companies to help inform the design of a potential national study on retail-level food loss. Thank you for agreeing to participate in an interview.

For these interviews we would like to interview the person or persons in your company who is most knowledgeable about how your company tracks food loss and maintains electronic data on product shipments and sales. Please email me if you think someone else in your company should participate in the interview and I will contact them instead.

Taking part in the interview will take about 90 minutes—60 minutes for the interview itself and about 30 minutes of prep time before the interview. Participation is voluntary and confidential. We have the following days/times available:

- *Day, Date: Time*
- *Day, Date: Time*
- *Day, Date: Time*

Please let me know what data/time works best for you and I will send you an email invitation with the log-on information. Please feel free to forward the invitation to other individuals from your company if they would like to participate in the interview and I will contact them and provide additional information about the study.

Attached is the list of interview questions and a summary of the types of data we would like to collect in a national study. This information is provided for informational purposes. You do NOT need to answer the questions before the interview. Please read the attached informed consent form and click the link below to sign the informed consent form before the scheduled interview. Please note that all participants in the interview will need to sign the informed consent; please provide us with email addresses for any additional attendees so that we can send them the informed consent prior to the interview.

[Respondents will click on a live link to electronically sign the informed consent form]

Thank you in advance for your help.

Best regards,

Name

[Study Coordinator name]

USDA ERS Retail-Level Food Loss Study

[email address, phone number]

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN: Public reporting burden for this Scheduling Email is estimated to average 5 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for

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Appendix B.2: Wave 2 Recruitment Materials

Recruitment Script (No contact identified)

Recruitment Script (No contact identified)⁵

Company is an Independent Operator

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International, a nonprofit research institute. In coordination with the U.S. Department of Agriculture, Economic Research Service, RTI is conducting interviews on the topic of food loss with a small number of food retail companies. Food loss is an issue of national and global importance with implications for nutrition security, environmental sustainability, and economic growth. The purpose of the interviews is to collect information to help inform the design of a potential national study on retail-level food loss. To make such a study a success, we need the help of independent retailers like you.

We would like to set up a short 30-minute interview with the person at [COMPANY NAME] who is most knowledgeable about how your company tracks food loss and maintains electronic data on product flows. This might be someone in operations, supply chain management, procurement or someone in the data or finance department. Participation is voluntary and confidential. Would you be able to help me identify the best person to interview?

[IF YES AND IF TRANSFERRING TO DIRECT LINE] Thank you, and may I also have their extension so that I can follow up directly if we get disconnected?

[IF YES, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [GO TO SCRIPT-CONTACT IDENTIFIED]

[IF NO] Thank you for your time.

Company is a Regional or National Chain

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International, a nonprofit research institute. In coordination with the U.S. Department of Agriculture, Economic Research Service, RTI is conducting interviews on the topic of food loss with a small number of food retail companies. Food loss is an issue of national and global importance with implications for nutrition security, environmental sustainability, and economic growth. The purpose of the interviews is to collect information to help inform the design of a potential national study on retail-level food loss. Participation in the 30-minute interview is voluntary and confidential.

I would like to speak with the Director of Sustainability or someone who holds a similar position within your company to help us identify the person to interview. Would you be able to help me identify the best person to interview?

NOTE: Concurrent with this process we will contact the Director of Corporate Communications and work with them to identify the appropriate person within the company to interview (for larger companies

⁵We will initially contact the company by phone if an email address is not available from online sources. When an initial point of contact is not identified through online searches and the main number for the company is being called, use this script. If an initial contact is available through online searches, use the script for contact identified.

there may be an email portal to submit requests) We will tailor our approach based on what we learn from our initial recruiting efforts.

[IF YES AND IF TRANSFERRING TO DIRECT LINE] Thank you, and may I also have their extension or email so that I can follow up directly if we get disconnected?

[IF YES, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [GO TO SCRIPT-CONTACT IDENTIFIED]

[IF NO] Thank you for your time.

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Recruitment Script (Contact identified)

Recruitment Script (Contact identified)⁶

Good Morning/Afternoon,

My name is <name>, and I am a researcher with RTI International, a nonprofit research institute. In coordination with the U.S. Department of Agriculture, Economic Research Service, RTI is conducting interviews on the topic of food loss with a small number of food retail companies. Food loss is an issue of national and global importance with implications for nutrition security, environmental sustainability, and economic growth. The purpose of the interviews is to collect information to help inform the design of a potential national study on retail-level food loss. [If independent operator:] To make such a study a success, we need the help of independent retailers like you.

We would like to set up a short 30-minute interview with the person at [COMPANY NAME] who is most knowledgeable about how your company tracks food loss and maintains data on product flows. Participation is voluntary and confidential. Would this be you by chance? [If no response or they don't know:] Or would that be someone in operations, finance, supply chain management, or procurement? Or possibly someone in sustainability or food waste reduction?

[IF YES, BEST PERSON] Great! Would you have 30 minutes sometime in the next couple of weeks that we can schedule an interview? We can schedule the interview now or would it be better if I followed up by email?

We have the following days/times available:

May I have your email address and phone number?

[RECORD INFORMATION]

Thank you, I will follow up by email (to schedule interview/confirm interview) and provide additional information about the interview. Please feel free to invite other individuals from your company to participate in the interview.

[IF NOT BEST PERSON] Who do you suggest I contact? Can you please provide me with their email or phone number?

[IF CONTACT RECOMMENDED, RECORD CONTACT INFORMATION AND WAIT TO BE TRANSFERRED] Thank you, have a nice day. [REPEAT SCRIPT FOR IDENTIFIED INDIVIDUAL]

[IF NO CONTACT RECOMMENDED] Thank you for your time.

⁶ We will use this script if a contact was available from online sources or if we identified a contact the previous call script.

Interview Topics (Reference for Interviewer If Needed)

- General information about company
- If and how your company currently tracks food loss
 - Process for receiving product shipments (i.e., from store-owned distribution centers vs. direct shipments vs. wholesalers) and tracking shipment information
 - Information on unsold product removed from shelves
 - Information on donated product
- Data maintained on product shipments: level of detail (e.g., product code vs. department), time period, information maintained (e.g., units, value, weight)
- Data maintained on product sales: level of detail, time period, information maintained
- Whether stores cut, grind, or repackage meat, poultry, or seafood in the store and sell as random-weight products and, if so, data maintained on shipments and sales for random-weight products
- Whether stores do intra-store transfers (e.g., using raw chicken from the meat department to make chicken salad in the deli) and, if so, data maintained on intra-store transfers
- Data management and software systems
- Availability, willingness, feasibility, and estimated amount of time to provide requested data
- Feedback on proposed benchmarking report as benefit for participation
- Feedback on data security and confidentiality procedures.

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Recruitment Email

Recruitment Email⁷

Subject line: Request for Response: USDA Retail-Level Food Loss Study

Dear [contact name],

In coordination with the U.S. Department of Agriculture, Economic Research Service (USDA, ERS), RTI International, a nonprofit research institute, is conducting interviews on the topic of food loss with a small number of food retail companies. Food loss is an issue of national and global importance with implications for nutrition security, environmental sustainability, and economic growth. The purpose of the interviews is to collect information to help inform the design of a potential national study on retail-level food loss. [If independent operator:] To make such a study a success, we need the help of independent retailers like you.

We would like to interview the person or persons at [company] who are most knowledgeable about how your company tracks food loss and maintains data on product flows. This might be someone in operations, finance, supply chain management, or procurement, or someone in sustainability or food waste reduction. Participation is voluntary and confidential. The interview itself will take no more than 30 minutes.

Please reply to my email if you are willing to participate or to recommend someone within your company I should contact (including an email and phone number). I will follow up by email to schedule an interview and to provide more information. Thank you for your assistance with this important study.

Best regards,

[Study Coordinator name]
USDA, ERS Retail-Level Food Loss Study
[email address, phone number]

Principal Investigator: Mary Muth, PhD
OMB Control Number: 0536-0073
Expiration: 04/30/2025

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN: Public reporting burden for this Recruitment email is estimated to average 5 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is #0536-0073. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Linda Kantor, U.S. Department of Agriculture, Economic Research Service (linda.kantor@usda.gov).

⁷ We will initially contact companies by email instead of phone if an email address is available through online searches. After sending this email, we will follow up to schedule the interview and provide more information by sending the scheduling email. If both an email address and telephone number are available, we will make two email attempts and two phone call attempts.

Scheduling Email (Participant identified)

Scheduling Email (Participant identified)

Dear [contact name],

Thank you for agreeing to be interviewed about how your company tracks and maintains data on food loss as part of a study we are conducting for the U.S. Department of Agriculture, Economic Research Service (USDA, ERS).

We have the following days/times available next week to speak with you for a 30-minute interview:

- *Day, Date:* Time
- *Day, Date:* Time
- *Day, Date:* Time
- *Day, Date:* Time

Please let me know what days/times work best for you or whether you have other times available in the next couple weeks, and I will send you an email invitation with the log-on information for a 30-minute interview. Please feel free to forward the invitation to other individuals from your company if they would like to participate in the interview, and I will contact them and provide additional information.

I have attached an informed consent document with more information about the interview. Before the interview, please review the document and click the link below to sign. I have also attached the list of interview questions. This information is provided for informational purposes. You do NOT need to answer the questions before the interview.

[Respondents will click on a live link to electronically sign the informed consent form.]

Thank you in advance for your help.

Best regards,

[Study Coordinator name]

USDA, ERS Retail-Level Food Loss Study

[email address, phone number]

Principal Investigator: Mary Muth

OMB Control Number: 0536-0073

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Appendix C: Interview Guides for Semistructured Interviews

Appendix C.1: Wave 1 Interview Guide

Interview Guide: Wave 1

Thank participant(s) and make introductions.

I'm with RTI International, a nonprofit research institute. [Introduce RTI notetaker]. We are gathering information for the U.S. Department of Agriculture, Economic Research Service (USDA, ERS) for a potential national-level study on retail food loss. We want to get a better understanding of what types of data might be available to measure food loss in retail stores. We are talking to a small group of retail food companies to get industry's input on a potential study design. We will use what we learn from these interviews to design a study to calculate national estimates of the percentage of retail-level food loss for about 200 single-ingredient foods such as fresh fruits and vegetables, meat, poultry, seafood, canned fruits and vegetables, and dairy products.

Your input will help to ensure that USDA obtains the information needed with the least amount of burden on industry.

Participation is voluntary and confidential, and you can stop the interview at any time. We are not asking for any data at this time, only information on the type (s) of data that might be available and how such data are formatted and maintained. Any information you provide today or in the future is protected under the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). Information collected under CIPSEA is not subject to Freedom of Information Act (FOIA) requests.

Assurance of Confidentiality: The information you provide will be used for statistical purposes only. Your response will be kept confidential and any person who willfully discloses ANY identifiable information about you or your company is subject to a jail term, a fine, or both. This study is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws.

[Interviewer to confirm that written (electronic) consent has been obtained via Qualtrics link previously provided, if not ask all interview participants to complete written consent (electronically) before starting the interview]

General Information

1. To start, please tell us about your company such as number and formats of stores, number of distribution centers, geographic coverage, and, if applicable, banners under which you operate. [Note: if company owns multiple banners, we will select one banner for the interview]

Approaches to Tracking Food Loss and Donations

2. We would like to know if and how the stores owned by your company currently track food loss. When we talk about retail food loss, we mean the weight of food that is received at the store but not sold or donated for human consumption. Do your stores track and measure unsold food products that are removed from the shelf? [If no, go to next question.] How is information on food loss recorded for products with a barcode?
 - Are data recorded electronically or manually?
 - What data fields are collected? [Probe as needed.]
 - Department or section of store in which product is located (e.g., dairy, frozen)

- Food product category used by the store
 - Barcode (UPC or GTIN) or other product code
 - Number of units
 - Total dollar value of product (is this tracked by wholesale or retail value?)
 - Weight or volume per unit and unit of measure
 - Date entered into system
3. How is information on food loss recorded for random-weight products?
- Are data recorded electronically or manually?
 - What data fields are collected? [Probe as needed.]
 - Department or section of store in which product is located (e.g., produce, frozen)
 - Food product category used by the store
 - Barcode (UPC or GTIN) or other product code
 - Number of units
 - Total dollar value of product (is this tracked by wholesale or retail value?)
 - Weight or volume per unit and unit of measure
 - Date entered into system

Availability of Food Loss Metrics

4. If USDA proceeds with a national study, we are considering an approach in which we would request raw data on product shipments and sales and other information that we would use to calculate food loss percentages. (Share screen with participant so they can see the table below or refer participant to the list of interview questions sent prior to interview (see page G-2), which contains the same table that is below.)

To calculate retail-level food loss using this approach, we would need the following raw data for a 1-year period:

- Product shipments into the store for UPC and random-weight products
- Product sales (scanner data) for UPC and random-weight products
- Products packaged in the store (for example, raw meat and poultry), if applicable
- Products transferred to other departments in the store (for example, ingredients for prepared foods) if applicable
- Food donations, if applicable

For each type of data, we would need data fields like those shown below.

Data Field	Description
Store ID	Unique identification for the store
Department	Section of store in which product is located (e.g., dairy, frozen foods)
Category	Food product category used by the store, if applicable
Barcode	UPC, GTIN, or other product code
Description	Text description of the barcode or product code
Date	Year (calendar or fiscal year) for annual data or week for weekly data
Units	Number of units received, transferred, sold, or donated
Weight	Weight per unit or volume per unit
Unit of Measure	Measurement standard for product (e.g., pounds, kilograms, liters)
Value	Total wholesale value of units received (cost of goods sold), or retail value of product sold or donated

- Do you think an approach like this would be feasible?
- If yes, what suggestions would you have for designing and implementing this type of approach?
- If no, do you have any suggestions on other approaches that would be feasible for a company like yours? [NOTE: If participant responds no, adjust questions below as appropriate]

General Data Questions

5. Could you tell us more about how your company maintains the types of data that we've talked about?
 - Are the data maintained by one person or unit within the company or is it a different person or department for each type of data (food loss, donations, shipments, sales, random weight, intra-store transfers)?
 - Is this person at the corporate location or elsewhere? [NOTE: If interviewing one banner within the company, clarify whether "corporate" means the parent company or the banner headquarters.]
 - What software systems or platforms are used to maintain all the types of data we discussed?
 - Does your company use blockchain technology to track food shipments or food loss? If so, can you please explain this process.
6. If USDA proceeds with a national study, participating companies will receive a benchmarking report that compares their estimates of product-specific food loss percentages with national

averages as a benefit for participation. Would such a report motivate your company to participate? Why or why not? What else would encourage your company to participate?

- To provide benchmarks for all your companies' stores, we would need data on shipments, sales, and donations for all stores, not a sample of stores. Is this something your company would be willing to do, OR would your company be more willing to provide data on a sample of stores? In that case, the benchmarks would only be for the sampled stores.
7. [If data discussed above are available] For informational purposes, if USDA proceeds with a national study, would a company like yours be able to provide the types of data we discussed from the most recent calendar or fiscal year?
 - a. [If yes] What steps or activities would be needed to make this happen?
 - What would be the process for your company to get the necessary approvals to share the data?
 - Who would need to be involved to (e.g., legal, IT)?
 - What information would you need from USDA to get the necessary approvals?
 - Are there any specific times of the year we should avoid when collecting the data?
 - b. [If yes] For a potential national study, there would be a secure web portal for uploading data. Would it be useful to a company like yours if we were able to provide guidelines and/or a specific format for uploading the data OR would it be easier for you to specify the format?
 - c. [If yes] For a potential national study, we would only be measuring loss for single-ingredient foods. We wouldn't need information on most mixed-ingredient foods such as frozen entrees, other processed foods, and most beverages. For stores like yours, would it be easiest to provide a "data dump" for all the products received and sold/donated, OR would it be easier if USDA were to provide instructions on the specific categories of food to include and exclude?
 - d. About how many hours of staff time and calendar time do you estimate would be required to provide the data that we've described for one store? How would this estimate change if you were asked to provide data for multiple stores?
 - e. Are there other ways to obtain the data we have described that you think would be more efficient or less burdensome?
 - For example, would it be feasible and/or less burdensome if a data collector went to each store to obtain data either from store-level software systems or through other types of records?
 8. Do you have any other thoughts or potential concerns about the proposed data collection strategy that we have described that we have not discussed already?
 9. For a potential national study, we plan to collect data from several hundred stores of different type and size. We are interested in your opinion about the best approach for identifying who

(e.g., job title) to initially contact to get buy-in for the study and then identifying who collects and maintain the data we need? Will this vary by size and type of company?

10. May I follow up by email or phone if I have additional questions or need clarification?

Appendix C.2: Wave 2 Interview Guide

Interview Guide: Wave 2

Thank participant(s) and make introductions.

I'm with RTI International, a nonprofit research institute. [Introduce RTI notetaker]. We are gathering information for the U.S. Department of Agriculture, Economic Research Service (USDA, ERS) for a potential national-level study on retail food loss. Food loss is an issue of national and global importance with implications for nutrition security, environmental sustainability, and economic growth. We want to get a better understanding of what types of data might be available to measure food loss in retail stores. We are talking to a small group of retail food companies to get industry's input on a potential study design. We will use what we learn from these interviews to design a study to calculate national estimates of the percentage of retail-level food loss for about 200 single-ingredient foods such as fresh fruits and vegetables, meat, poultry, seafood, canned fruits and vegetables, and dairy products.

Your input will help to ensure that USDA obtains the information needed with the least amount of burden on industry.

Participation is voluntary and confidential, and you can stop the interview at any time. We are not asking for any data, only information on the type (s) of data that might be available and how such data are formatted and maintained. Any information you provide today or in the future is protected under the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). Information collected under CIPSEA is not subject to Freedom of Information Act (FOIA) requests.

Assurance of Confidentiality: The information you provide will be used for statistical purposes only. Your response will be kept confidential and any person who willfully discloses ANY identifiable information about you or your company is subject to a jail term, a fine, or both. This study is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws.

[Interviewer to confirm that written (electronic) consent has been obtained via Qualtrics link previously provided, if not ask all interview participants to complete written consent (electronically) before starting the interview]

General Information

1. To start, please tell us about your company such as number and formats of stores, number of distribution centers, geographic coverage, and, if applicable, banners under which you operate. [Note: if company owns multiple banners, we will select one banner for the interview]

Approaches to Tracking Food Loss and Donations

2. We would like to know if and how the stores owned by your company currently track food loss. When we talk about retail food loss, we mean the weight of food that is received at the store but not sold or donated for human consumption. Do your stores track and measure unsold food products that are removed from the shelf? [If no, go to next question.] How is information on food loss recorded for products with a barcode?

- [If participant responds using “shrink”] Can you explain what you mean by shrink?
 - Are data recorded electronically or manually?
 - What data fields are collected? [Probe as needed.]
 - Department or section of store in which product is located (e.g., dairy, frozen)
 - Food product category used by the store
 - Barcode (UPC or GTIN) or other product code
 - Number of units
 - Total dollar value of product (is this tracked by wholesale or retail value?)
 - Weight or volume per unit and unit of measure
 - Date entered into system
3. How is information on food loss recorded for random-weight products?
- Are data recorded electronically or manually?
 - What data fields are collected? [Probe as needed.]
 - Department or section of store in which product is located (e.g., produce, frozen)
 - Food product category used by the store
 - Barcode (UPC or GTIN) or other product code
 - Number of units
 - Total dollar value of product (is this tracked by wholesale or retail value?)
 - Weight or volume per unit and unit of measure
 - Date entered into system

Availability of Food Loss Metrics

4. If USDA proceeds with a national study, we are considering an approach in which we would request raw data on product shipments and sales and other information that we would use to calculate food loss percentages. (Share screen with participant so they can see the table below)

To calculate retail-level food loss using this approach, we would need the following raw data for a 1-year period:

- Product shipments into the store for UPC and random-weight products
- Product sales (scanner data) for UPC and random-weight products
- Products packaged in the store (for example, raw meat and poultry), if applicable
- Products transferred to other departments in the store (for example, ingredients for prepared foods) if applicable
- Food donations, if applicable

For each type of data, we would need data fields like those shown below.

Data Field	Description
Store ID	Unique identification for the store
Department	Section of store in which product is located (e.g., dairy, frozen foods)
Category	Food product category used by the store, if applicable
Barcode	UPC, GTIN, or other product code
Description	Text description of the barcode or product code
Date	Year (calendar or fiscal year) for annual data or week for weekly data
Units	Number of units received, transferred, sold, or donated
Weight	Weight per unit or volume per unit
Unit of Measure	Measurement standard for product (e.g., pounds, kilograms, liters)
Value	Total wholesale value of units received (cost of goods sold), or retail value of product sold or donated

- Do you think an approach like this would be feasible?
- If yes, what suggestions would you have for designing and implementing this type of approach?
- If no, do you have any suggestions on other approaches that would be feasible for a company like yours? [NOTE: If participant responds no, adjust questions below as appropriate]

General Data Questions

5. Could you tell us more about how your company maintains the types of data that we've talked about?
 - Are the data maintained by one person or unit within the company or is it a different person or department for each type of data (food loss, donations, shipments, sales, random weight, intra-store transfers)?
 - Is this person at the corporate location or elsewhere? [NOTE: If interviewing one banner within the company, clarify whether "corporate" means the parent company or the banner headquarters.]

- What software systems or platforms are used to maintain all the types of data we discussed?
 - Does your company use blockchain technology to track food shipments or food loss? If so, can you please explain this process.
6. If USDA proceeds with a national study, participating companies will receive a benchmarking report that compares their estimates of product-specific food loss percentages with national averages as a benefit for participation. Would such a report motivate your company to participate? Why or why not?
- To provide benchmarks for all your companies' stores, we would need data on shipments, sales, and donations for all stores, not a sample of stores. Is this something your company would be willing to do, OR would your company be more willing to provide data on a sample of stores? In that case, the benchmarks would only be for the sampled stores.
 - What else would encourage your company to participate?
 - Another company we talked with suggested providing some type of recognition from USDA. What are your thoughts about that?
7. [If data discussed above are available] For informational purposes, if USDA proceeds with a national study, would a company like yours be able to provide the types of data we discussed from the most recent calendar or fiscal year?
- a. [If yes] What steps or activities would be needed to make this happen?
 - What would be the process for your company to get the necessary approvals to share the data?
 - Who would need to be involved to (e.g., legal, IT)?
 - What information would you need from USDA to get the necessary approvals?
 - Are there any specific times of the year we should avoid when collecting the data?
 - b. [If yes] For a potential national study, there would be a secure web portal for uploading data. Would it be useful to a company like yours if we were able to provide guidelines and/or a specific format for uploading the data OR would it be easier for you to specify the format?
 - c. [If yes] For a potential national study, we would only be measuring loss for single-ingredient foods. We wouldn't need information on most mixed-ingredient foods such as frozen entrees, other processed foods, and most beverages. For stores like yours, would it be easiest to provide a "data dump" for all the products received and sold/donated, OR would it be easier if USDA were to provide instructions on the specific categories of food to include and exclude?

- d. About how many hours of staff time and calendar time do you estimate would be required to provide the data that we've described for one store? How would this estimate change if you were asked to provide data for multiple stores?
- e. Could you tell us what the barriers are there to measuring food loss?
 - i. For example, if a secure software application was provided for you to use to collect food loss data, would you use it?
 - 1. Probes: A person or data collector comes out with a handheld device to collect the data (is the issue due to staffing); software is created (is the issue due to cost); what are other barriers?
 - ii. Are there other ways to obtain the data we have described that you think would be more efficient or less burdensome?
- 8. Do you have any other thoughts or potential concerns about the proposed data collection strategy that we have described that we have not discussed already?
- 9. For a potential national study, we plan to collect data from several hundred stores of different type and size. We are interested in your opinion about the best approach for identifying who (e.g., job title) to initially contact to get buy-in for the study and then identifying who collects and maintain the data we need? Will this vary by size and type of company?
- 10. May I follow up by email or phone if I have additional questions or need clarification?

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN: Public reporting burden for this Interview guide is estimated to average 30 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is #0536-0073. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Linda Kantor, U.S. Department of Agriculture, Economic Research Service (linda.kantor@usda.gov).