

Rethinking Kitchen and Shopping Techniques for the Environment



Overview: Rethinking Kitchen and Shopping Techniques for the Environment

- Small changes by individuals can add up to a larger impact
- From sourcing food selection prep disposal
- Sourcing
 - Which stores, and how far do you drive?
- Food selection
 - Local food vs shipped
 - Packaging or bring-your-own-container
 - Carbon emissions of different food types

Overview: Rethinking Kitchen and Shopping Techniques for the Environment (cont'd)

- Selecting foods and meals
- Preparing food
 - Paper towels or reusable, compostable towels, wipes, and sponges
 - Paper napkins vs cloth & handkerchiefs vs tissues
 - Kitchen cleaning chemicals
- Disposal
 - Food waste disposal options
- Appliances
- Resources/Links

Developing an Environmentally Friendly Approach to What We Eat Sourcing our Food

- Be aware of how far food travels to get to our plates (the value of buying local and in season)
 - Buying local means fewer travel miles and less pollution to fly or drive the food to us. It also means less packaging and therefore pollution. (OneGreenPlanet)
 - Buying in season means reducing the storage and reducing the spoilage and waste in the process. (<u>StopFoodWaste.ie</u>)
- Options
 - Local farm markets
 - Subscribe to local farm packages
 - Check food source labels on produce

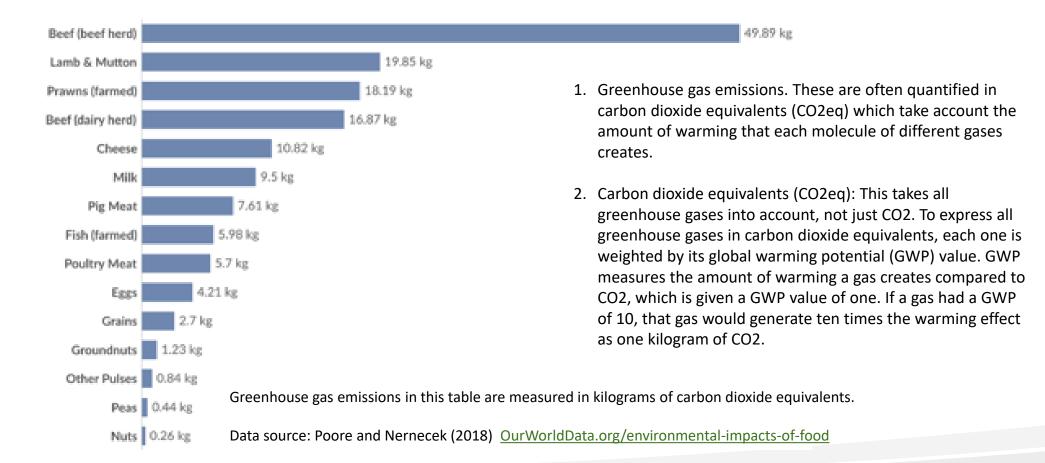
Developing an Environmentally Friendly Approach to What We Eat Adjusting our diets

It's up to each of us to figure out what works for us and our families. Many of us eat much more protein than we need. Becoming a vegan or a vegetarian is great for the environment but doesn't work for many people. Decisions about food involve cost, convenience, family preferences, time, etc. Regardless of your situation, you can keep these basics in mind and look for ways to adjust ingredients in your cooking.

Developing an Environmentally Friendly Approach to What We Eat Examples of modifying

- Beef tacos or burritos: substitute poultry, reduce beef and add more beans.
- Meat or chicken stew: add in tofu as substitute for some of the meat (it will absorb the flavor of the stew)
- Pick a night to go vegetarian (ideas at <u>mondaycampaigns.org/meatless-Monday</u>), and see if you can find a few recipes that the whole family will love. Look for foods from various cultures
- Have breakfast for dinner (eggs and potatoes, savory pancakes)
- Reduce quantity of meat
- Use whole grains as the base of the meal and add vegetables, beans, cheese, and nuts to increase protein and flavor. Try different grains and beans to increase variety and reduce mono-agriculture.

High-Emission vs Low-Emission Foods: Greenhouse gas emissions per 100 grams of protein



How to Develop an Environmentally Friendly Approach to What We Eat How much protein do we need?

Calculator at <u>nal.usda.gov</u>

- USDA recommends:
 - Children 4-7 ounces/day
 - Women 5-6 oz/day
 - Men 6-7 oz/day

How to Develop an Environmentally Friendly Approach to What We Eat Examples of 1 ounce-equivalent from the Protein Foods Group

- 1 ounce of meat, poultry, or fish
- 1/4 cup cooked beans
- 1 egg
- 1 tablespoon of peanut butter
- ½ ounce of nuts or seeds
- ¼ cup (about 2 ounces) of tofu
- 1 ounce tempeh, cooked

Source: <u>myplate.gov</u>

Developing an Environmentally Friendly Approach to What We Eat Where to get more menu ideas

- Get this conversation going with friends, family and neighbors
- Subscribe to recipe newsletters like <u>cooking.nytimes.com</u>, <u>americastestkitchen.com</u>, <u>patijinich.com</u>
- Treat yourself to a new cookbook that's less focused on meat
- For gatherings, try more potlucks with these tools in mind

Reducing Plastic in Shopping Packaging – How to reduce plastic use

- Buy in bulk or buy only as much as you need
 - Bethesda Co-Op on Seven Locks and MOM's Organic Market have spices, beans, grains, etc., in bulk.
 - Lotte's Market on Veirs Mill Rd, Yekta, and Penzey's Spices sell bulk spices NOTE: Look for lead warning labels on some packaging in China-originating pre-wrapped items
 - "Fillable" stores let you bring your own containers. See Trace in Vienna, "the zero waste store," which carries household liquids and dry goods.

Reducing Plastic in Shopping

- Ask for non-plastic wrappings or bring your own
 - Fresh Market you can buy unpackaged fish & meat and have it wrapped in paper or a container that you bring
 - Also at Lotte Market, Great Wall Market, and New York Market
- Buy produce from the bulk bins instead of pre-packaged in plastic
 - Bring your own reusable produce mesh bags, available for purchase on most supermarket household goods aisles
 - Use compostable bags to purchase produce, then use the bags to collect your food waste for composting
 - Trader Joe's & MOM's Organic Market have these available in the produce dept





Plastics, Continued

- Reduce County initiatives
 - The county council has approved a law to ban single-use plastic bags at grocery and other stores, along with a \$0.10 fee for a new paper bag, called the Bring Your Own Bag bill. The law goes into effect Jan 1, 2026.
 - To encourage reusable bag usage and reduce plastic trash all over the county
- Reuse
 - Ziploc-type bags can be washed and reused multiple times
- Recycle
 - Ziploc-type bags are recyclable with plastic bags that are collected at grocery store bins, NOT in our curbside blue bins
 - Small plastic items (screw caps, etc.) can be recycled in MoCo in the blue bins



Composting Options

- Compost Crew
- Backyard composting
- Deliver to a collection site

Trashcan or Sink Disposal

- Stinky in open trash can
- WSSC discourages sink disposal
 - Clogs up water treatment facilities
- 1960's homes' drainpipes become occluded over time; ground-up food waste causes costly drain blockages

Disposing of Food Waste Garbage Disposal vs Garbage Can vs Compost

What is the greenest way to deal with food waste?

- Light green: Running it through the garbage disposal, from which it heads to the wastewater treatment plant.
- Green: Toss it in your compost bin.
- Greenest: Reduce the amount of food we waste in the first place.

ecomyths.org/sink-disposals-vs-trashcans



Disposing of Food Waste Where does food waste go from the trashcan?

Food scraps that are put into garbage cans in Montgomery County end up at the incinerator in Dickerson, which produces greenhouse gas and toxic gas emissions.

For many other communities, food ends up in a landfill and decomposes, releasing methane gas. Landfills, by law, capture methane, and either burn it off or clean it to sell back to the energy grid. However, some methane escapes.

Collecting food waste and processing it into gas/electricity requires far more energy than collecting it for compost.

Disposing of Food Waste Where does food waste go from the disposal?

Food scraps in the disposer go into the waterways. It takes a considerable amount of water and energy to filter out food waste when it reaches a water treatment facility, and contributes to the formation of "fatbergs" that clog the systems.

Using the disposer for large quantities of food increases WSSC cleanup costs at the water treatment facility.

Our older homes have older sewage lines to the street, which have often become occluded and the interior diameters narrowed. They will clog and cost a great deal for a plumber to ream out.

Use your disposer only for food bits that are stuck to plates and pots, after you've scraped them.

Disposing of Food Waste What not to put down any disposal

Large quantities of starchy foods like rice, pasta, and potatoes break down into a mush that can clog your drain.

Stringy foods: celery, corn husks, artichokes, edamame pods, asparagus, and rhubarb, fruit and vegetable peels. They often pass through most standard disposals without being ground properly and can ball up in the downstream plumbing and cause a clog.

Eggshells, shellfish, and coffee grounds. They don't decompose quickly, and a large amount can accumulate and stop up the drain, especially with older pipes.

Food Waste Composting Benefits of composting

- 1.Composting food scraps reduces trash hauling costs.
- 2. Composting food scraps does not produce methane. Instead, the composting process has the potential to absorb CO2 and atmospheric greenhouse gases.
- 3. Compost is a natural soil conditioner, improving soil quality.
- 4. Separating food waste into a covered bin reduces the amount of trash for the county incinerator and your trashcan won't stink of rotten food.

Food Waste Composting What do I do with the scraps I'm collecting?

As you're preparing food or scraping plates after a meal, you'll want a safe and odor-free place for the bits. Here are some options:

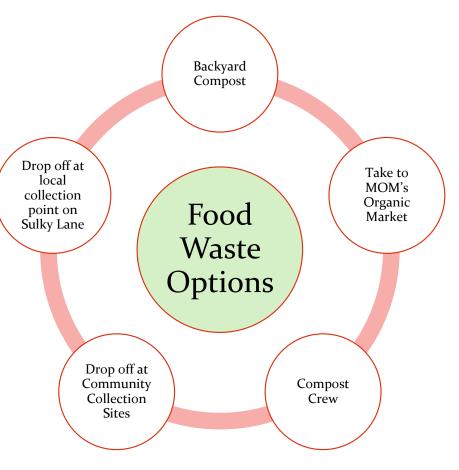
- Put a container with a lid on your countertop, under the sink, in your refrigerator, or in a close-by closet. Food waste bins for this purpose are available for sale at amazon.com, The Container Store, Home Depot, Lowe's
- Put the scraps in a compostable bag in your freezer, collecting more until you have enough to compost
- Expensive option: You can buy a countertop composting bin that composts the food within the unit





Food Waste Composting Composting options

- 1. A monthly subscription to Compost Crew, which takes all food waste, including bones, with weekly curb-side pick-up at your home.
- 2. Drop off food waste at MOM's Organic Market, which is free, and takes all food waste.
- 3. Drop off at an expanding number of farmers' markets that have drop off bins.
- 4. Home backyard composting, which requires a little attention and can't compost meat, bones, and some other foods.
- 5. Bring to the compost drop-off bin at a private home on Sulky Lane, which is also free, but has some restrictions on types of food.



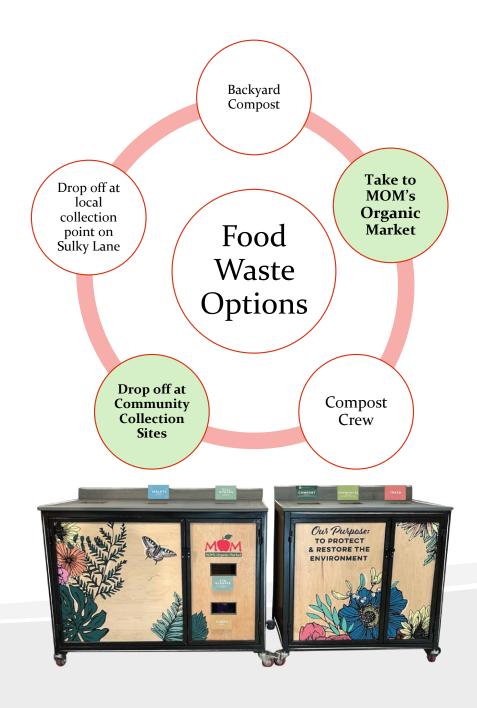
Food Waste Composting Compost Crew

- There are currently 37 GFCA families subscribing to Compost Crew. When it began serving our community, the subscription rate was \$32/month. With enough new subscribers, the rate fell to \$28/month. To qualify for this GFCA-negotiated discount, you need to reside within the Greater Farmland community.
- Compost Crew has an industrial facility that composts at very high temperatures, so you can dispose of any kind of food waste with this service.
- To sign up, contact them at <u>CompostCrew.com</u> and tell them you are in the Greater Farmland discount group. Also, inform <u>jerrymindes@gmail.com</u> so we can keep track of the number of new subscribers.
- Encourage other GFCA families use Compost Crew.



Food Waste Composting More options for all food types

- 1. MOM's Organic Market, on the corner of Randolph Rd and Nebel St <u>momsorganicmarket.com/recycle-center</u>
- Bethesda Central Farm Market, 7600 Arlington Rd, Bethesda. Open year round <u>centralfarmmarkets.com/Bethesda</u>
- Derwood Market, 16501 Redland Rd, Rockville. Closed until May 2025 <u>milkladymarkets.org/</u>



Food Waste Composting Backyard composting options

- You can compost in your own backyard, creating rich soil for your garden. <u>montgomerycountymd.gov/DEP/trash-</u> <u>recycling/programs/yard-trim/composting.html</u> and <u>greaterfarmland.org/neighbor-talks-environmentalism-at-</u> <u>home</u>, click Food Waste Composting button
- 2. A neighbor in the 7000 block of Sulky Lane has a bin at the curb that you can use. Since this material goes to a backyard compost bin, there are restrictions to what can be left there.
- 3. Bins like the one pictured are available online or at Home Depot, Ace Hardware, Walmart and other stores.



Kitchen Appliances

Energy Star products meet or exceed strict energy-efficiency guidelines established by the EPA and DOE. Not all Energy Star appliances are of equal efficiency, so compare models. Choose appliances that save at least 25 percent in energy consumption over your current models.

<u>greenamerica.org/green-living/energy-efficient-appliances</u> Energy Star, <u>energystar.gov/productfinder</u>



The most reliable appliance brands <u>blog.yaleappliance.com/the-least-serviced-most-reliable-appliance-</u> <u>brands?hs_amp=true</u>

Kitchen Appliances Refrigerators

These are the biggest energy hogs in the kitchen. Over 1/3 of US fridges are over 10 years old, costing \$4.4 billion/year in energy costs. Energy Star refrigerators have efficient compressors, improved insulation, and more precise temperature and defrost mechanisms.

- When to replace: If bought before 1993, replace ASAP. A new Energy Star fridge with automatic defrost and a top-mounted freezer uses 300-500 kWh/ year and keeps 1,000 lb/year of C02 out of the atmosphere. Before 1993 uses 1,539 kWh/year and 1994-2000 uses 1,031 kWh/year.
- Efficiency Tips: Position refrigerator away from a heat source, like an oven, dishwasher, or direct sunlight. Clean condenser coils at least every 2 years. Keep door gaskets clean and check that they seal airtight. If you can program temp, set refrigerator to 35°-38°F and freezer at 0°F.
 Pack to max capacity.





The average icemaker in the average fridge increases energy consumption by 12% to 20%.

science.time.com/2011/04/14/how-the-ice-inyour-drink-is-imperiling-the-planet/

<u>berlinzo.com/blogs/tips/choosing-eco-friendly-</u> <u>ice-maker-a-sustainable-</u> <u>solution?srsltid=AfmBOor4yxdC8kPpAcSdlGYe5cT</u> <u>VprMZygGu3LPdl3BYl10LVj3vRFjB</u>





Kitchen Appliances Dishwashers

An Energy Star dishwasher uses 25 percent less energy than a standard dishwasher and will save \$100 and 3,870 gallons of water over its lifetime. An efficient dishwasher needs very little water to clean dirty dishes. Many new dishwashers include a soil-sensor to adjust water use depending on the degree of dirtiness in each load. Washing dishes by hand uses significantly more water.

•When to replace: about every 10–15 years—sooner if your family cooks at home and runs the dishwasher daily.

•Efficiency Tips: According to DOE, no need to pre-rinse. Dishwasher detergent enzymes are most efficient when combined with what's left on the plate after scraping, and the dishwasher has a filter to handle the residue. Most of the energy used comes from heating water, so turn down your water heater to 120°F. When possible, don't use heat-dry, rinse-hold, or pre-rinse.

Kitchen Appliances Stoves and ovens - Why Induction vs Gas

- Gas stoves, particularly when unvented, are a source of indoor air pollution, including carbon monoxide, nitrogen dioxide, formaldehyde, and benzene.
- Induction stoves heat up and cool down nearly



- immediately and are energy-efficient. If you source your electricity from a renewable source, your induction stove will be carbon neutral.
- Induction stoves are also safer, since only the pan gets hot, not the cooktop surface. It
 will not heat if there isn't a pot on it, and the surface around a pot remains safe to the
 touch, so it's the best choice for the elderly or where small children are present.

Kitchen Appliances Induction cooking tips

- Induction stoves can be purchased as built-in cooktop units, as part of a complete range, or there are lowcost countertop units available at appliance stores & online.
- Most pots and pans are compatible with induction, but solid aluminum or copper-bottom cookware will not work. Inductions stoves work via magnetic fields.
- An electrician will be needed to install a highamperage circuit (40 or 50 amps, 240 volts) connected to a four-prong outlet, if you're converting from gas.







Amount: An ENERGY STAR-certified induction cooktop may be eligible for **either:**

•A Home Electrification and Appliance Rebate of up to \$840, or

•A **Home Efficiency Rebate**, which provides up to \$8,000 off projects that significantly reduce household energy use.

How to access: Visit DOE's <u>Rebates portal</u> to check the status of your locality's program. <u>energy.gov/</u>

Montgomery County: <u>montgomerycountymd.gov/DEP/energy/homes/incentives.html</u>

Cleaning without toxicity and waste

- Packaging
 - Buy or make your own in bulk container, then fill reusable spray bottles
- Replace paper towels with compostable "Swedish" towels
 - Highly absorbent and don't fall apart in your hands
 - Reusable and washable
 - Can be added to food waste compost
- Avoid aerosols, which are more likely to emit droplets to breathe in (compared to pump/trigger bottles)
- Avoid (chemically) perfumed cleansers



Cleaning without toxicity and waste

- Make your own all-purpose cleaner by mixing 1 cup white vinegar and 1 cup water. If desired, add peel from a citrus fruit for scent, such as grapefruit, lemon, lime, or orange.
- Use dishwasher tablets that are not encased in plastic (available from <u>blueland.com</u>). Plastic pods dissolve, leaving microplastics in water and soil.
- Non-plastic pods and dry detergent sheets are also available for clothes washing, so large plastic bottles aren't needed.
- Look for a "refillery" store, such as the Fulfillery in Tacoma Park. <u>fulfillery.com</u>



StopFoodWaste.ie

mondaycampaigns.org/meatless-Monday

MontgomeryCountyMD.gov/Climate

<u>cooking.nytimes.com</u>, <u>americastestkitchen.com</u>, <u>patijinich.com</u>

bethesdacoop.org

montgomerycountymd.gov/DEP/trash-recycling/programs/yard-trim/composting.html

greaterfarmland.org/neighbor-talks-environmentalism-at-home

compostcrew.com

Resources and Links Links mentioned in this presentation

powerknot.com/2023/03/13/say-goodbye-to-garbage-disposals-how-biodigesters-arewinning-the-food-waste-battle-in-canada/ nal.usda.gov myplate.gov ecomyths.org/sink-disposals-vs-trashcans momsorganicmarket.com/recycle-center montgomerycountymd.gov/DEP/trash-recycling/programs/yard-trim/composting.html greaterfarmland.org/neighbor-talks-environmentalism-at-home centralfarmmarkets.com/Bethesda Milkladymarkets.org blueland.com Fulfillery.com



- 1. Friends of Cabin John cabinjohncreek.org
- 2. Environment Maryland environmentamerica.org/maryland
- 3. Sierra Club sierraclub.org
- 4. Chesapeake Climate Action Network <u>chesapeakeclimate.org</u>
- 5. Chesapeake Bay Foundation <u>cbf.org/index.html</u>