

Food Waste Reduction in School Meal Programs



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Extension and Outreach

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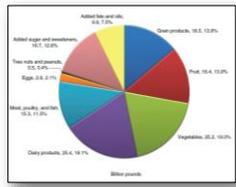
School Meal Programs

- Provides nutritionally balanced, low-cost or free meals
- Must meet nutrition standards
- Committed to prevent hunger
- Responsible stewards of Federal dollars
- Child Nutrition Program policy sims to limit food waste



Food Waste in the US

- Agriculture Secretary Tom Vilsack and EPA Deputy Director Stan Meiburg announced the 1st ever national food loss and waste goal
 - 50% reduction by 2030



- Current food waste in the US:
 - Between 30-40% of the food supply
 - Approximately \$161 billion worth of food
 - In 2010, the average amount of food loss per American was 429 pounds

Why Does it Matter?

- Could have helped feed the hungry
- Land, water, labor, and energy are used in producing, processing, transporting, preparing, storing, and disposing of discarded food
- Food waste is the single largest component going into municipal landfills
 - Generates methane, helping to make landfills the third largest source of methane



Food Waste Challenge



- USDA and EPA launched the U.S. Food Waste Challenge
 - Farms, agricultural processors, food manufacturers, grocery stores, restaurants, universities, schools, and local governments to join efforts to:
 - **Reduce** food waste by improving products, storage, shopping/ordering, marketing, labeling, and cooking methods
 - **Recover** food waste by connecting potential food donors to hunger relief organizations
 - **Recycle** food waste to feed animals or to create compost, bioenergy and natural fertilizers



K-12 Schools

"I know schools are already doing so much to cut food waste and educate children about food and agriculture. It would be great if we could get hundreds of schools to join the Food Waste Challenge and spread the word about these good efforts...and stimulate more!"

– Janey Thornton, Deputy Undersecretary for Food, Nutrition, and Consumer Services, USDA –

http://www.usda.gov/ocf/foodwaste/resources/K12_schools.html

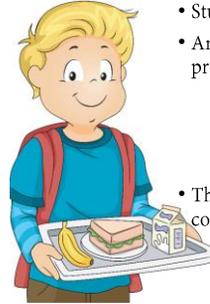


Food Waste in Schools

- Concern for many schools
- Various stakeholders need to be engaged
 - Food service, principal, teachers, students, parents, custodians, etc.
- Students need to be frequently reminded on how to build a reimbursable school meal in a positive way



Things to Consider



- Students are generally compassionate
- Any type of food waste reduction/food rescue program should not:
 - Pressure students to donate to please others
 - Encourage students to take food they do not plan to eat
 - Prevent students from eating foods they selected for their meal
- The overall goal should be to **increase** consumption, which in turn will reduce waste

Increase Consumption

- Implement offer vs. serve
 - Make sure teachers, parents and students understand the concept
- Increase food choices
 - At least 2 fruits and 2 vegetables each day
 - Alternative entrée option (deli sandwich, yogurt plate, Kidz-ables, etc.)
- Ensure students have ample time to eat
 - 15 minutes for breakfast
 - 15 minutes for lunch
- Have recess before lunch



Reduce Food Waste

- Allow students to save items for later consumption
- Have a sharing table for students to place items they are not going to consume
- Measure food waste to determine which food items are most frequently wasted and make changes to the menu
- Compost food waste for school or community gardens
 - Only plant based food
- Work with a local farmer to provide food waste to livestock



Unserviced Food

- Large amounts of unserved food on a regular basis
 - Review production practices and meal participation
- Alternatives permitted to eliminate waste by local health and sanitation codes should be exhausted before discarding food
- Excess food may be donated to a non-profit organization
 - Good Samaritan Laws typically provide protection from any liability of such donations



Food Safety – Cathy Strohbehn

- Key elements of sharing tables:
 - Shelf stable food packaged by manufacturer (individual portions)
 - Foods sold in Child Nutrition Programs (not food from home)
 - Unopened packages
 - Continuous monitoring of the table
 - Plan re security once accepted
 - Plan for distribution
- Sample SOP in packets

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Action Steps



- If you are considering the re-use of food through sharing tables or donation:
 - Contact your local food safety inspector to discuss the process
 - Develop standards and policies to support the process
 - Train staff and students
- Include guidelines for sharing tables in food service program's HACCP plan



Composting

- Best practice: plant based foods
 - Plate waste ok, but challenge to sort
 - Avoid dairy and meat products
 - Use kitchen production scraps
- Three general types:
 - Aerobic or static
 - Bokashi
 - Formation with microorganisms)
 - Vermicomposting
 - Worms



Composting – When/Where

- Need location away from public
- Potential cross contamination
- Recognize not a sand pit!
- Requires time inputs, materials and record keeping
- Consider carefully



Resources

- www.iowafoodsafety.org
 - SOPs
 - [ISU Safe Produce Modules](#)
 - School garden coordinators and students
 - Assess learning
 - Consider requiring prior to garden work
- [ICN Food Safety and School Gardens](#)
- [North Carolina School Gardens](#)



School Meals
Food Waste Checklist

Food waste is a concern for many schools. There are many different factors that affect waste in school meals. Complete the assessment below to reflect current practices at your school. The results can be utilized to develop a food waste reduction action plan at your school.

- Implement "offer versus serve" (students can decline items (i.e. milk), but must select at least 3 components, including a fruit/vegetable).
- Offer at least two fruit and at least two vegetable choices each day.
- Offer an alternative entrée item each day (sell sandwich, yogurt plate, etc.).
- Students have ample time to eat (at least 15 minutes for breakfast and 20 minutes for lunch after they receive their meal).
- recess is held before lunch.
- Completed a [Sustainable Lunchroom Scorecard](#) and have made the following changes:

<input type="checkbox"/> Focus on Fruits	<input type="checkbox"/> Increasing Sales of Reimbursable Meals
<input type="checkbox"/> Promoting Vegetables	<input type="checkbox"/> Creating School Synergies
<input type="checkbox"/> Moving More White Milk	<input type="checkbox"/> Signage, Atmosphere, Student involvement, etc.
- Allows students to save items for later consumption, such as an apple.
- Has a sharing table for students to place items they are not going to consume (only includes non-perishable items and items are only for students).
- Measure food waste to determine which food items are most frequently wasted and make changes to the menu.
- Compost food waste for school or community gardens (only plant based food).
- Work with a local farmer to provide food waste to livestock.

For additional information: [Iowa's Food Waste Reduction in School Meals Program](#)

Iowa School Food Waste Survey

- Completed by 178 food service directors
- Most common techniques implemented that has reduced food waste:
 - Implemented offer vs. serve
 - Increased the number of food choices
 - Self-serve fruit and vegetable bar



Iowa School Food Waste Survey

- Schools were interested in the following strategies to reduce food waste:
 - Working to ensure students have enough time to eat
 - Completing a food waste assessment
 - Letting students self-serve



Iowa School Food Waste Survey

- Greatest concerns with attempting to decrease food waste:
 - Food safety concerns
 - Time to plan and coordinate
 - Cost



Iowa School Food Waste Survey

- Interested in learning more about:
 - Smarter Lunchroom Techniques
 - How to complete a food waste assessment
 - How to recover wholesome, uneaten food for human consumption
- 50% expressed interest in participating in a pilot



Success Story – Morning Sun

- TAG students (3rd – 6th) – Nancy Martin
- Rotate on a daily basis
- Paper products and cold lunches are put in separate waste containers
- Natural waste was not included (banana peel, orange peel, etc.)
- Weigh total food waste each day
- Each month students compile the data and display on board

"This Hot Lunch Waste Watch Program is a win-win on many levels, but particularly in regards to good nutrition and saving important dollars in our school food budget."



Success Story – Tri Center

- Lego League - Shiloh Corrin
- Developed a program to combat food waste locally
- Worked with a local hog farmer
- Collected food waste daily/delivered to farm
- Presented their project at a regional competition
 - Placed 1st out of 28 teams!
- Continue to work with superintendent and the cafeteria staff to help students make good food choices and eliminate food waste



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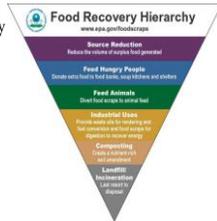
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Tom Anderson

Food Waste

Why is DNR interested in food waste?

- Food waste is landfilled more than any other material type
- Significant contributor to Greenhouse Gasses once landfilled
- Wasted natural resources
- Support for EPA's Food Waste Hierarchy



Food Waste

- Statewide Waste Characterization Study
- MSW food waste landfilled in Iowa
 - 1998 10.3% 226,597 tons
 - 2005 10.6% 283,807 tons
 - 2011 13.3% 380,917 tons

Food Waste

- Industrial, Commercial and Institutional (ICI) Food Waste Study – 2015
 - Interviews were conducted with 111 schools. Questions included:
 - The amount of food waste generated
 - Type of food waste
 - Pre-consumer, post-consumer, both
 - Fruits, vegetables, grains, meats, dairy, other
 - Packaged, unpackaged, both
 - Disposal method
 - Donate, recycle and/or disposal
 - Frequency of disposal
 - Miles traveled to dispose of food waste
 - Interest in obtaining free food waste assistance

School Food Waste Pilot Project

- **Goal**
 - To identify the types and quantity of food waste being disposed
 - Develop best practices to reduce food waste
- **Participants**
 - 10 elementary schools
- **Timeline**
 - Assessments beginning in September– project completion prior to Thanksgiving break
- **Logistics:**
 - Observation/Assessment and Waste Audit
- **Deliverable:**
 - Tool kit for schools including but not limited to:
 - Assessment results, case studies, observations, recommendations, and resources

Application

- **Deadline: September 1st**
- Interest
- Tray return process
- Student involvement

School Meal Waste Assessment Pilot Application	
<small>Iowa Department of Education is partnering with the Iowa Department of Natural Resources to conduct a food waste pilot with 20 Iowa elementary schools during the 2016-17 school year. The pilot will include observations, assessments, and a waste audit.</small>	
District Name: _____	School Name: _____
City: _____	County: _____
Enrollment: _____	School Contact Name: _____
Title: _____	E-mail: _____
Average Breakfast Participation: _____	Average Lunch Participation: _____
1. Please describe why you are interested in this pilot?	
2. Please describe how students currently dump their tray? (Dump all items together, dump milk in a pail, separate paper and food, etc.)	
3. Student involvement is essential for this project. Do you have a student group in mind that could be a part of this project that would include 4th, 5th, or 6th grades (Student Council, TAG, Environment Club, etc.)?	
Signature of School Contact: _____	
Signature of Food Service Manager/Director: _____	
Signature of Principal: _____	

School Food Waste Resources

Solid Waste Alternatives Program

- Quarterly application deadlines: January, April, July, October
- Awards
 - Requests up to \$10,000 are offered as a forgivable loan
 - The next \$50,000 are offered as 0% loans
 - Awards amounts above \$60,000 are offered as 3% loans
- 25% cash match



Iowa Waste Exchange

- Designed to keep waste out of the landfills and in production.
- Industry, business and local governments dispose of items others can use. IWE representatives are available to help anyone who is looking for a specific item or has items they are willing to give away.
- No-cost, non-regulatory service matching clients that have byproduct materials with other groups interested in using or recycling those materials
- IWE reps also provide solid waste management assistance such as with this pilot food waste reduction project

Thank You!

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