Food waste: have we thrown away the chance to end hunger?
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Food waste, hunger and the environment

• Global issues update:
  – Agriculture and the environment
  – Hunger

• Field to Foodbank: one option to avoid waste in the first place

• The take-home message, literally

Source: www.kpbs.org
Agricultural production and the environment

• Food distribution accounts for 17% of U.S. energy use
  – 8 calories of energy to produce 1 edible calorie of corn
  – 35 calories to produce 1 calorie of beef

• 90% of U.S. consumptive water use
  – 13,600 pounds of water to produce 1 pound of red meat

• 83% of the average U.S. household carbon footprint/year for food consumption is agricultural production
  – Weber and Matthews, 2008
“The world has a water shortage, not a food shortage”
The Economist, 9/08

Global population growth is rampant

Source: U.S. Census Bureau, International Data Base, June 2011 Update.
Global food costs are rising

Hunger is a growing problem

- U.S. Hunger Statistics:
  - 48.8 million Americans in food-insecure households
  - 20% of households with children considered food-insecure by USDA
  - Nationally, Feeding America food assistance served 46 million people in 2011, an increase of 25% from 2010
Hunger is a growing problem

• Wisconsin is no different:
  – Second Harvest Foodbank of Southern Wisconsin is serving 83% more people than in 2006.
  – 140,600 individuals served in 2010, 43% of whom are children
  – 73% of participating households with children are food insecure in 2010 survey

The solution is a pile of garbage

• Reducing food waste by 25% could feed 43 million people 3 times a day, and end hunger for 430 million Americans (if we had that many)

• Globally, enough food is produced to feed the 860 million hungry according to the UN-FAO

  – From J. Bloom’s American Wasteland
The big picture of U.S. food waste

• 160 billion pounds each year
  – Per capita food waste increased 50% since 1974

• Accounts for 19% of landfill waste
  – 2nd to paper, doubled from 1980 to 2007
  – In 2008, Pennsylvania received waste from 24 states and Puerto Rico

• About 40% of available calories are wasted

The big picture of U.S. food waste

“Buying three shirts and then throwing one away would be regarded as unorthodox behavior. But buying a sandwich and eating half and throwing the other half away is not.”

— Amartya Sen, Harvard Professor and Nobel Prize winner, in Bloom’s American Wasteland
The big picture of U.S. food waste

- Food waste is not related well to income – the poor and rich tend to waste less than middle income

- Food waste is correlated strongly with age
  – Those that were around during World War II waste much less food

Source: New Hampshire Library Collection
Food waste: agriculture

• Much of agricultural field waste is based on consumer pickiness – size, uniformity and appearance but not taste
• Salinas Valley lettuce example:
  – 90% of field is harvested, 10% bypassed
  – Equivalent of 15,300 bypassed acres in 2007
  – 13 million pounds not harvested
Food distribution

• Focus crops:
  – Potatoes
  – Carrots
  – Onions
  – Snap beans
  – Sweet corn
  – Apples

• 1.5 million pounds captured and distributed thus far

Food Waste:
Taking advantage of our weaknesses...

• Cornell Food and Brand Lab, Brian Wansink
  – Bottomless soup bowl experiment: those with refilling bowls ate 73% more than regular bowls
  – Average dinner plate increased 36% between 1960 and 2007
    • We leave behind 8% of what we serve ourselves, regardless of plate size
    • “Small Plate Movement”: reduce plate from 12 to 10 inches will reduce calories by 22%
Taking advantage of our weaknesses...

- Cornell Food and Brand Lab, Brian Wansink
  - Chinese buffet experiment: diners with large plates took 52% more food and wasted 135% more than those with small plates

Food waste: at home

- Estimates vary, but about 1/3 of food brought home is never eaten
- The Garbage Project (Univ. of Arizona, 1973-2005)
  - About 15% of food ends up in garbage can
  - 10% goes down drain
- Want a raise?
  - Food waste costs the average household about $2,275 per year
Food waste: at home

• Home solutions:
  – Smaller plates,
  – Plan meals, make a list and stick to it
  – We all have blemishes – why can’t our food?
  – Avoid bulk buying
  – A good fridge goes a long way
  – Freeze bulk
  – Eat leftovers
  – If all else fails, compost

References


• Cornell Univ. Food and Brand Lab: Food Psychology.
  – http://foodpsychology.cornell.edu/index.html