Knowledge for Life

Food waste composting at KSU

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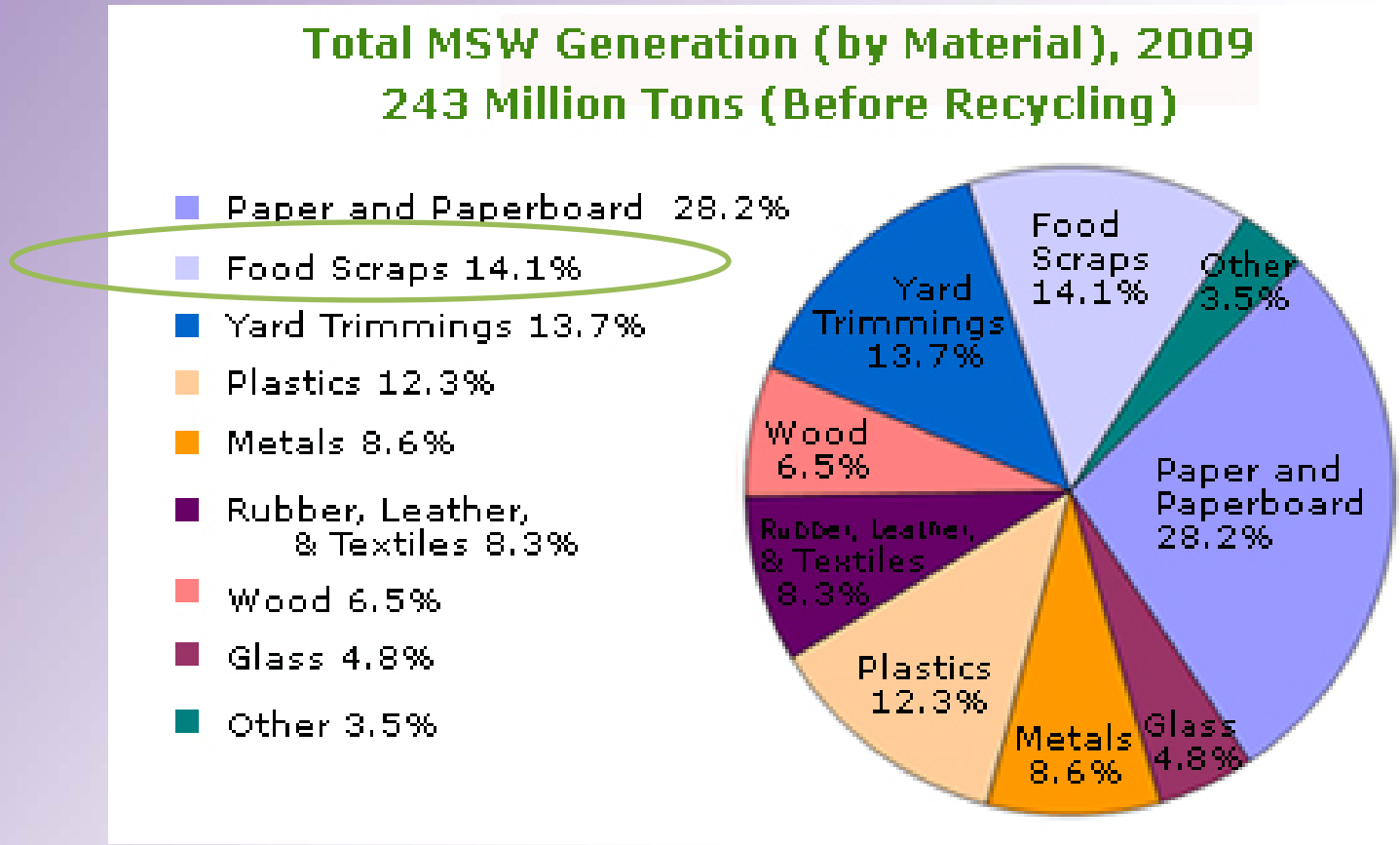
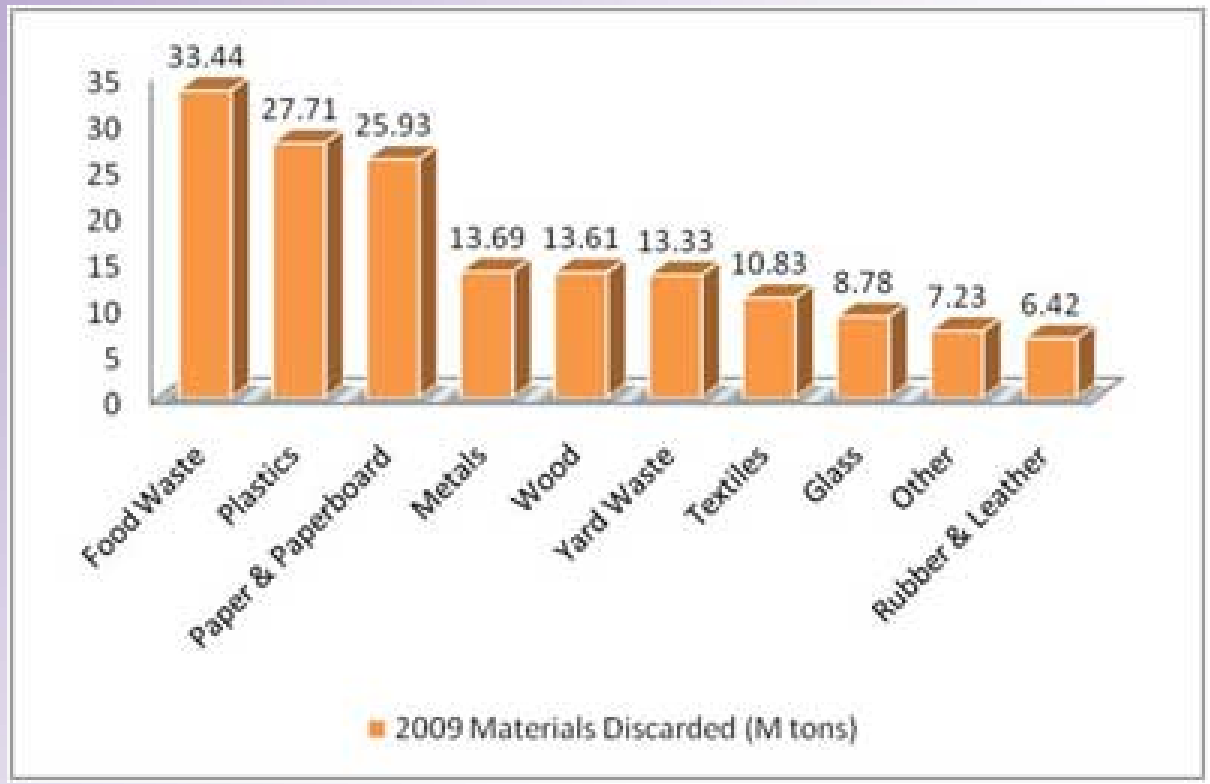
EPA statistics



Municipal Solid Waste Discarded (by material) in 2009



KSU Facts

- 23,000+ students
- 3,800 live in residence halls
- Derby and Kramer are the main dining centers on campus

Buying locally

- 63,000 lbs of meat from Animal Science Dept.
- 38,000 gallons of fluid milk and 900 gallons of ice cream from Call Hall (Dairy)
- 73,000 pounds of flour from McPherson, Kansas (Cereal Food Processors)
- Produce from Willow Creek Farm

What we waste: Plates

We collected food and beverage plate waste at Kramer Dining Center for a five day period.

- Breakfast
  - **256** lbs. of Beverage
  - **118** lbs. of Food
- Lunch
  - **390.75 lbs.** of Beverage Waste
  - **342.40 lbs.** of Food Waste
- Dinner
  - **325 lbs**. of Beverage Waste
  - **510 lbs.** of Food Waste

Waste generated at Kramer…

- On average, **each student** is contributing
  - 0.17 lbs. of food and beverage waste per meal, or,
  - 0.5 lbs. per day
  - Equals 3.5 lbs. per week.
- 3.5 lbs per week X 3,800 students
- = 13,300 lbs per week, or 6.65 tons per week
- That's just in the dining centers, also have the Union restaurants, coffee shops, etc.

Student support

- Now waste is collected from Radina's in the Leadership Studies Building
- LEED certified building
- Coffee, breakfast, and lunch
- Started because of a student class, and because of interested students

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How it works

- Dining services: Collect food
- Facilities staff: Use their truck, collect the materials, deliver
- Agronomy farm: Waste dropped off, covered with residue or grain

PLACE
NEW MATERIAL
ON
THIS PILE
11/03/2008

11/03/2008

11/03/2008

11/03/2008

Compost Uses

- On-farm
  - “Manure” study: They prefer our compost
  - Flower beds
  - Remediate degraded soils
- Transported 10 cubic yards per year to Willow Lake Farm, a produce farm operated by a KSU student club
- Club sells produce to dining services, and public

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Dining Center

Vegetable Production

Compost

Sustainable Food

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Why do we compost food waste?

- No one is making us do this, and no one is getting rich
- We feel it's the right thing to do
- Some recognition:
- 2010 and 2011: "The Princeton Review's Guide to 311 Green Colleges"
  - K-State and Southwestern College in Winfield

2200 Kimball Avenue, Mar

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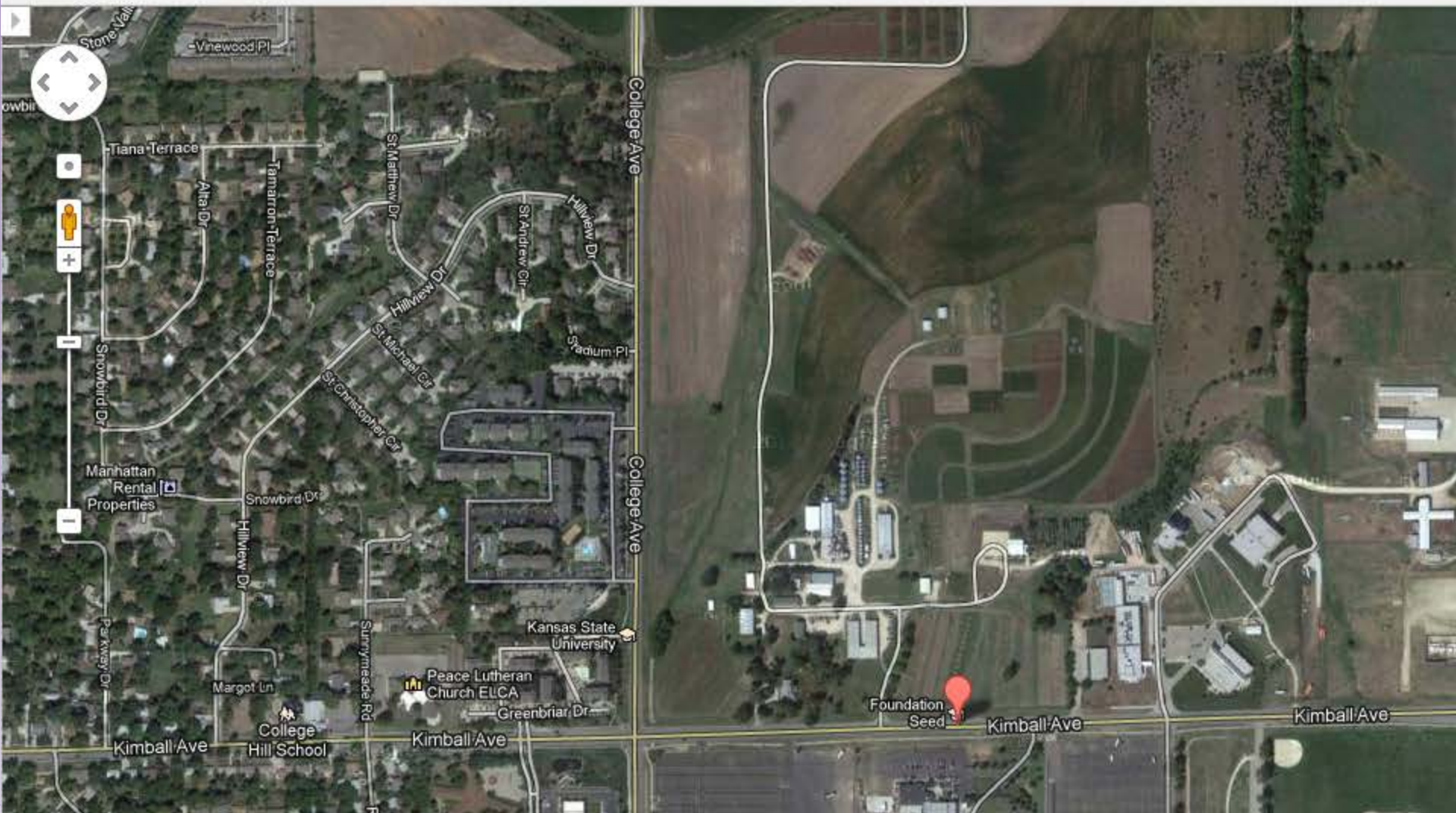

Problems

- Food waste must be covered within 24 hours of deposition at the site
- Odors
- Vector (think varmint) control
- Like mice, right?

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High Tech Solution

- We murdered them!
- Not really!
- We (Garry) came up with a plan
- Facilities provided the raw material

FOOD
WASTE
ONLY
FOOD
WASTE
ONLY

Environmental benefits

- When food is disposed in a landfill it quickly rots and becomes methane— a potent greenhouse gas with 21 times the global warming potential of carbon dioxide.
  - Landfills are a major source of human-related methane in the United States, accounting for more than 20 percent of all methane emissions.
- Soil amendment: improves soil health and structure; increasing drought resistance; and reducing the need for supplemental water, fertilizers, and pesticides.

Sanitation benefits

- Food wastes dumped in standard trash cans and dumpsters in the back alley of a home, store or restaurant can attract rodents and insects, – as well as generate bad odors.
- By placing food scraps in a closed, leakproof, durable, and reusable container, frequently picked up, can reduce problems.

What can you compost?

- fruit and vegetable trim
- out-dated bakery goods and doughs
- dairy products (cheese, yogurt, etc.)
- coffee grounds and filters
- tea bags
- floral waste
- egg shells and paper cartons
- slurry from a pulper

Continued

- soiled napkins, tissues, paper towels, and paper wrappers and packaging
- waxed corrugated boxes (suggest shredding)
- coated papers, like milk cartons
- paper plates, cups, and trays
- biodegradable bags, plates, cups, and packaging
- meat from plate scraps (works fine in large scale composting, not in backyards)
- seafood, including shells
- liquids (beer, milk, soda, etc.)
- salad bar leftovers, including dressings

What to avoid

- Anything inorganic, like plastic, glass, or aluminum
- Some composting facilities prohibit meat, grease, oils and other non-vegetative organics.
  - Although these products are degradable, they break down slowly and composting them requires more care and supervision because they can attract animals and insects.