Winning on Reducing Food Waste Initiative
USDA/EPA/FDA Agency Inventory by Interagency Strategy Priority Area
(April 2019 – April 2020)

Priority Area 1: Enhance Interagency Coordination.

Improving interagency coordination will enable USDA, EPA, and FDA to use government resources more efficiently and effectively. An interagency, collaborative mechanism will be established to reduce programmatic redundancies and leverage complementary activities.

Joint Efforts

- Release of the Winning on Reducing Food Waste FY 2019-2020 Federal Interagency Strategy
- Joint Public Statement by three agency heads on reducing food waste
- Interagency Detail:
    - USDA Economist went on six-month detail to EPA to assist with municipal solid waste estimation, including food waste estimation, among other related work.
- Established Interagency Working Group on Reducing Food Waste:
    - Presented agency perspectives in a panel discussion at the 2019 Food Waste Summit hosted by ReFed, an initiative partner nonprofit that uses a data-driven approach to combat food loss and waste.

USDA

- USDA Food Loss and Waste Liaison:
    - In response to Congress' request, USDA hired a Food Loss and Waste Liaison to enhance interagency coordination.

Priority Area 2: Increase Consumer Education and Outreach Efforts.

Households are a major source of food loss and waste in the United States. Most consumers are unaware of the consequences of food loss and waste. A coordinated consumer education effort by USDA, EPA, and FDA, in conjunction with public, private, or nonprofit partners, has the potential to raise awareness, motivate consumers to take action, and accelerate progress to reduce food loss and waste.

Joint Efforts

- EPA and USDA supported development of the Food Matters Action Kit, which provides several engaging activities for kids and youth ages 5-25 to learn about and take action on reducing food waste.

USDA

- Created a new website (www.usda.gov/foodlossandwaste) on USDA's food loss and waste initiative, with audience-specific sections for farmers, businesses, consumers, schools, funding resources, and tips on donating. The website also features information on the interagency initiative with EPA and FDA, including the strategic plan. The site also highlights the 2030 Champions, offers FAQs, latest news, and information on other USDA activities and partnerships.

- Press releases – since the launch of the initiative, USDA has posted numerous press releases -- both interagency and department-level releases -- highlighting the FLW initiative, new Memos of Understanding with partners such as the Food Waste Reduction Alliance, and resources such as the Good Samaritan Act (PDF, 128 KB).
- Webinar: "How to Reduce Food Waste in Your Household." September 29, 2019. Attended by more than 220 people.
- Blogs – From Research to the Marketplace: USDA Scientists Invents New Uses for Produce and Grains; The Psychology of Food Waste.
- Media outreach – USDA spokesperson Elise Golan has been highlighted in media coverage resulting from news releases, convenings, and media interviews. Coverage includes Waste Dive, The Revelator, and Feature Story News.
- Social media – USDA social media channels are sharing news on USDA grants and resources that combat food waste, news on food industry innovations to combat FLW, and amplifying EPA and FDA news.
- 2020 Agricultural Outlook Forum – the USDA FLW team organized a session at the 96th Annual USDA Agricultural Outlook Forum held in February 2020. The Forum is USDA's largest annual gathering, bringing together more than 1,500 industry decisionmakers, and leaders. The session, "Food Waste: A Multi-Billion Dollar Opportunity," featured scientists from USDA Agricultural Research Service (ARS) as well as entrepreneurs representing businesses that have partnered with ARS to develop new products and technologies that help reduce food waste and loss. More than 80 attendees learned about new approaches to conserving food and creating products from otherwise wasted food and processing.

FDA

- Launched a home page for Food Loss and Waste on the FDA.gov to provide a single location for individuals to find information about food waste from FDA and our partners.
- Created fact sheets and education pieces to increase consumer awareness and encourage actions to reduce food waste
- Tips to Reduce Food Waste
- How to Cut Food Waste and Maintain Food Safety
- Confused by Date Labels on Packaged Foods?

EPA

- Sustainable Materials Management Web Academy
    - December 2019: From Pen & Paper to Artificial Technology -- 21st Century Methods for Measuring Excess Food
    - September 2019: Oregon's Wasted Food Strategy: Highlights of current work, recent research and next steps
- Announced the Winning on Reducing Food Waste State, Local, Tribal, and Territorial Pledge to invite state, local, tribal and territorial governments, as well as respective government organizations, to sign and work toward addressing food loss and waste in the United States. To date, 35 government organizations have signed.
- Awarded three Small Business Innovation Research contracts to develop technologies that provide sustainable solutions for environmental issues, specifically for food waste.
- Awarded funding for projects to help reduce food waste and loss and divert food waste from landfills by expanding anaerobic digester capacity in the United States.
- Launched Resources and Possible Funding Opportunities Related to the Food System page.

Priority Area 3: Improve Coordination and Guidance on Food Loss and Waste Measurement.

Enhanced coordination and voluntary guidance regarding measurement of food loss and waste will reduce confusion and help establish clearer goals and strategies. Improved and coordinated methodologies can identify missed opportunities and better communicate progress.

USDA and EPA worked to improve and update measurement of food loss and waste within their respective mission areas. The agencies continue to coordinate and leverage their efforts to provide a more complete assessment of food loss and waste amounts in the United States.

Joint Efforts

- Buzby, Jean C. (USDA) and Claudia Fabiano (EPA). "Food Loss and Waste Measurement Methods and Estimates for the United States." (Christian Reynolds, Tammara Soma, Charlotte Spring, and Jordon Lazell, Eds.). Routledge: Taylor & Francis Group: Oxon and New York, January 2020. This chapter discusses the key food loss and waste studies and estimates in the United States, including those by USDA and EPA.

- *The Economics of Food Loss in the Produce Industry (2020).* Edited by Travis Minor, Suzanne Thornsbury, Ashok K. Mishra, Published by Routledge. This book both analyzes current food loss literature and presents new empirical research. It draws lessons from those who have encountered these issues by focusing on how past regional or national estimates of food loss have been conducted with varying degrees of success. It includes chapters on several themes: understanding food loss from an economic perspective; efforts to measure food loss; case studies across commodities within the produce industry; and economic risks and opportunities. The commodity case studies provide detailed discussion of factors impacting changes in loss levels within the produce industry, and a wealth of knowledge on strategies and contexts is developed. The book concludes by identifying critical knowledge gaps and establishing future priorities. Note: Jean Buzby (USDA) and Claudia Fabiano (EPA) co-authored Chapter 6 titled "USDA and EPA estimation methods for food loss and waste in the United States."

- Supported development of Why and How to Measure Food Loss and Waste: A Practical Guide. This guide was developed as part of the Commission for Environmental Cooperation (CEC) Operational Plan 2017-2018 and its Measuring and Mitigating Food Loss and Waste project. It includes easy-to-use measurement guidelines for every segment of the food value chain, from primary production, to manufacturing, to the food service industry. This practical guide is available in English, French, and Spanish, and the collaboration also produced a Technical Report, which discusses the methods for quantifying FLW and surplus across the supply chain and the approaches for estimating environmental, financial and social impacts caused by FLW and food surplus

- EPA contributed to the report, A systems approach to assessing environmental and economic effects of food loss and waste interventions in the United States (June 2019, M.K. Muth, C. Birney, A. Cuéllar, et al.) This paper comprehensively reviews available information on the causes and consequences of food loss and waste (FLW) in the United States and lays the groundwork for prioritizing FLW interventions to benefit the environment and stakeholders in the food system.

USDA

- *Exploring Food Loss from Farm-to-Retail in the Produce Industry* (2019) Minor, T., C. Hitaj, F. Kuchler, S.R. Skorbiansky, B. Roe, and S. Thornsbury 2019. ERS. Choices. Quarter 1
- *Economic Drivers of Food Loss at the Farm and Pre-Retail Sectors: A Look at the Produce Supply Chain in the United States* (January 2020). This study by the USDA's Economic Research Service provides an overview of the drivers of food loss on the farm and other pre-retail sectors, with a focus on economic incentives that underlie the way fresh foods are grown, processed, and marketed in the United States. The study focuses on the produce sector because fruits and vegetables are highly perishable and important to diet quality.
- Consumer-Level Food Loss Estimate Validation Studies:
    - In September 2019, ERS entered into a cooperative agreement with Ted Jaenicke from Pennsylvania State University to review the accuracy and validity of new consumer-level loss estimates developed by RTI International in 2018 under a grant from ERS. Under the agreement, Jaenicke and his team will compare the new RTI-generated consumer-level loss factors against estimates and information from a modified and extended stochastic production frontier model in which food waste is identified as an input inefficiency. The model is explained here, Yang Yu, Edward C. Jaenicke. Estimating Food Waste as Household Production Inefficiency. American Journal of Agricultural Economics, 2020; DOI: 10.1002/ajae.12036
    - ERS has an ongoing contract with RTI International to develop new retail-level loss estimates for the Loss Adjusted Food Availability (LAFA) commodities. A recent General Accountability Office report, Food Loss and Waste: Building on Existing Federal Efforts Could Help Achieve National Reduction Goal, identified limited data and information about food loss and waste as one of three key areas in which challenges exist to reducing food loss and waste.

EPA

- EPA launched version 2.0 of the Excess Food Opportunity Map in April 2019, supporting diversion of excess food from landfills. The information presented by this map can be used to inform waste management at the local level and identify potential sources of organic feedstocks, infrastructure gaps and disposal alternatives to landfill. Composting facilities were updated with 2018 data for Version 2.0 of the map.

Priority Area 4: Clarify and Disseminate Information on Food Safety, Food Date Labels, and Food Donations.

Confusion about food safety, date labels, and food donation results in food loss and waste in groceries and in homes across the country. Clearer, coordinated guidance on the meaning of date labels and coordination on donation opportunities and benefits could spur reduction in both waste and food insecurity.

USDA

- Published updated FSIS Fact Sheet on Food Date Labeling. Also available in Spanish. (April 2019)
- Memorandum providing information to The Emergency Food Assistance Program (TEFAP) State agencies and eligible recipient agencies, such as food banks, on protections under the Bill Emerson Good Samaritan Food Donation Act for privately donated foods provided to them. (June 2019)
- Food and Nutrition Service (FNS) released a memo focused on best practices to minimize food waste of commodities donated to state agencies and emergency feeding organizations. (August 2019)
- FNS released a final rule to implement the TEFAP provisions of the 2018 Farm Bill. The rule established the requirements on TEFAP for projects to harvest, process, package, or transport donated commodities for use by TEFAP emergency feeding organizations (EFOs), also known as Farm to Food Bank Projects. These projects must have a purpose of reducing food waste at the agricultural production, processing, or

distribution level through the donation of food. State agencies must amend their state plans in order to participate, and FNS will soon release a request for these state plan amendments. These plans describe state agency projects in partnership with emergency EFOs to harvest, process, or package unharvested, unprocessed, or unpackaged commodities. (October 2019)

- USDA posted FAQs on the Bill Emerson Good Samaritan Food Donation Act of 1996 (PDF, 241 KB) to help address potential confusion about the coverage of the Act and encourage increased food donations. (December 2019)

FDA

- May 2019: Issued an open "Letter to Industry" encouraging food manufacturers to use a standardized introductory phrase of "Best if Used By" when choosing to apply quality-based date label on packaged foods and to increase efforts educate their consumers on the meaning of date labels.
- January 2020: Provided consultation on the development of food safety best practices documents for food donors, food recovery organizations, and charitable food agencies that was submitted to consideration and adoption by the Conference for Food Protection.
- March 2020: Released, Guidance for Industry: Temporary Policy Regarding Nutrition Labeling of Certain Packaged Food During the COVID-19 Public Health Emergency, that provide restaurants and food manufacturers flexibility regarding nutrition labeling of certain packaged food to facilitate the distribution of food during the COVID-19 pandemic.
- March 2020: Posted an on-line fact sheet Safely distributing unused human food for use as animal food that provides advice to restaurants, warehouses, and food markets on safely diverting surplus human foods to feed animals.

Priority Area 5: Collaborate with Private Industry to Reduce Food Loss and Waste Across the Supply Chain.

The food industry, including processors, manufacturers, distributors, retailers, and food service establishments, has an important role in reducing food loss and waste. Showcasing and building partnerships through efforts such as the USDA/EPA U.S. Food Loss and Waste 2030 Champions, as well as connecting stakeholders with food waste reduction technologies, will help stimulate further efforts throughout the food supply chain.

Joint Efforts

- Six more companies joined the U.S. Food Loss and Waste 2030 Champions (January 2020)
- In April 2019, the USDA, EPA and FDA signed a memorandum of understanding (MOU) with ReFED (PDF, 783 KB), a multi-stakeholder nonprofit committed to reducing U.S. food waste.
- In August 2019, the USDA, EPA and FDA also signed an MOU with the Food Waste Reduction Alliance (FWRA) (composed of the Consumer Brands Association, the Food Industry Association, and the National Restaurant Association) to collaborate on industry education and engagement with respect to the importance of food waste reduction.
- FDA and EPA provided representatives to an expert network that advised and provided curriculum for the ReFED Nonprofit Food Recovery Accelerator, a program created by ReFED that assisted food recovery organizations focus on leveraging earned revenue models, technology solutions, and human-centered design.

EPA

- U.S. EPA honors ProduceGood for leading food recovery efforts in San Diego County
- U.S. EPA honors MGM Resorts' Bellagio Hotel and Casino for leading food recovery efforts nationwide

- In Case You Missed It: In the Fight Against Food Waste, Leaders Focus on the Business Case
- EPA presents Mariners/T-Mobile Park with national award for food recovery

USDA

- USDA presented a snapshot of federal programs and actions in the United States to help reduce, reuse, and recycle food loss and waste in a webinar for Business France, the French Embassy's trade agency on April 29, 2020.
- In May 2020, USDA released a U.S. Food Loss and Waste 2030 Champions Milestones Report (PDF, 2.4 MB). This report highlights best practices from select 2030 Champions – including grocery stores, restaurants, food manufacturers, food service, hospitality, and entertainment companies – demonstrating how they have succeeded in reducing food loss and waste in their operations.

Collaboration on new value-added products – making new technologies to keep fresh produce fresher, as well as developing new products from food processing waste

2019

- Material Transfer Research Agreement, Lonestar Citrus Growers, to work on research related to the use of steam explosion on California red grapefruit peel for the water extraction of citrus fiber for food products, (Agreement# 56-6034-8-022) August 27, 2018. Publication in Progress.
- Material Transfer Research Agreement, Lonestar Citrus Growers, to work on research related to the use of steam explosion on Texas red grapefruit peel for the water extraction of citrus fiber for food products, (Agreement# 58-6034-9-015) January 30, 2019. Publication in Progress.
- Material Transfer Research Agreement, Jones Laffin Company Inc., to work on research related to the use of extracted citrus seed, dairy and plant proteins for the improvement of orange juice flavor, (Agreement# 58-6034-9-024) May 1, 2019.
- Material Transfer Agreement, National Renewable Energy Laboratory, to on research related to the use of raw, steam exploded and water extracted citrus processing waste as a feedstock for anaerobic digestion to produce volatile fatty acids, (Agreement# 15693) April 2, 2019.
- Cooperative Research and Development Agreement, NUCO Citrus (a citrus byproduct company founded by Gramercy Hill Partners), to work on research related to the extraction of pectin, sugars, phenolics and other valuable components in Florida orange peel, (Agreement# 58-6034-9-021) April 1, 2019.
- AFRI Sustainable Agricultural Systems Grant Proposal, Michigan State University, Converting Citrus Juicing Waste Into Compostable Packages for Food, (Proposal 2019-08293) Submitted November 5, 2019.
- Full Cycle Bioplastics (FCB) has been partnering with the USDA ARS for the past five years to help us scale our technology to turn food waste into compostable and marine degradable plastic.
- Cooperative Research and Development Agreement, with Chino Valley farms in central California to help them solve their egg waste problem. Rejected eggs (especially in quarantined areas) pose a disposal problem for the environment and added expense to the egg farmer.

2020

- Cooperative Research and Development Agreement with a fresh-cut processor and the Food Quality Laboratory at the USDA-ARS, Beltsville, MD has teamed up to develop and test a technology to extend shelf life and reduce post-harvest loss of fresh vegetables (Agreement is pending).
- Cooperative Research and Development Agreement with Revive Genomics, UC San Diego, Food Quality Laboratory at the USDA-ARS, Beltsville, MD and Bioprodex to develop a broadspectrum nanomaterial using GRAS compounds for broad spectrum control of pre and postharvest fungi. (Agreement is pending).

- Cooperative Research and Development Agreement, California Olive Ranch [large California olive oil processor], to establish a valorization process for olive pomace, the semisolid co-product of olive oil processing, (Agreement 2030-41000-064-25C) October 1, 2018 to September 30, 2020.
- Cooperative Research and Development Agreement, ReGrained [California startup company], to develop methods for upcycling brewers spent grains into snack bars, (Agreement 2030-41440-007-05C) May 1, 2016 to July 30, 2020.
- Cooperative Research and Development Agreement, Treasure8 [California startup company], to develop novel and healthy crisp fruit, vegetable, and nut snacks, sourcing ingredients from misshapen but otherwise sound produce, (Agreement 2030-41000-064-20C) May 1, 2015 to April 30, 2020.
- Full Cycle Bioplastics (FCB) we will also work together to determine the microbial compositions during composting of waste materials. This information will be applied to FCB's digesters to understand interrelations between microbial composition and PHA production.

Patents:

- McHugh, T.H., Avena-Bustillos R.D, Olson, D.A., Pan, Z. Intermittent Infrared Drying for Brewery-Spent Grain. Letters Patent of the United States, USDA Case 0173.17, (2019).

Priority Area 6: Encourage Food Waste Reduction by Federal Agencies in their Respective Facilities.

Federal facilities operate food service venues, including cafeterias and concessions, and manage events. Encouraging the reduction of food loss and waste at these facilities and events will demonstrate federal leadership and implementation of the administration's priorities.

USDA

- USDA Video: *Composting: One Way to Win on Reducing Food Waste*

EPA

- October 2019 Presentation at the Federal Environmental Symposium: Federal Food Initiatives and Efforts

For more information on the Winning on Reducing Food Waste Initiative, visit:

https://www.usda.gov/foodlossandwaste
https://www.epa.gov/sustainable-management-food
https://www.fda.gov/food/consumers/food-loss-and-waste

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